



One Bank, One UniCredit.

2018

Annual Report

Banking that matters.  **HypoVereinsbank**
Member of  **UniCredit**

Banking that matters.



We are dedicated to creating tangible value for all our clients, employees and stakeholders by providing real solutions to real needs. Everything we do is grounded on ethics and respect.

Financial Highlights

Key performance indicators

	1/1–31/12/2018	1/1–31/12/2017
Net operating profit ^{1,2}	€1,587m	€1,517m
Cost-income ratio (based on operating income)	65.8%	65.6%
Profit before tax	€392m	€1,597m
Consolidated profit	€238m	€1,336m
Earnings per share	€0.29	€1.66

1 Net operating profit according to IAS 39 until 31 December 2017.

2 Net operating profit according IFRS 9 since 1 January 2018.

Balance sheet figures/Key capital ratios

	31/12/2018	31/12/2017
Total assets	€286,688m	€299,060m
Shareholders' equity	€17,751m	€18,874m
Common Equity Tier 1 capital ¹	€16,454m	€16,639m
Core capital (Tier 1 capital) ¹	€16,454m	€16,639m
Risk-weighted assets (including equivalents for market risk and operational risk)	€82,592m	€78,711m
Common Equity Tier 1 capital ratio ^{1,2}	19.9%	21.1%
Core capital ratio (Tier 1 ratio) ^{1,2}	19.9%	21.1%
Leverage ratio in accordance with Commission Delegated Regulation ^{1,3}	4.9%	5.1%

	31/12/2018	31/12/2017
Employees (in FTEs)	12,252	13,405
Offices	503	553

1 31 December 2018: 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-sheets items.

Ratings

	LONGTERM	SHORTTERM	OUTLOOK	STAND-ALONE RATING	CHANGE/CONFIRMATION	PFANDBRIEFE		CHANGE/CONFIRMATION
						PUBLIC SECTOR	MORTGAGE	
Fitch Ratings				bbb+	3/12/2018	AAA/stable	AAA/stable	5/12/2018 1/2/2019
Derivative Counterparty Ratings	BBB+				3/12/2018			
Deposits	BBB+	F2			3/12/2018			
Issuer Default Rating	BBB+	F2	negative		3/12/2018			
Moody's				baa2	31/5/2017	Aaa/–	Aaa/–	23/6/2015 23/6/2015
Counterparty Ratings	A1	P-1	—		19/6/2018			
Deposits	A2	P-1	stable		3/8/2018			
Senior Unsecured & Issuer Rating	A2	P-1	stable		3/8/2018			
Junior Senior unsecured	Baa3	—	—		3/8/2018			
Standard & Poor's				bbb+	1/2/2019			
Resolution Counterparty Ratings	A–	A-2			1/2/2019			
Issuer Credit Rating	BBB+	A-2	negative		1/2/2019			
Senior Subordinated Debt	BBB	—	—		1/2/2019			

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Financial Statements (1)

Management's Discussion and Analysis

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Financial Review

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, however, HVB does remain listed on securities exchanges as an issuer of Pfandbriefs, 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 increase its sustainable 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 regular, timely and comprehensive reports 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.

Ms Ljiljana Čortan was appointed to the Management Board as the Chief Risk Officer (CRO) with effect from 1 January 2018. At its meeting on 16 February 2018, the Supervisory Board appointed Mr Jan Kupfer and Dr Emanuele Buttà as members of the Management Board with effect from 1 March 2018. Mr Kupfer is in charge of the Corporate & Investment Banking (CIB) business segment and succeeded Dr Michael Diederich, who was appointed Board Spokesman of UniCredit Bank AG (HVB) as per 1 January 2018. Mr Peter Buschbeck resigned from the Management Board effective from the end of 28 February 2018. Dr Emanuele Buttà took over the Private Clients Bank business unit from him. Mr Robert Schindler resigned from the Management Board effective from the end of 7 November 2018. Mr Markus Beumer took over the Unternehmer Bank business unit from him with effect from 1 December 2018. Combined, the Private Clients Bank and Unternehmer Bank business units make up the Commercial Banking (CB) business segment of HVB.

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.

Mr Klaus Grünewald resigned from the Supervisory Board as an employee representative effective from the end of 30 June 2018. He was succeeded by Mr Gregor Völkl with effect from 1 July 2018 who had already been appointed a substitute member in May 2015 in compliance with the German Act on the Co-determination of Employees in a Cross-border Merger (Gesetz über die Mitbestimmung der Arbeitnehmer bei einer grenzüberschreitenden Verschmelzung – MgVG).

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 Management Board" and the Note "Members of the Supervisory Board" in the notes to the 2018 consolidated financial statements.

Statement pursuant to Section 289f (4) of the German Commercial Code

The Supervisory Board of UniCredit Bank AG set a target that one-third of the members of the Supervisory Board (i.e. four out of twelve) should be women, which is to be achieved by 31 December 2021. Both the shareholder and the employee representatives on the Supervisory Board are to contribute to achieving this target. Three members of the Supervisory Board are women: Dr Marita Kraemer and Prof Dr Annette G. Köhler as shareholder representatives and Ms Beate Dura-Kempf as an employee representative. As the next Supervisory Board elections will not be taking place until 2020, the target can be achieved only by members resigning from the Supervisory Board. The target was unable to be achieved in the 2018 financial year when an employee representative resigned from the Supervisory Board as he was succeeded by the substitute member Mr Georg Völkl who was already elected in May 2015 in accordance with the German Act on the Co-determination of Employees in a Cross-border Merger (MgVG). Achieving this target will be given priority particularly during the scheduled elections to the Supervisory Board in the 2020 financial year.

For the proportion of women on the Management Board, the Supervisory Board adopted a target that one-seventh of the members should be women (i.e. one out of seven), which was to be achieved by the end of the first statutory compliance period (30 June 2017). In the 2017 financial year, the Supervisory Board once again set a target that one-seventh of the members of the Management Board should be women (i.e. one out of seven), which is to be achieved by 31 December 2021. By appointing Ms Sandra Betocchi Drwenski as a Management Board member (Chief Operating Officer – COO) from 1 November 2017, this target was achieved in 2017. By appointing Ms Ljiljana Čortan as a Management Board member (Chief Risk Officer – CRO) from 1 January 2018, two sevenths (i.e. two out of seven) of the members of the Management Board are currently women.

For the proportion of women in the first and second management levels below the Management Board respectively, the Management Board set the following targets, which were to be achieved by the end of the first statutory compliance period (30 June 2017): 22 percent of women in the first and 24 percent in the second management level below the Management Board. Measures to promote women and more mixed management teams have been a focus at HVB for a long time: Concepts for work-life balance were developed and career development instruments were put in place to specifically support

female talents and top performers in their careers. Talented women are made visible in discussion and management forums. The Bank already defined internal targets coupled with specific initiatives for the individual business segments in 2012. These are evaluated and followed up each quarter.

Based on this approach the proportion of women close to Management Board level has continually increased since 2012, even though the ambitious targets for the two management levels below the Management Board have not yet been reached. At 31 December 2018, the proportion of women at the first level below the Management Board was 19 percent (target: 22 percent) and at the second level below the Management Board 18 percent (target: 24 percent). The reasons for this can be found in the structural conditions of the individual business segments. In areas with a traditionally rather low representation of women, the proportion of women in management positions increased only at a slow but steady rate while in areas with an equal distribution of men and women, the targets had already been met. At the same time, to date the Bank has deliberately applied sustainable measures effective in the medium term to prepare high potential female employees for their career. This ensured that there was a steady improvement in the equal representation of men and women in the candidate pools for higher-level management positions.

In the 2018 financial year, the Management Board confirmed the targets of 22 percent of women in the first and 24 percent in the second management level below the Management Board, which are to be achieved by 31 December 2021. In future the Bank will place a greater focus than before on binding measures and percentages in the talent and successor pools as well as on promotion and appointment processes. Particularly in the rapidly changing environment of the banking business and in connection with our transformation strategy, it should be possible to easily achieve our gender goals.

Financial Review (CONTINUED)

On 11 July 2018, UniCredit signed the “Women in Finance Charter” and joined the UK’s HM Treasury Women in Finance Charter with the aim of supporting the improvement in gender diversity in the financial services sector both in the United Kingdom and worldwide. Participation in this initiative is part of UniCredit’s group-wide Diversity Action Plan, which was launched in 2017 and follows a series of decisive measures that the Bank has already taken in order to achieve a more balanced gender distribution at all levels of the organisation. These measures include specific initiatives in the areas of the recruitment and professional development of talents, remuneration, work-life balance and education. In 2018, a Diversity & Inclusion Committee was set up to monitor the progress made in these initiatives.

Non-financial reporting

In the context of transposing the Corporate and 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. As a fully consolidated subgroup of the UniCredit corporate group, HVB Group waives 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 (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 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 2018 financial year

HVB Group is part of UniCredit, a successful, pan-European commercial bank, with a simple business model and a fully plugged-in Corporate & Investment Banking. It delivers a unique banking network in Western, Central and Eastern Europe to its extensive client franchise and combines regional strength and local competence with the potential and know-how provided by an international banking group. Our integration into UniCredit is a strong basis for consistently exploiting its international network and economies of scale. UniCredit has a divisionally and regionally diversified business model. It facilitates unique access to leading banks in 14 core markets and 18 other countries worldwide for its customers.

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 retail, corporate and public-sector customers, international companies and institutional customers. HVB Group has a well-developed network of branches in Germany, which was modified to accommodate changing patterns of customer behaviour in recent years. In total, HVB Group has 503 offices around the world – 348 of which are HVB offices in Germany. 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 consolidated financial statements.

With our customer-oriented business model, excellent capital base, stable operating profitability and solid funding foundation as well as a good market position in our core business areas, we are a sought-after and reliable partner for our customers and investors.

The business segments

HVB Group is divided into the following business segments:

- Commercial Banking
- Corporate & Investment Banking (CIB)
- Group Corporate Centre
- Other/consolidation

We report the Group Corporate Centre (GCC) as a separate segment for the first time in the 2018 reporting year. We have adjusted the previous-year figures accordingly. In the past, the GCC was part of the “Other/consolidation” segment. It was necessary to split GCC off into a segment of its own as it exceeds the thresholds defined in IFRS 8.13 not only for a short period. 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 2018 consolidated financial statements.

Transform 2019

The persistently challenging environment for the banking industry and thus the huge downward pressure on profitability and revenues require adjustments to be made to bank structures and processes. To ensure the successful advancement of the Bank, we set up the Multi-Year Plan 2017–2019. Our strategic planning is embedded in the group-wide Transform 2019 programme, which comprises initiatives on the income, costs and cooperation side. Within the framework of the programme we are optimising our internal structures and processes (also through end-to-end optimisation and the streamlining of processes). This includes a transfer of activities between different locations and the centralisation of tasks as a restructuring measure and will extend into 2019 in parallel to a further adjustment of our staffing levels. At the same time, intensified cooperation between the business segments will create greater cross-selling potential and the use of the respective product expertise will leverage additional synergies and earnings potential. The implementation of the programme is proceeding according to schedule.

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

In March 2018, HVB reached an agreement with an international financial investor on the sale of all the shares held in Mobility Concept GmbH, Oberhaching, which until then had been a 60 percent subsidiary of UniCredit Leasing GmbH. The closing of the transaction took place at the end of 31 May 2018. As a result of the closing, the company 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 consolidated financial statements.

Economic report

Underlying economic conditions

Global economic growth is likely to have slowed slightly to 3.6% in 2018 compared with the previous year, although there were some geographical differences. While the USA reports strong growth for 2018, Europe and some emerging markets grew at a slower pace. One of the main reasons for the weaker global development was less dynamic world trade. Economic growth in China also contracted slightly in 2018. Even though fiscal stimuli, such as infrastructure projects, are likely to have supported Chinese GDP growth and industrial production in 2018, the ongoing change in Chinese economic structures towards more private consumption and services is expected to have had a negative impact.

Financial Review (CONTINUED)

The US economy was one of the main drivers of growth in the global economy again in 2018. Real GDP growth is likely to have reached 2.8% in the USA, which is a significant increase on the previous year's figure (up 2.2%). The main reasons for the strong GDP growth in 2018 were fiscal measures aiming to support growth, including in particular a reduction in income and corporate tax as well as higher government spending. As a result, the government deficit rose to almost 5% of the GDP in the 2018 financial year and thus to the highest deficit since 2012. The momentum on the labour market once again proved to be another key factor of the strong growth. A still low unemployment rate close to the 4% mark coupled with lower taxes is likely to have supported private consumption. But corporate investments (such as in the energy sector) are predicted to have picked up substantially, providing further positive impetus for overall economic growth.

According to EuroStat, growth in the GDP in the eurozone was weaker than expected on account of the lower performance figures recorded by Germany and France (1.8% in 2018 compared with 2.3% in 2017). Besides temporary special factors (particularly in Germany), weaker global trade also had a dampening effect. However, the protectionist measures of the USA are likely to have had only a minor effect on growth so far. Other dampening effects arose on account of weaker monetary policy stimuli and higher oil and energy prices. In this context, particularly the latter weighed on increases in real household income and corporate profits.

With the steady decline in ECB bond purchases over the past year and the complete phase-out of the bond-buying programme in December 2018, the ECB remained on course for a less expansionary monetary policy. The inflation rate in the eurozone rose to 1.7% for the whole of 2018 and was thus again below the ECB's threshold of 2% in the reporting year.

At country level (data according to national statistical offices), the GDP grew in Germany by 1.4% (not calendar-adjusted) in 2018 compared with 2.2% in 2017, and also in France, growth declined to 1.5% in 2018 (previous year: 2.2%). Italy's economic growth also contracted to 0.8% in 2018 compared with 1.5% in the previous year. The economic recovery in Spain is set to decline slightly to 2.6% in 2018 after strong growth of 3.0% in 2017.

Weaker growth in Germany resulted from slower industrial production, with special factors (such as nationwide strikes, absences from work due to the flu epidemic and the introduction of new CO₂ emission standards for new cars) as well as lower demand from abroad having a negative impact. Positive growth stimuli, on the other hand, came from domestic demand. In addition to a solid increase in private consumer spending, positive stimulus from the construction industry supported GDP growth.

Sector-specific developments

The year 2018 was characterised by increasing global uncertainty and volatility driven by political risks and growing trade tensions. The greatest global growth risks are an increase in trade tensions, including the imposition of tariffs by the USA and China on imports from the other respective country, and the much-discussed US tariffs on imports from other regions. Another negative factor for the global economy is the somewhat weaker growth projected in China. The macroeconomic

development in Europe can still be seen as positive. The formation of the government in Italy out of the Five Star Movement and the Lega in May and the ousting of Spain's prime minister in June led to a sharp increase in the risk premiums for the government bonds of both countries. This increase also resulted in higher risk premiums for bonds issued by banks from both countries. Compared with Germany's five-year bonds, the risk premium rose for Italy's ten-year government bonds from an average of under 137 basis points in the first quarter of 2018 to more than 320 basis points. After Italy presented its draft budget and reduced the planned deficit for 2019 after conducting negotiations with the EU Commission, the risk premiums narrowed again to 200 basis points in the fourth quarter. The ongoing negotiations on Brexit represent additional uncertainty for the markets. In early December 2018, Prime Minister Theresa May postponed the parliamentary vote on the Brexit agreement in order to renegotiate it with the EU and survived the vote of no confidence. In the first vote on 15 January 2019, a clear majority of the members of parliament voted against the Brexit agreement negotiated with the EU.

The ECB will discontinue its monthly net purchases of bonds as of the beginning of 2019 after making monthly purchases of €30 billion or €15 billion respectively in 2018. However, the ECB will remain a key market participant in the coming years. As at November 2018, the ECB had purchased €2.6 trillion in assets and will be reinvesting the maturing assets.

The increasing global and political uncertainty also caused gloomy sentiment on stock markets. The STOXX Europe 600 Banks index fell by over 28% in 2018.

Following the interest rate hikes of the Federal Reserve Bank (FED), the interest rate level continued to rise in the USA in 2018. The yield on the ten-year US government bonds rose to more than 3.2% and was thus more than 80 basis points higher than the level at the beginning of 2018. However, after mid-November there was a relatively sharp decrease in the yield to less than 2.7%. The yield on Germany's ten-year government bonds rose to over 70 basis points in the first quarter of 2018, the highest level since September 2015. But the increasing risk aversion of investors on account of rising political uncertainty again led to a narrowing to less than 30 basis points. The 3-month Euribor remained almost unchanged within a bandwidth of negative 31–33 basis points in 2018. A general revaluation of the risk premiums for bonds was carried out in 2018. Credit spreads for non-financials with good credit ratings widened by 63 basis points and senior bonds of banks by 57 basis points. This development partly reflected the anticipation of the end of the ECB's net purchases and partly offset the sharp narrowing of spreads in 2017.

The euro depreciated by around 5% against the US dollar in 2018. A depreciation against the Swiss franc and Japanese yen was also evident. The euro appreciated against the British pound, reflecting in particular the sharp depreciation of the pound since November 2018 in the course of the Brexit negotiations.

In the Italian banking sector, the reduction in the relatively large stock of impaired loans continued in 2018. The portion of impaired loans fell from 16.8% at the end of 2015 to 9.4% at 30 September 2018 and in the same period the risk coverage rose from 45% to 55%. Impaired loans were also further reduced in other countries such as Spain, Ireland or Portugal which resulted in a reduction of risks in the European banking sector overall.

Financial Review (CONTINUED)

Initial adoption of IFRS 9

For the 2018 reporting year, HVB Group has for the first time adopted the new IFRS 9 standard "Financial Instruments", which supersedes the previously valid IAS 39 standard on the classification and measurement of financial instruments. The new standard addresses the accounting and measurement of financial assets and financial liabilities. As a result of the new accounting and measurement methods, the structure of the balance sheet and the income statement has been adjusted to reflect the new categories of IFRS 9. HVB Group waived the retrospective application of IFRS 9 which means that figures for previous years have not been stated for the new items in the balance sheet and income statement. Previous items that reflect IAS 39 categories have been retained and show the previous-year figures.

Net interest has been expanded to disclose negative interest. As the measurement of financial instruments at fair value was expanded in the banking book by IFRS 9, we have inserted a new item "Net gains/losses on financial assets and liabilities at fair value". This item includes all the financial instruments measured at fair value outside the trading book. As a result, the "Net trading income" item in the income statement in 2018 has been reduced to net income from trading positions. The now explicitly required item "Net gains/losses on derecognition of financial instruments measured at cost" has been added and, in 2018, includes the gains/losses on disposals (assets) or buy-backs (liabilities) of financial instruments measured at cost. These were previously disclosed under the item "Net other expenses/income" or as parts of net trading income. The previous "Net write-downs of loans and provisions for guarantees and commitments IAS 39" item has been replaced by a new item "Credit impairment losses IFRS 9" for 2018 as the method for determining the loan-loss provisions has changed from the previous Incurred Loss model to the Expected Loss model. "Net gains/losses on disposals of investments" is also a new item. It includes parts of the previous net income from investments which has been completely discarded as an income statement item in 2018. This item, which ceased to apply when

IFRS 9 was introduced, primarily contained gains and losses from the IAS 39 categories of available-for-sale financial assets and held-to-maturity investments. The income from land, buildings and improvements as well as investment properties shown under this item to date is disclosed as of 2018 under the "Net other expenses/income" item, which recognises the current income and expenses of investment properties, among other things.

On the assets side of the balance sheet, new items are added in line with the classification of the financial instruments based on IFRS 9: "Financial assets at FVTPL" (financial assets at fair value through profit or loss) and "Financial assets at FVTOCI" (financial assets at fair value through other comprehensive income). On the liabilities side, the item "Financial liabilities at FVTPL" (financial liabilities at fair value through profit or loss) was included in order to incorporate financial liabilities designated for measurement at fair value through profit or loss.

Remeasurements and adjustments were also made in equity on account of the effects of the first-time adoption of IFRS 9. For instance, the available-for-sale reserve has been eliminated and another reserve has been added due to the fair value changes in own credit spread. In addition, a separate line was inserted to show the effects from the first-time adoption of IFRS 9.

Essentially, the first-time adoption of IFRS 9 has resulted in shifts between the items named. Overall, this has had no material effect on equity and total assets. Please refer to the explanations given in condensed form under the respective chapters in Management's Discussion and Analysis and in greater detail in the Note "Effects of first-time adoption of IFRS 9" in the notes to the 2018 consolidated financial statements.

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.

Income/Expense	2018	2017	CHANGE	
	€ millions	€ millions	€ millions	in %
Net interest	2,484	2,541	(57)	(2.2)
Dividends and other income from equity investments	25	11	+ 14	>+ 100.0
Net fees and commissions	1,014	1,103	(89)	(8.1)
Net trading income	693	928	(235)	(25.3)
Net gains/(losses) on financial assets and liabilities at fair value	(110)	n/a		
Net gains/(losses) on derecognition of financial instruments measured at cost	52	n/a		
Net other expenses/income	524	399	+ 125	+ 31.3
OPERATING INCOME	4,682	4,982	(300)	(6.0)
Payroll costs	(1,468)	(1,600)	+ 132	(8.3)
Other administrative expenses	(1,405)	(1,443)	+ 38	(2.6)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(206)	(227)	+ 21	(9.3)
Operating costs	(3,079)	(3,270)	+ 191	(5.8)
OPERATING PROFIT	1,603	1,712	(109)	(6.4)
Net write-downs of loans and provisions for guarantees and commitments IAS 39	n/a	(195)		
Credit impairment losses IFRS 9	(16)	n/a		
NET OPERATING PROFIT ^{1,2}	1,587	1,517	+ 70	+ 4.6
Provisions for risks and charges	(919)	(25)	(894)	>+ 100.0
Restructuring costs	(14)	(7)	(7)	>+ 100.0
Net income from investments	n/a	112		
Net gains/(losses) on disposals on investments	26	n/a		
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL	680	1,597	(917)	(57.4)
Impairment on goodwill	(288)	—	(288)	
PROFIT BEFORE TAX	392	1,597	(1,205)	(75.5)
Income tax for the period	(154)	(261)	+ 107	(41.0)
PROFIT AFTER TAX	238	1,336	(1,098)	(82.2)
CONSOLIDATED PROFIT	238	1,336	(1,098)	(82.2)
attributable to the shareholder of UniCredit Bank AG	236	1,332	(1,096)	(82.3)
attributable to minorities	2	4	(2)	(50.0)

1 Net operating profit according to IAS 39 until 31 December 2017.

2 Net operating profit according to IFRS 9 since 1 January 2018.

Financial Review (CONTINUED)

Net interest

At €2,484 million, net interest in the challenging environment of the 2018 financial year was slightly lower than the previous-year figure (€2,541 million).

In the Commercial Banking business segment there was a 1.7% increase in net interest to €1,467 million despite the still very low level of interest rates compared with the previous year. In the CIB business segment, net interest rose a significant 8.5% to €997 million. This rise is attributable to an expansion in lending activities, an increase in the Treasury contribution and higher interest income from foreign currency deposits. In the Group Corporate Centre business segment, net interest declined sharply by €159 million to €51 million. This is mainly attributable to the absence of a non-recurring effect in the previous year (positive interest effect of €90 million from the reversal of tax provisions). In the Other/consolidation segment, net interest remained unchanged from the previous year at minus €31 million.

Dividends and other income from equity investments

Dividends and other income from equity investments came to €25 million during the reporting period. This is attributable to dividend income of €21 million and net income from companies accounted for using the equity method of €4 million. Income of €11 million from dividends and other income from equity investments was generated in the previous year.

Net fees and commissions

In the 2018 financial year, net fees and commissions fell by €89 million, or 8.1%, to €1,014 million. This development is mainly due to lower commission income from investment services for customers, which fell by €86 million to €567 million. This reflects, among other things, a decline in corporate demand for equity or debt financing through capital market products. In addition, net fees and commissions from the lending business were down by €38 million to €160 million. By contrast, income from the sale of third-party products increased by €14 million to €85 million and "Other commission income" by €20 million to €58 million.

Net trading income

Changes to measurement and recognition as a result of the first-time adoption of IFRS 9 must be considered when comparing the net trading income generated in the 2018 financial year with the previous year's figure. This year's net trading income, which fell by €153 million to €693 million, only shows the net gains on financial instruments held for trading. In this context, it should be taken into account that at 1 January 2018 the Bank designated structured liabilities as measured at fair value through profit or loss for the first time. These structured liabilities are still contained in the previous year's figure but will be reported under the item "Net gains/losses on financial assets at fair value" in 2018. In addition to the effects from changes in recognition, the decline in net trading income relates above all to the interest and foreign currency business and is partly attributable to the high market volatility.

Net gains/losses on financial assets and liabilities at fair value

This new item shown as a result of the first-time adoption of IFRS 9 reports a loss of €110 million. This is mainly due to the negative development of liabilities measured at fair value through profit or loss.

Net gains/losses on derecognition of financial instruments measured at cost

This new item shown as a result of the first-time adoption of IFRS 9 reports a gain of €52 million.

Net other expenses/income

The changes made to measurement and recognition as a result of the first-time adoption of IFRS 9 must be taken into account when comparing the net other expenses/income reported for the 2018 financial year with the previous year's figure. Net other expenses/income amounts to €524 million and cannot be compared with the previous year's figure. The figure for the 2018 financial year contains for the first time income from the measurement and sale of land and investment properties totalling €162 million.

Operating costs

In the downward development of operating costs, we are benefitting from the continuation of our consistent cost management as well as from our Transform 2019 programme which has already increased efficiency by a significant level in many areas. Compared with the previous year, operating costs decreased by €191 million, or 5.8%,

to €3,079 million. This decrease is attributable to the decline in payroll costs, which fell by €132 million, or 8.3%, to €1,468 million, mainly on account of the lower headcount. Other administrative costs were also down by €38 million, or 2.6%, to €1,405 million.

Operating profit (before credit impairment losses IFRS 9)

The operating profit of HVB Group fell by €109 million, or 6.4%, to €1,603 million in the reporting period. The decline in operating income was largely offset by the reductions achieved in operating costs. As a result, the cost-income ratio (ratio of operating expenses to operating income) at currently 65.8% is almost at the same level as in the previous year: 65.6%.

Credit impairment losses IFRS 9

This new item shown as a result of the first-time adoption of IFRS 9 reports an income of €16 million. These very low credit impairment losses compared with the previous year are largely attributable to the favourable economic development in Germany in the reporting year which allowed net impairments to be reversed in the CIB business segment among others. We refer to the comments on the impact of the first-time adoption of IFRS 9 in the notes to the financial statements for the difference between the credit impairment losses IFRS 9 and the net write-downs of loans and provisions for guarantees and commitments shown in the previous year.

Provisions for risks and charges

In the 2018 financial year, there were net expenses for provisions for risks and charges of €919 million after €25 million in the previous year, whereby the expenses in the reporting period are largely attributable to provisions for legal risks. The legal risks of HVB Group are described in detail in the section entitled "Operational risk" in the Risk Report of Management's Discussion and Analysis.

Restructuring costs

In the 2018 financial year, restructuring costs came to €14 million. An amount of €7 million was reported for these in 2017.

Net gains/losses on disposals of investments

This new item shown as a result of the first-time adoption of IFRS 9 reports a gain of €26 million, which is largely attributable to the disposal of our subsidiary Mobility Concept GmbH, Oberhaching.

Profit before tax and impairment on goodwill

In the 2018 financial year, HVB Group generated a satisfactory profit before tax and impairment on goodwill of €680 million in the persistently challenging market environment.

Impairment on goodwill

In the reporting period, the goodwill of €288 million for the CIB business segment was completely written off. Particularly on account of the stricter capital adequacy requirements under Basel III and the related additions to allocated capital, the recoverable surplus of the cash flows of the business segment decreases, resulting in a lower value in use for the business segment. As the value in use determined in this way is lower than the carrying amount, the goodwill was to be written off (please refer to the Note "Impairment on goodwill" in the consolidated financial statements).

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

In the 2018 financial year, HVB Group generated a satisfactory profit before tax of €392 million.

Income tax expense decreased by €107 million to €154 million in the reporting year. In this connection, effects from the reversal of provisions reduced the tax expense. After deducting income tax, HVB Group generated a consolidated profit of €238 million in the reporting period, which is significantly lower than the consolidated profit of the previous year (€1,336 million).

Return on allocated capital

The profitability ratio return on allocated capital (RoAC) presents the consolidated profit of HVB Group (accruing to the HVB shareholder) as a ratio of the allocated capital. With RoAC, the allocated capital is determined on the basis of the average risk-weighted assets (including equivalents for market risk and operational risk). In the process, 12.5% equity (previous year: 12.0%) is allocated to the average risk-weighted assets. In the reporting year, this ratio fell to 2.3% after 13.9% in the previous year.

Financial Review (CONTINUED)

Appropriation of net income

In the 2018 financial year, the profit available for distribution disclosed in the annual financial statements of UniCredit Bank AG (equivalent to the consolidated profit of HVB Group), which forms the basis for the appropriation of profit, amounts to €520 million. We will propose to the Shareholders' Meeting that a dividend of €520 million be paid in total to UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €0.65 per share after around €1.62 for the 2017 financial year. The consolidated profit of €1,300 million reported in the previous year was distributed to UniCredit in accordance with a resolution adopted by the Shareholders' Meeting on 11 June 2018.

Segment results by business segment

In the 2018 financial year, all the business segments, with the exception of the CIB business segment, generated a profit before tax or consolidated profit:

(€ millions)		
Operating income	2018	2017
Commercial Banking	2,307	2,323
Corporate & Investment Banking	1,993	2,301
Group Corporate Centre	154	310
Other/consolidation	55	48
Total	4,509	4,982

(€ millions)		
Profit before tax	2018	2017
Commercial Banking	112	331
Corporate & Investment Banking ¹	207	931
Group Corporate Centre	270	316
Other/consolidation	91	19
Total	680	1,597

¹ In the segmented income statement impairment on goodwill is reported after the "Profit after tax".

(€ millions)		
Consolidated profit/(loss)	2018	2017
Commercial Banking	51	282
Corporate & Investment Banking	(206)	684
Group Corporate Centre	331	353
Other/consolidation	62	17
Total	238	1,336

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 2018 consolidated financial statements. This note also shows the income statements for each business segment and comments on the economic performance of the individual business segments. The tasks of each business segment are described in detail 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 consolidated financial statements.

General comments on the business situation in 2018 and comparison with last year's expectations

HVB Group again operated in a market environment still characterised by fiscal challenges in the 2018 reporting year. Due to our well-balanced and solid business model coupled with the positive stimuli from the Transform 2019 programme, we nevertheless managed to generate a satisfactory result in our operating business. As expected, operating income is moderately below the previous-year figure, which benefited from a non-recurring effect in net interest income. There was a stronger decline in net trading income which was a result of market conditions. The profit before tax was substantially lower than forecast, mainly on account of a non-recurring effect in the additions to provisions for risks and charges for legal risks. However, there were offsetting non-recurring effects in the profit after tax that had a positive impact.

As in previous years, we succeeded in reducing operating costs once again in the reporting year as planned thanks to our strict cost management and the stringent implementation of measures from the Transform 2019 programme.

The new item "Credit impairment losses" shown as a result of the first-time adoption of IFRS 9 reports an income of €16 million. These very low credit impairment losses compared with the previous year are largely attributable to the favourable economic development in Germany in the reporting year which allowed net impairments to be reversed in the CIB business segment among others.

At 65.8%, the cost-income ratio remained at the same level as 2017 as anticipated (65.6%).

At 19.9%, the CET1 capital ratio was still at an excellent level in the reporting year and, as expected, fell slightly on account of the increase in volumes in the lending business.

Although our expectations regarding the operating business of all the segments were essentially fulfilled, our positive forecast for the profit after tax was not, which is above all attributable to the non-recurring effects mentioned above that had a negative impact solely on the Commercial Banking and ClB business segments.

Financial situation

Total assets

The following comments are based on a comparison with the 2018 opening balance sheet in order to eliminate first-time adoption effects. The total assets of HVB Group decreased by €12.5 billion, or 4.2%, to €286.7 billion in the reporting year compared with the opening balance sheet.

On the assets side, particularly the cash and cash balances fell by €16.4 billion to €20.0 billion, which is exclusively due to the lower balances with central banks. Financial assets held for trading decreased by €6.5 billion to €69.0 billion. This is attributable to the declines in fixed-income securities (down €1.2 billion), equity instruments (down €5.1 billion) and positive fair values (down €1.1 billion). The decrease in equity instruments is partly owing to the more difficult market conditions in the fourth quarter of 2018 which resulted in a lower number of customer transactions and thus also in lower holdings. By contrast, there was an increase in other financial assets held for trading (up €1.0 billion). The portfolio of financial assets at FVTPL was down from €22.3 billion in the opening balance sheet to €16.7 billion as a result of maturing securities that were not reinvested. In comparison, the financial assets at FVTOCI rose to €7.4 billion compared with the initial level of €6.1 billion at 1 January 2018. Loans and receivables with banks were up by €3.2 billion to €33.7 billion, due primarily to increases of €3.1 billion in repo volumes and of €1.1 billion in securities. Loans and receivables with customers rose a substantial €12.8 billion to €133.7 billion. This rise can be attributed to larger volumes of securities (up €3.1 billion), reverse repos (up €2.4 billion), mortgage loans (up €2.0 billion) and other loans to banks (up €5.0 billion).

By contrast, non-performing loans and receivables fell by €0.4 billion to €1.4 billion. As a result of the reclassification from the item "Investment properties" to the item "Non-current assets or disposal groups held for sale" according to IFRS 5, this fell by €552 million. The item "Non-current assets or disposal groups held for sale" increased by a net amount of €231 million, whereby the increase ensuing from the reclassification is offset by the disposal of assets in connection with the sale and deconsolidation of our subsidiary Mobility Concept GmbH, Oberhaching. In the last quarter, an impairment loss of €288 million was carried out on goodwill. As a result, the item "Intangible assets" fell by €296 million to €149 million.

On the liabilities side, the deposits from banks decreased by €4.4 billion to €62.9 billion. There was a rise particularly in repos of €3.5 billion to €16.5 billion. By contrast, there were decreases of €3.0 billion to €16.9 billion in deposits from central banks compared with the 2018 opening balance sheet and of €4.7 billion to €4.8 billion in term deposits. The decline of €3.2 billion to €121.0 billion in deposits from customers is mainly attributable to decreases of €3.8 billion to €18.1 billion in term deposits, €2.4 billion to €6.2 billion in repos and €1.7 billion to €1.6 billion in promissory notes. This is offset by an increase of €5.3 billion to €76.3 billion in liabilities on current accounts. The debt securities in issue fell by €1.2 billion to €24.4 billion compared with the opening balance sheet. Financial liabilities held for trading were also down by €3.4 billion to €48.1 billion compared with the opening balance sheet.

The shareholders' equity shown in the balance sheet fell by €1.1 billion to €17.8 billion at the balance sheet date of 31 December 2018. This decline is largely attributable to the dividend payout of €1,300 million to UniCredit S.p.A., Milan, Italy, as resolved by the Shareholders' Meeting in the second quarter of 2018. This development was unable to be offset by the consolidated profit of €238 million generated in the reporting year.

Financial Review (CONTINUED)

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 2018 consolidated financial statements.

The contingent liabilities and other commitments not recognised in the balance sheet amounted to €74.8 billion at 31 December 2018 compared with €68.3 billion at the end of the previous year. This figure includes contingent liabilities in the form of financial guarantees of €26.2 billion (31 December 2018: €21.1 billion) and other commitments of €48.6 billion (31 December 2017: €47.2 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 Basel III requirements amounted to €82.6 billion at 31 December 2018 and were thus €3.9 billion higher than year-end 2017.

The risk-weighted assets for credit risk (including counterparty default risk) determined by applying partial use rose by €5.2 billion to €64.1 billion. Among other things, this increase is due to higher exposure values at HVB, particularly to companies.

The risk-weighted assets for market risk fell by €1.9 billion to €9.2 billion. This is attributable to both a decline in market risk in HVB's internal market risk model and to lower credit valuation adjustments as an expression of the risk of changes in credit ratings of counterparties in the OTC derivatives business.

The risk-weighted asset equivalents for operational risk amounted to €9.2 billion at 31 December 2018 and thus increased by €0.5 billion compared with year-end 2017. The increase is mainly attributable to a change in the AMA (Advanced Measurement Approach) model at year-end 2018, which also contains a margin of conservatism.

At 31 December 2018, the Common Equity Tier 1 capital compliant with Basel III excluding hybrid capital (CET1 capital) and the Tier 1 capital of HVB Group amounted to €16.5 billion (in accordance with approved financial statements) and thus fell compared with year-end 2017 (31 December 2017: €16.6 billion in accordance with approved 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 Basel III (including market risk and operational risk) amounted to 19.9% at 31 December 2018 (31 December 2017: 21.1% in both cases). The decrease is attributable to the decrease in Common Equity Tier 1 capital and an increase in risk-weighted assets. Own funds came to €17.0 billion at 31 December 2018 in accordance with approved financial statements (31 December 2017: €17.3 billion in accordance with approved financial statements). The own funds ratio was 20.6% at 31 December 2018 (31 December 2017: 22.0%).

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 financial statements amounted to 4.9% at 31 December 2018 (31 December 2017: 5.1%).

Ratings

The ratings of countries and banks are subject to constant monitoring by rating agencies. In the course of the harmonisation of the liability cascade of bank liabilities within the EU, the provisions of Section 46f KWG were adapted 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.

In the course of this legislative adaptation, Moody's adjusted 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. Junior senior bank bonds did not receive any premium resulting from possible government support as in the opinion of Moody's there is little likelihood that this class of instruments will receive 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 the senior preferred instruments rating category. However, on account of the current uncertainty concerning the resolution strategy of UniCredit, Fitch is not currently differentiating between the individual instrument ratings of UniCredit Bank AG. The rating of senior preferred instruments is 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 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 the outlook of UniCredit Bank AG were affirmed by Fitch on 3 December 2018 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, which is usually one level below the issuer credit rating (ICR). The senior subordinated debt rating of UniCredit Bank AG is BBB.

In June 2018, S&P introduced the resolution counterparty rating (RCR). 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.

Following the S&P rating decisions for Italy and for UniCredit S.p.A. in October 2018, for which the rating outlook was set to negative in both cases, the outlook of UniCredit Bank AG was then also adjusted from developing to negative in November 2018 while the ICR of UniCredit Bank AG was affirmed at BBB+/A-2 by S&P. The negative outlook for the ICR indicates that the rating can deteriorate in the event that UniCredit S.p.A. is downgraded and at the same time reflects the uncertainties regarding the design and timing of UniCredit's resolution strategy.

Investments

In the 2018 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 beyond those apart from the investments required in the ordinary course of business.

Financial Review (CONTINUED)

Report on subsequent events (events after the reporting period)

In January 2019, we reached an agreement on the sale of the associated company SwanCap Partners GmbH accounted for using the equity method. The shares are recognised at year-end in the balance sheet item "Non-current assets or disposal groups held for sale".

In addition, we reached an agreement with a purchaser in February 2019 on the sale of properties also recognised in the balance-sheet item "Non-current assets or disposal groups held for sale" that are held by our companies Acis Immobilien- und Projektentwicklungs GmbH & Co. Oberbaum City KG and NF Objekte Berlin GmbH.

Ms Beate Dura-Kempf resigned from the Supervisory Board of UniCredit Bank AG as an employee representative with effect from the end of 31 January 2019. For the remaining term of her office, Ms Claudia Richter was appointed to the Supervisory Board as an employee representative by Munich Local Court with effect from 8 February 2019.

On 6 February 2019 UniCredit S.p.A. announced the reorganisation of the Group Senior Management Team of UniCredit S.p.A. This also involves the resignation of Gianni Franco Papa as the General Manager of UniCredit S.p.A. Gianni Franco Papa will also resign as the Chairman of the Supervisory Board of UniCredit Bank AG.

Forecast report/Outlook

Management's Discussion and Analysis and the rest of the Annual Report include statements, expectations and forecasts also concerning the future. These statements, expectations and forecasts are based on plans and estimates that are 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 be entailed in 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

Growth in the global economy is likely to weaken further in 2019. After an increase of roughly 3.6% in global output in 2018, we expect this to fall slightly to 3.4% in 2019. Besides a decline in economic performance in the USA, growth is also likely to contract in the eurozone. Many emerging and developing countries are likewise expected to lose momentum in 2019 as persistently high oil prices, a rise in US interest rates and a stronger US dollar exchange rate will adversely affect their economic development. Another negative factor for the global economy is likely to be the somewhat weaker growth in China. Besides the ongoing transformation of the economy, this is attributable to stricter allocation guidelines for real estate loans and house purchases and the related process of normalisation in the Chinese real estate market. In addition, there is still uncertainty about global trade due to the yet unforeseeable consequences of an increase in protectionist measures by the US administration and the outcome of the Brexit negotiations. In the eurozone, the budget negotiations between Italy and the EU Commission might also weigh down on the markets in autumn 2019 and poorer financing conditions might hinder economic growth. However, there are currently signs of an easing of this situation.

Weaker global growth in 2019 will be mainly attributable to the forecasted weakening of the US economy. On account of expiring fiscal measures, we expect real GDP growth in the USA to come to 2.4% in 2019 and thus be 0.5 percentage points lower than in the previous year. In this context, fiscal stimuli are expected to probably begin expiring in the second half of 2019. Yet other factors will also adversely affect US growth in 2019: Firstly, the labour market will continue to lose momentum as job offers will increasingly lead to a bottleneck. With an unemployment rate of less than 4%, the increase in the working population will no longer suffice to ensure a continued high level of growth in employment. As a result, we expect monthly salary increases to slow down in 2019. In combination with the diminishing effects of tax cuts, this is projected to lead to a perceptible decrease in the income gains available. Secondly, there will probably be less investment expenditure as a weaker oil price will impact particularly commodity-related sectors. Furthermore, we anticipate an unfavourable external environment, characterised by a slower pace in global economic growth coupled with greater uncertainty about additional duties on Chinese imports. Finally, financial terms are also expected to be less accommodating, reflecting a combination of higher interest rates, greater volatility on stock markets and a stronger US dollar.

In 2019, we project lower growth of 1.4% in the eurozone and thus anticipate a slight decline compared with the previous year (up 1.8%). In this context, particularly the decline in growth in the USA and weaker global trade in the second half of 2019 will impact the economy in the eurozone. By contrast, domestic demand will probably be an important mainstay of economic activities again in 2019. Despite the economic slowdown, employment growth has been robust to date, even though we anticipate a slight slow-down in recruitments this year. In addition, consumer confidence has declined slightly but it is still at a high level which is why private consumption should record stable growth at just under 1.5% again this year. From an accounting perspective, the budgets are in good shape as the debt burden in most countries is still low despite strong growth in consumer lending. There is a backlog in expenditure, particularly in the construction sector, which means that the recovery in capital expenditure in 2019 will continue at an annual pace of around 2.5–3%. The risks entailed in our forecasts are particularly

political uncertainties (which includes an increasing intensification of protectionist measures of the US administration and corresponding countermeasures by trading partners, a disorderly Brexit and a renewed escalation of the budget negotiations between Italy and Brussels).

As the ECB's bond-buying programme ended in December 2018, the focus in 2019 is on the liquidity supply of banks and on the point in time at which the first hike in interest rates is going to take place. With regard to liquidity, we expect the ECB to ultimately decide to extend its TLTRO programme by around two years. As far as interest rate policy is concerned, the ECB is likely to leave the refinancing rate unchanged at 0% and the deposit facility rate at minus 0.4%. We expect consumer price inflation in the eurozone to fall to 1.4% for the full year 2019.

At country level, we forecast a GDP growth rate in Germany of 1.3% (not calendar-adjusted) in 2019 compared with the previous year (2018: up 1.4%). At 1.2%, growth in France is projected to be slightly lower in 2019 than in 2018 (up 1.5%). For Italy, we also expect economic growth at a lower rate of 0.5% in 2019 compared with 0.8% in the previous year, and the economic recovery is likely to continue to weaken in Spain from 2.6% in 2018 to an estimated 2.1% in 2019. By contrast, we anticipate unchanged year-on-year growth of 1.4% in 2019 for the United Kingdom.

The key driver of German economic growth in 2019 is likely to be domestic consumption whereas foreign trade will probably have a dampening effect due to the global slow-down in the second half of the year. Moreover, particularly manufacturing companies might suffer from a further escalation of the trade conflicts in the USA-China-Europe triad. In the wake of weaker global growth and the associated lower growth rate in exports, the investments in Germany are expected to be less dynamic in the course of the year.

Financial Review (CONTINUED)

By contrast, private consumption should record solid growth on the back of a historically low unemployment rate coupled with sustained wage increases. Further positive stimuli are likely to come from fiscal measures and an expansion of government consumption. But the construction industry in particular will probably once again make a significant contribution to overall economic growth in 2019, which is signalled not least by very high business expectations and a large backlog of completions in comparison with the building permits granted.

Banking sector development in 2019

The ECB discontinued its monthly net purchases of bonds from the beginning of 2019 after making monthly purchases in 2018 of €30 billion (January to September 2018) and €15 billion (October to December 2018). However, the ECB will remain a key market participant in the coming years. As at November 2018, the ECB had purchased €2.6 trillion in assets and will reinvest the maturing assets. At the same time, the prospect was held out of an increase in the key interest rates but not before the summer of 2019, which might also be delayed.

From a regulatory perspective, there were several important developments for banks again in 2018: One major issue was the further harmonisation of the creditor hierarchies of banks in Europe. Germany adopted a law on the readjustment of the insolvency hierarchy of banks that entered into force on 21 July 2018 and enables German banks to issue non-preferred senior unsecured bonds. Every other country had also amended its national insolvency hierarchies for banks by the end of 2018. Further regulatory issues were the topping up of the required TLAC and MREL ratios through the issuance of suitable debt instruments, the Targeted Review of Internal Models (TRIM) by the ECB, stricter regulatory expectations on the part of the ECB regarding loan loss provisions for new non-performing loans and receivables, the entry into effect of IFRS 9 as per 1 January 2018 as well as the new Markets in Financial Instruments Directive (MiFID II) and the related Regulation on Markets in Financial Instruments (MiFIR), which entered into effect on 3 January 2018.

In addition, the final Basel III reform package was adopted at the end of 2017. The new regulations relate mainly to the calculation of credit and operational 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, which restricts the scope of banks in calculating their need for own funds with their own risk quantification methods, represents a significant change. The output floor will be implemented in stages between 2022 and 2027. Although a considerable increase in requirements is not expected for the global banking sector overall, the Basel III regulations are likely to result in higher capital requirements for individual financial institutions. These institutions are required to gradually bolster their capital cover by 2027.

After an agreement was reached in the European Council in May 2018 on measures to reduce risks in the banking sector, a fundamental agreement was reached in December 2018 in the trilogue between the three different EU institutions. The political decision on the banking package was passed on 15 February but is to be adopted before the European elections in May 2019. The legislative text on the banking package is likely to be published by June 2019 at the latest. The package includes amendments to requirements for own funds (CRR II and CRD V) and to the recovery and resolution of failing banks (BRRD II). There is also political agreement on a greater role to be played by the European Stability Mechanism (ESM). In addition, the leverage ratio is projected to expand capital requirements. Moreover, the MREL and TLAC concepts will be harmonised and also contain a definition of TLAC requirements for globally systemically important banks and MREL requirements for other important banks. However, no major progress was made on the political side in the area of the European deposit insurance scheme (EDIS), although also the European Banking Authority (EBA) established that risks have been reduced in the European banking sector.

Development of HVB Group

The currently difficult-to-assess macropolitical environment in Europe, caused, among other things, by a potentially disorderly Brexit, the meanwhile somewhat defused budget dispute between the EU and Italy and the uncertainty about the impact that any new protectionist measures by the US administration will have on global trade are continuing to lead to structurally high volatility on 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 2019 financial year based on the satisfactory development in our operating activities in the 2018 reporting year, our solid business model and the assumption that the political and macroeconomic environment will remain relatively stable. Our profit before tax should turn out considerably higher than in the reporting year, which, among other things, was heavily impacted by a non-recurring effect from an allocation to the provisions. We do not expect this effect to have any further impact in 2019. At the planned tax rate, it should be possible to post an equally good result in profit after tax.

As described above in the section entitled "Transform 2019", we are proceeding on the assumption that the initiatives planned on the earnings and cooperation side in the Transform 2019 programme will develop positively and stimulate growth in operating income. To date, this programme has focused on cost reductions. On the earnings side, we expect growth to be stimulated by the acquisition of new customers and an increase in market shares in regions with high potential. We are also developing new sales channels through more intensive digitalisation in response to customer requests for new, more flexible advisory forms. On the cooperation side, we anticipate additional synergies through better interaction between the different business segments and the associated use of the respective product expertise which is likely to lead to an increase in cross-selling. All these measures should serve to ensure that slightly higher operating income is generated than in the reporting year.

Through the consistent implementation of our measures under the Transform 2019 programme and by continuing our strict cost management, which has already been in place for many years, there will be another slight reduction in operating costs compared with the reporting period. This should also result in a slight improvement in the cost-income ratio in the 2019 financial year compared with 2018.

Compared with the current low level, we expect a significant increase in credit impairment losses IFRS 9 in the 2019 financial year, which should be seen as returning to a normal level. In the reporting year, credit impairment losses IFRS 9 benefited from the generally positive economic development in Germany and were again very low by historical standards.

Overall, we assume for the 2019 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 to the overall result of HVB Group. Particularly in the Commercial Banking and CIB business segments, we project a significant improvement in the results through the cessation of the non-recurring effect described above. In the GCC and Other/consolidation segments, the planning does not contain any non-recurring effects which means that a contribution to earnings is assumed that will be considerably lower than that of the 2018 financial year.

For the 2019 financial year, we continue to expect an excellent capital base without any change. The CET1 ratio will probably fall moderately below the level of the previous year as we project an increase in risk-weighted assets, particularly due to the planned expansion in the lending volume.

Financial Review (CONTINUED)

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 an important member of one of the largest, best-positioned banking groups in Europe, UniCredit. It is one of the largest private financial institutions in Germany and has core competence for all UniCredit customers, products and markets in Germany. In addition, it is the centre of competence for the international markets and investment banking of UniCredit as a whole. HVB Group operates in a domestic market which is the largest in the whole of Europe in terms of economic power, population and the number of companies and upscale private customers. 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 exploit its regional strength coupled with the opportunities that arise from the network of a leading European banking group for the benefit of its customers.

With a business policy geared to sustainability, an excellent capital base, the measures for boosting efficiency and earnings in the Transform 2019 programme and specific growth initiatives, HVB Group stands for innovation, reliability, stability and security. This results in the opportunities described below.

The Commercial Banking business segment is notable for its universal bank offerings guaranteed to meet customers' needs to a high standard, particularly through the close cooperation between the business units in Commercial Banking and with the product specialists in Corporate & Investment Banking. The focus is placed on customers prepared to pay an appropriate price for premium services.

Specifically, we see the following growth 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 customer business through its positioning as a principal or core bank and the acquisition of new customers. At the same time, the Unternehmer Bank has positioned itself as a full-service solution provider in all customer-relevant sales channels. As a strategic business partner, the Unternehmer Bank is

heavily involved 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 segment. For this reason, the growth initiatives of the Unternehmer Bank cover precisely these needs.

In the Private Clients Bank business unit, we will continue to pursue the successful path we have embarked upon of fundamentally modernising our retail banking business by expanding our digital offering, thus underscoring our positioning as a quality provider. We are proactively focusing on demanding customers seeking professional advice. Here we aim to actively increase our market share to improve the profitability of our Private Clients Bank. We are striving to achieve this by creating clear lines of demarcation between us and the competition, providing first-class individualised advisory expertise, offering a modern omni-channel business model, loyalty pricing and accentuating our premium market presence. Among other things, the latter is characterised by our modern branches and a network of specialists. The consistent use of the 360-degree comprehensive advisory approach illustrates our advisory and product expertise in the market which aims to sustainably increase the prosperity of our customers and thus maintain long-term, trusting customer relationships. Offerings on all aspects of private assets, a business model that has received external awards as well as innovative and customised products and services underscores our commitment to be the best bank for customers in Germany – with quality, innovation and support.

The strategic emphasis in the CIB business segment is on consistent risk-adequate pricing and enhancements in strategic customer transactions and solutions to ensure a sustainable and long-term business relationship. An integrated value chain comprising network and product specialists enables us to provide top-drawer advice complete with solution-oriented approaches and wide-ranging financing and capital-procurement opportunities. We see further business potential in the expansion and improved use of our strong 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 close cooperation between the Private Clients Bank and the Unternehmer Bank as well as CIB. As a result of the fully 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. Besides Eastern and Western Europe, the Unternehmer Bank serves its customers in all regions of strategic importance. Extensive opportunities for new business also arise by providing support in succession planning. HVB Group can respond quickly and flexibly to expansion opportunities arising on the market. On account of its excellent capital base, it is already well equipped for any tightening of regulatory requirements and will be able to actively operate even in that kind of scenario.

A success component at HVB Group entails setting strict limits for risk and managing the Bank with an awareness of risk. This approach is set to continue going forward. The HVB portfolio is in very good shape in terms of risk content and can be considered as entailing below-average risk exposure.

For years, HVB Group has been evolving into a bank with strong and consistent cost management. HVB Group is seeking to constantly enhance its operating costs over the coming years as well by exploiting synergies of overlapping functions particularly in the context of its Transform 2019 programme. In this regard, we are making use of the opportunities to cooperate within UniCredit across country and company lines and applying best practices wherever they can be found.

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 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 the expectations of customers 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 diverse models in various areas in terms of digitalisation.

As an attractive employer, 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.

We are part of a successful, pan-European commercial bank, with a simple business model and a fully plugged in Corporate & Investment Banking, delivering a unique Western, Central and Eastern European network to our extensive client franchise.

Everything we do is based on our Five Fundamentals:

Our top priority, at all times, is to serve our customers the very best we can (Customers First). To do this, we rely on the quality and commitment of our people (People Development), and on our ability to cooperate and generate synergies as "One Bank, One UniCredit" (Cooperation & Synergies). We take the "right" risks, which we carefully manage and monitor (Risk Management), whilst being very disciplined in executing our strategy (Execution & Discipline).

We would expressly like to thank our employees at this point. Their willingness to embrace change and at the same time to help secure our commercial success forms the basis for our good performance. We also wish to thank the employee representatives for their constructive cooperation in spite of the very difficult issues. This gives all of us the confidence we need to master the challenges of the future.

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 are presented separately in the section of the Financial Review in the Management's Discussion and Analysis 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/consolidation

The Group Corporate Centre (GCC) is shown as a separate business segment for the first time in the 2018 reporting year. The previous-year figures have been adjusted accordingly. In the past, the GCC was part of the "Other/consolidation" business segment.

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 2018 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 potential loss of on- and off-balance-sheet positions in the trading and banking books that can arise in response to adverse changes in market prices (interest rates, equities, credit spreads, foreign exchange and commodities), other price-influencing parameters (volatilities, correlations) or trading-related events in the form of default or change in credit ratings of securities (specific price risk for interest net positions).

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 failed 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.
- **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 other primary risks.

Risk Report (CONTINUED)

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 (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 assumes an interruption of the growth in the major economies of the European Currency 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 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 (BaFin), specifically by its insurers and pension funds supervision, 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 and 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 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

Risk Report (CONTINUED)

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. Regional Planning & Controlling has also been tasked with central business management, cost controlling and equity capital management. 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.

Asset Liability Committee

The Asset Liability Committee (ALCO) makes decisions at its monthly meetings on the asset/liability management of HVB. 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's reputational risks. It is the decision-making body for all business transactions and other activities that give rise to a potential 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

Loan Loss Provision Committee

The Loan Loss Provision Committee (LLPC) is kept informed about developments in HVB's restructuring/workout portfolio and takes decisions within HVB regarding:

- the submitted risk provision requests, where these lead to allowances in excess of €5 million resulting from the initial assessment or follow-up assessments entailing a material change in the risk assessment
- debt forgiveness in excess of a risk provision/forgiveness competence of €5 million
- internal impairments at HVB in excess of a competence value I of €250 million or greater than 5% of HVB's regulatory equity capital

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 a regular basis and, where necessary, modified.

Risk Report (CONTINUED)

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 ensure 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 move within the corridor 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 restrictions 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

To plan the regulatory capital taking account of regulatory requirements, we apply 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)
- equity funds 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)

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

- carrying out of a rolling eight-quarter projection on a monthly basis to provide an ongoing forecast of the capital ratios of HVB Group
- carrying out of quarterly stress tests of the regulatory capital ratios under various scenarios (details on the stress tests can be found in the section entitled "Stress tests", see also the section entitled "Consistent liquidation approach/going concern approach")

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

All in all, HVB Group satisfies both the regulatory requirements arising from the statutory provisions and the minimum capital ratio specified by the European Central Bank (ECB) under the Supervisory Review and Evaluation Process (SREP).

HVB and UniCredit S.p.A. agreed with the relevant regulators that HVB and HVB Group would not fall below an equity funds ratio of 13%. This agreement will remain in force until further notice. The equity funds ratio of HVB Group was 20.6% at the end of December 2018 (31 December 2017: 22.0%).

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. On account of the low risk content, the economic capital for small legal entities of HVB Group is approximated with no differentiation by risk type.

In addition, the group-wide model risk cushion, which takes account of the model risk, was included in the calculation of the ICAAP at year-end 2018. The model risk contribution is added to the aggregate economic capital to obtain the internal capital.

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

Internal capital after portfolio effects (confidence level 99.90%)

Broken down by risk type	2018		2017	
	€ millions	in %	€ millions	in %
Credit risk	3,144	37.6	2,734	34.8
Market risk	2,004	23.9	2,023	25.7
Operational risk	1,263	15.1	1,318	16.8
Real estate risk	475	5.7	386	4.9
Business risk	234	2.8	280	3.6
Aggregated economic capital	7,120	85.1	6,741	85.8
Pension risk	874	10.4	924	11.7
Financial investment risk	185	2.2	163	2.1
Model risk cushion	161	1.9	—	—
Economic capital of small legal entities	28	0.3	34	0.4
Internal capital of HVB Group	8,368	100.0	7,862	100.0
Available financial resources of HVB Group	17,170		17,475	
Risk-taking capacity of HVB Group, in %	205.2		222.3	

Risk Report (CONTINUED)

Internal capital has increased by €506 million in comparison to 31 December 2017. This is mainly due to the increase in economic capital in credit risk and the introduction of 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%)

Broken down by business segment	2018		2017	
	€ millions	in %	€ millions	in %
Commercial Banking	1,828	24.9	1,634	23.6
Corporate & Investment Banking	4,627	63.1	4,698	67.7
Group Corporate Centre	514	7.0	329	4.7
Other/consolidation	363	5.0	276	4.0
Internal capital (without pension risk and without the model risk cushion) of HVB Group	7,332	100.0	6,938	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 liquidation approach/going concern approach

HVB Group controls its risk-taking capacity under a consistent liquidation approach (gone-concern approach), where the fundamental aim of protective measures is to protect senior lenders. At the same time, appropriate figures are also defined for the regulatory core capital backing alongside targets, triggers and limits for the risk-taking capacity.

The going-concern approach (the assumption that operations will continue) is additionally allowed for by critically evaluating and incorporating as appropriate the results of the regular Bank-wide stress tests when defining targets, triggers and limits for both the risk-taking capacity and the regulatory capital backing. There will be a transition in the control approach from the liquidation approach to the going-concern approach in the course of 2019.

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 a HVB Group recovery plan since 2015. For this reason, HVB works closely together 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 2018 and has been in effect since then.

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 the 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, is based on a gone-concern approach. Under this approach, 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 equity funds (available financial resources). When determining the available financial resources, the available capital is viewed from an economic standpoint. In other words, the calculation is made in accordance with a value-oriented approach, under which shareholders' equity shown in the balance sheet is adjusted for fair value adjustments. Furthermore, intangible assets, deferred tax assets and effects of own credit rating are deducted and minority interests are only taken into account to the extent of the risk-bearing portion. At the same time, subordinated liabilities recognised as regulatory capital are included. The available financial resources at HVB Group totalled €17,170 million at 31 December 2018 (31 December 2017: €17,475 million).

With internal capital (including the model risk cushion) of €8,368 million, the risk-taking capacity for HVB Group is 205.2% (31 December 2017: 222.3%). This figure is much higher than the target HVB Group has set itself. The decrease of 17.1 percentage points in comparison with 31 December 2017 for HVB Group is attributable to a decrease of €305 million or 1.7% in the available financial resources and a simultaneous increase of €506 million or 6.4% in the internal capital in 2018. The decline in the available financial resources is the result of changes in individual components that had opposing effects in some cases; but above all, maturities in subordinated capital and a negative development in fair-value adjustments (elimination of effects of own credit rating and revaluation reserve).

Limit concept

The risk limit system is a key component of the ICAAP at HVB Group. Its purpose is to ensure the Bank's risk-taking capacity at all times 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, as an aggregate amount for the small legal entities 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 ensured at all times. The correlation effects included in the internal capital cannot be influenced by the business segments and relevant subsidiaries. Consequently, economic capital limits adjusted for these effects and the risk-type-specific limits are used for controlling purposes in the business segments and relevant subsidiaries.

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 monitored regularly and presented in the Bank's reports on a monthly basis. After six months of the year, the limits are additionally checked to ensure their adequacy and, if necessary, adjusted.

Risk Report (CONTINUED)

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 2018:

- Contagion scenario – focusing on 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

Taking account of macroeconomic developments in 2018, 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 would currently be met and complied with even after 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 on a regular basis 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. Adequate monitoring, the suitability of which is reviewed at regular intervals, is used as the steering approach for the risk types of financial investment risk, real estate risk and pension risk.

The risk management processes for concentrations have been optimised with regard to the interlinking of 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 regularly, 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 2018. 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 2018 risk inventory was presented to the Risk Committee and HVB's Management Board in September 2018 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, 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 do not correspond to 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, to be communicated to the Risk Committee and the units involved in risk management, among others.

Risk types in detail

Where the measurement methods for individual risk types have been refined, details are presented under the risk type concerned.

1 Credit risk

Definition

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 of the contracting party, meaning it is no longer in a position to meet its contractual obligations. Credit risk comprises 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.

Risk Report (CONTINUED)

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: Settlement risk is defined as the risk that the counterparty fails to meet its delivery or performance obligation on the due date while the Bank has already paid the consideration.
- Pre-settlement risk: Pre-settlement risk arises from the risk that the Bank has to replace a transaction on the market under less favourable conditions following a default by the counterparty.
- Money market risk (cash risk): Money market risk consists in the risk that the counterparty does not repay loans (taken out in cash).

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): Sovereign risk is the risk of the central government or central bank (or any agency backed by the government) defaulting, irrespective of the currency in which the debt is issued.

- Transfer and conversion risk: Transfer and conversion risk is the risk that the government takes measures due to the inability or unwillingness to pay with the objective of limiting the transfer of capital and/or convertibility of the currency, which leads to losses. War and civil war can similarly lead to a lack of solvency. Transactions contain transfer risk when they represent cross-border business (from the standpoint of the unit disbursing the loan) and are denominated in a foreign currency (from the borrower's standpoint). The borrower's credit risk is not classified as transfer risk; the transfer risk is measured separately. Delivery risk is included in transfer risk. Delivery risk is the risk of default on account of non-delivery caused by state intervention in the delivery contract or state-imposed delivery restrictions (in the case of project loans or commodity financing, for instance).

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.

HVB Group's successful strategy implemented in recent years of strictly limiting risk and managing the Bank in a risk-conscious manner was continued again in 2018. By selectively writing new business, employing active portfolio management and making effective use of professional restructuring and workout capacity, HVB Group has evolved into a bank that has a lower than average risk profile for the industry. The goal for 2018 was to continue applying this strategy and maintain the overall portfolio at a sustainable level.

Industry-specific controlling of credit risk had a positive effect. The details of industry-specific controlling are specified in the Industry Credit Risk Strategy. This strategy includes an assessment of the opportunities and risks for every industry, from which controlling signals and quantitative ceilings for new business are derived.

Active management of the exposure in the countries badly affected by the financial crisis also contributed to the positive development described. The strategy of HVB Group in its role as a universal bank was to concentrate on strong regional core markets like Switzerland, the UK, Belgium and France alongside the domestic market of Germany. The Spanish, Dutch and Scandinavian markets are primarily served by other UniCredit banks, with the exception of multinational core customers, who continue to be served by HVB Group. At the same time, the Markets unit in the CIB business segment will enter into credit risk and market risk subject to clearly defined standards in UniCredit's core countries as a result of the corporate function as UniCredit's investment bank.

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 banks)

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

The reference unit for setting limits on single-name concentrations are economic or legal borrower groups with an unsecured exposure of €50 million or more.

- industry concentrations

The limits are set in the same way as for industry controlling as part of the risk management programme at HVB Group.

- concentration limits for countries and regions

Exposures outside Germany are subject to the risk of a sovereign default and hence possibly related problems in the financial system. The concentration limit restricts the credit risk of all borrowers in a given country. Every country and region has been assigned a limit that reflects the risk appetite and the strategic orientation via controlling signals (overweight, underweight or neutral) of HVB Group. In addition, a limit is set for cross-border country risk exposure.

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.

Risk Report (CONTINUED)

Credit risk mitigation

In new lending, HVB pursues the strategy of applying all types of 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. An essential point in the formulation of collateral agreements and internal processes is ensuring that the collateral is legally enforceable.

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. Consequently, we place particular emphasis on the further development and refinement of our internal rating analysis instruments.

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.

HVB master scale with PD bandwidths

HVB RATING CLASS	AVERAGE PD	LOWER PD BANDWIDTH	UPPER PD BANDWIDTH
1	0.03%	0.001%	0.048%
2	0.08%	0.048%	0.121%
3	0.19%	0.121%	0.306%
4	0.49%	0.306%	0.775%
5	1.23%	0.775%	1.961%
6	3.12%	1.961%	4.965%
7	7.90%	4.965%	12.570%
8	20.00%	12.570%	99.999%
8-9/10	100%	100%	

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. Consequently, the refinement and annual validation of our LGD estimation methodology is a high priority for us.

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.

Risk Report (CONTINUED)

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.

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. These systems are available online at all key HVB Group facilities engaged in trading activities. 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 is making greater use of 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 €3,488 million, which is €430 million higher than the total reported value as at 31 December 2017 (€3,058 million).

Development of metrics by business segment

Broken down by business segment	EXPECTED LOSS ¹ € millions		RISK DENSITY in BPS ²		ECONOMIC CAPITAL ³ € millions	
	2018	2017	2018	2017	2018	2017
Commercial Banking	161	150	16	16	994	808
Corporate & Investment Banking	185	155	14	11	2,489	2,240
Group Corporate Centre	0	0	6	10	3	5
Other/consolidation	0	2	31	166	2	5
HVB Group	346	307	15	13	3,488	3,058

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.

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, moreover, 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 a mere €44 million (31 December 2017: €127 million).

Risk Report (CONTINUED)

In 2018, the expected loss of HVB Group increased by €39 million and risk density by 2bps.

The expected loss in the CIB business segment rose by €30 million and the risk density by 3bps overall. This is mainly due to the recalibration of the PD model for global project financing and the related PD increase within the CIB business segment. In addition, the reduction of liquidity reserves, also in the CIB business segment, and the related change in the portfolio structure contributed to this development.

The increase of €11 million in the expected loss in the Commercial Banking business segment arises partly from business expansion but also from rating downgrades in the private customers and tourism industry groups.

The increase in the economic capital by business segment in 2018 essentially reflects the updating of the model parameters. The aforementioned rise in the risk density due to a change in the portfolio structure is another reason for the increase in the economic capital in 2018.

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

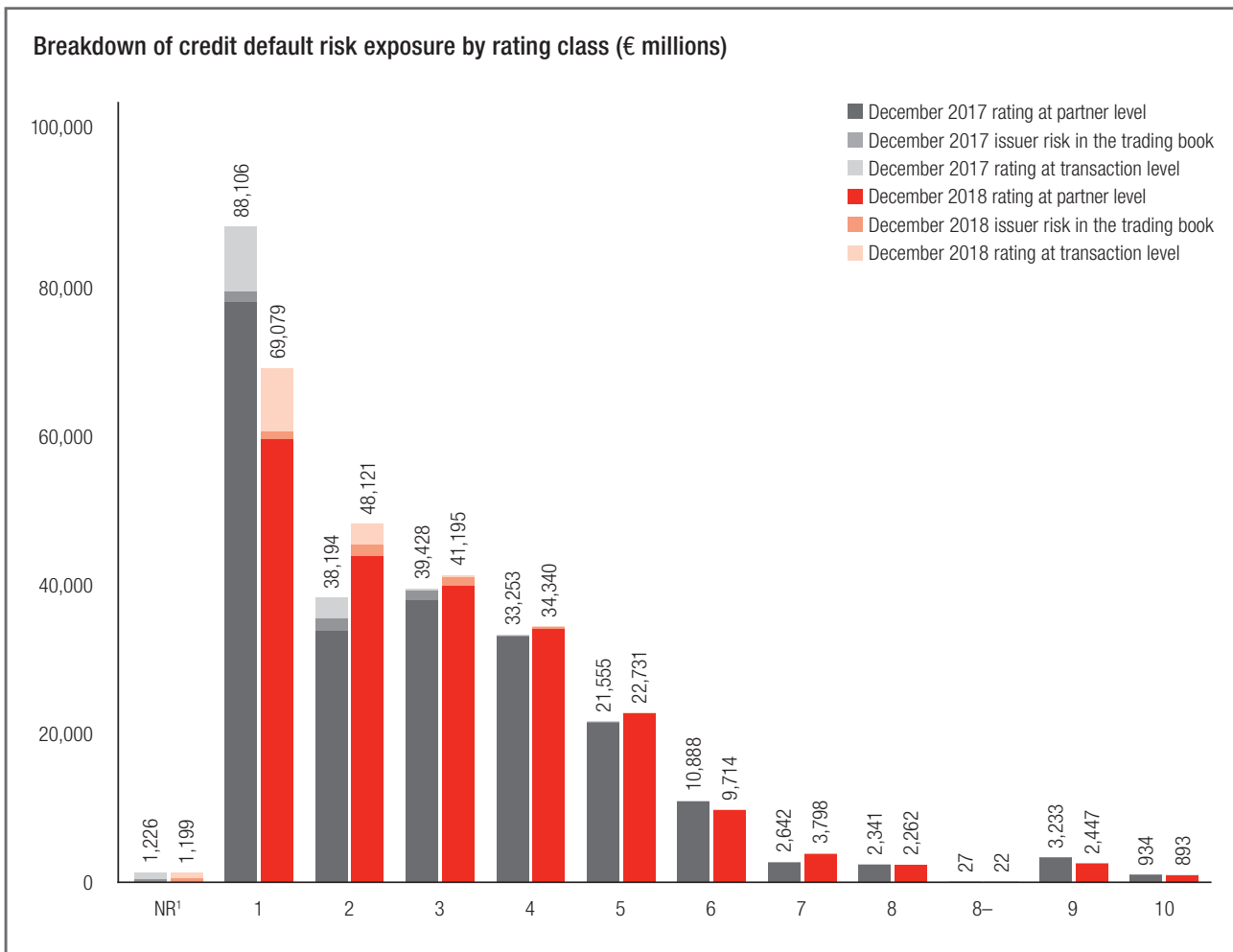
(€ millions)

Broken down by business segment	CREDIT DEFAULT RISK EXPOSURE		OF WHICH COUNTERPARTY RISK		OF WHICH ISSUER RISK IN BANKING BOOK		OF WHICH ISSUER RISK IN TRADING BOOK	
	2018	2017	2018	2017	2018	2017	2018	2017
Commercial Banking	100,563	96,340	2,823	2,661	—	—	—	—
Corporate & Investment Banking	134,941	145,121	18,346	16,011	36,947	38,557	4,270	4,836
Group Corporate Centre	192	227	186	205	6	10	—	—
Other/consolidation	105	139	0	3	0	—	—	—
HVB Group	235,801	241,827	21,355	18,880	36,953	38,567	4,270	4,836

HVB Group's credit default risk exposure decreased by €6,026 million in 2018.

In the CIB business segment in particular, the exposure fell by €10,180 million primarily on account of the sharp reduction in liquidity reserves at Deutsche Bundesbank and in the public sector that are, however, not only set against growth in business at other financial institutions (including foreign sovereigns) but also in other industries.

In contrast, exposure in the Commercial Banking business segment increased by €4,223 million in the private customers, real estate and automotive industries, among others.



1 Not rated.

The rating structure of HVB Group changed over 2018 mainly on account of the development of exposure in the financial institutions (including foreign sovereigns) and public sector (including German sovereign) industry groups.

This is contrasted by growth in business at other financial institutions (including foreign sovereigns) and in other industry groups of other rating classes.

In rating class 1, exposure fell by €19,027 million mainly on account of the significant reduction in HVB Group's liquidity reserves at Deutsche Bundesbank and in the public sector (including German sovereign).

Risk Report (CONTINUED)

Development of metrics by industry group

Broken down by industry group	CREDIT DEFAULT RISK EXPOSURE € millions		OF WHICH ISSUER RISK IN TRADING BOOK € millions		EXPECTED LOSS ¹ € millions		RISK DENSITY in BPS ²	
	2018	2017	2018	2017	2018	2017	2018	2017
Financial institutions								
(including foreign sovereigns)	58,894	70,813	2,970	3,178	29	29	5	4
Real estate	27,777	26,446	66	61	26	24	9	9
Public sector (including German sovereign)	20,078	25,261	307	411	2	2	1	1
Energy	13,938	12,720	142	218	59	35	43	29
Special products	12,532	12,891	17	0	8	7	6	5
Food, beverages, agriculture	11,155	10,008	48	83	16	16	15	17
Chemicals, pharma, healthcare	10,430	10,337	162	102	19	18	18	18
Automotive	8,812	7,485	125	118	9	7	11	10
Consumer goods, textile industry	6,657	6,387	22	58	16	13	25	21
Machinery	5,854	4,964	8	18	14	14	25	28
Services	5,771	5,855	39	78	16	20	29	36
Metals	5,702	5,435	83	108	13	16	24	31
Construction, building materials	5,606	4,939	32	33	9	10	16	20
Telecommunication, IT	5,448	4,470	148	180	11	9	22	21
Transport, travel	4,744	4,589	54	98	11	8	25	20
Shipping	3,047	3,527	1	5	41	43	177	177
Electronics	2,954	2,059	20	29	3	3	11	14
Media, paper	2,449	2,089	11	22	6	4	25	19
Tourism	2,428	2,081	10	32	7	4	29	21
Private customers	21,005	19,347	—	—	31	26	15	13
Others	520	124	5	6	0	2	3	200
HVB Group	235,801	241,827	4,270	4,836	346	307	15	13

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%.

The portfolio has a balanced structure and is diversified across the various industries.

How the top 5 industries developed within HVB Group is described below.

Financial institutions (including foreign sovereigns)

The exposure in the financial institutions (including foreign sovereigns) industry group fell significantly by €11,919 million as at 31 December 2018. This development is exclusively attributable to the reduction in liquidity reserves at Deutsche Bundesbank. A portion of this amount was reinvested both at other state institutions and issuers, and in other industries. There was no change in the expected loss which is within the range of normal portfolio development. The risk density increased slightly from 4bps to 5bps.

Rising costs from regulatory requirements and in connection with compliance (fines and investments), together with falling earnings due to partially modified business models, less demand for credit and the ongoing historically low level of interest rates led to continued strong downward pressure on margins throughout the industry group. The earnings of European banks in particular remained below those of major US banks. The provision of liquidity to banks is unproblematic in most cases. ECB policies may lead to negative interest rates for deposits in solitary cases. The banks have a stable capital base, but ten years down the line from the global financial crisis, it is still not possible to talk of a lasting recovery in the sector.

Some new geopolitical risks as well as existing ones that are intensifying again are causing turbulence and volatilities on the financial markets on a regular basis.

HVB Group has deployed a monitoring tool known as the "radar screen for financial institutions/banks" in order to be in a position to promptly identify and counter negative developments within the banking sector. A change in the exposure strategy will be adopted at short notice should bank downgrades be noted.

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 the 31 December 2018 reporting date increased by €1,331 million and the expected loss by €2 million in comparison to 31 December 2017.

The German real estate market saw a continuation of its boom phase once again in 2018. This development still has its origins in the historically extremely low long-term interest rates, the robust labour market and the persistently strong demand for residential and commercial properties – especially in conurbations. The change in investment patterns seen during the most recent financial crisis in 2008 led to large shifts of assets into real estate. The purchase prices frequently outstripped growth in rental charges and continue to do so. Counteracting effects can be identified in some regional sub-markets, due to demographic developments, among other factors.

Unresolved international conflicts and uncertainty as to developments in the situation surrounding Europe and increasing dangers from trade wars could lead to worsening economic prospects in coming periods, which could have an impact on the commercial real estate market in particular. In the case of residential properties, the core markets (including Berlin, Hamburg, Munich) are showing indications of market cooling and a normalisation of sales patterns, especially in the case of high-price properties.

Risk Report (CONTINUED)

Partly as a result of the conservative credit risk strategy for the real estate industry group that has been applied for years, the portfolio of existing properties remained robust and relatively low risk in 2018, and measured in terms of risk density, was successfully kept at an unchanged low level. In a multi-year comparison, a very good risk result (measured against the actual loss) was achieved in the real estate industry group in 2018. 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. Market observers, including Deutsche Bundesbank, warn of potentially overinflating prices and overheating markets.

Public sector (including German sovereign)

In the public sector (including German sovereign) industry group, the exposure decreased by €5,183 million in 2018. This is essentially attributable to the maturing liquidity reserves, a lack of corresponding investment opportunities and, to a certain extent, to a reallocation to other industry groups. The expected loss and the risk density remains unchanged in this context.

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.

Energy

As at the 31 December 2018 reporting date, exposure in the energy industry increased by €1,218 million. If one disregards the recalibration of the project finance rating that significantly influenced the parameters of a large transaction held in the portfolio for many years, the portfolio quality has improved with an expected loss of €15 million and a risk density adjusted to 12bps in 2018. The exposure of this large transaction continued to decrease in 2018 and there has been a substantial improvement in the economic parameters.

In line with the defined risk strategy, we are focusing on large multinationals in the energy sector (including oil and gas). The increase in exposure over the reporting period essentially results from an expansion in the loans issued to large companies with good credit ratings.

In the case of project loans on the renewable energy side, we are concentrating on projects in countries with a stable regulatory environment and ensuring compliance with our lending standards.

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).

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 under the 2018 risk strategy. This growth strategy was able to be implemented only to a certain extent in 2018. There was a further reduction in non-strategic transactions. As a result, the total volume of the special products portfolio lagged behind December 2017 somewhat. The expected loss and the risk density consolidated at a very low level.

In addition, details on further industry groups of relevance with regard to their development within HVB Group are described in the following.

Food, beverages, agriculture

The food, beverages, agriculture industry group saw an increase in exposure of €1,147 million with an unchanged expected loss in 2018. The rise in the exposure is mainly the result of new business with five key accounts, each with a very good rating. The risk density decreased accordingly by 2bps to 15bps.

Automotive

Exposure in the automotive industry group increased by €1,327 million as at the 31 December 2018 reporting date. This increase is distributed in almost equal proportions over new business with ten existing key accounts as well as new business with a large number of smaller accounts. Supported by our rigorous industry strategy and industry policies, the portfolio's high quality remains largely unchanged but the expected loss and the risk density have deteriorated slightly due to the ailing state of the automotive industry.

Shipping

Exposure in the shipping industry group continued to decrease, falling by €480 million to €3,047 million as at the 31 December 2018 reporting date. The expected loss fell slightly whereas the risk density remained the same at 177bps.

The industry situation improved overall in 2018, but is still not satisfactory in substantial areas.

HVB Group continues to apply a conservative strategy in its ship financing activities. The focus remains on managing the risk in the existing portfolio. After the significant portfolio reduction in the shipping industry in recent years, the reduction in the existing portfolio continued in 2018. In addition, customers repaid loans prematurely. At the same time, new business was written very selectively where this helped to enhance the quality of the portfolio.

Special focus facilities

HVB Group's portfolio includes the project financing for the BARD Offshore 1 (B01) wind farm completed in August 2013 (Ocean Breeze Energy GmbH & Co. KG is the owner and operator). It is located approximately 100 km off the German North Sea coast, to the north of the island of Borkum.

With an annual production recently recorded of 1.4 billion kWh (2018), B01 ranks among Germany's offshore wind farms with the greatest output (top 3). Its annual production is roughly equivalent to the annual energy needs of at least one million people for a whole year. A nominal output of up to 400 MW is achieved. Calculated from the date in December 2010 on which power was fed into the grid for the first time until the end of December 2018, more than 6.2 billion kWh of energy has been produced. The wind farm is designed for 25 years of operation.

Since the Bank took over the wind farm in 2014, some significant technical efficiency improvements have been made, for example in availability and effectiveness. Availability is now stable at the level of the industry standard. The high internal financing capability (cash conversion) of the wind farm has already enabled the continued repayment of the financed sum. Annual repayments of substantial amounts are intended to be made from the cash flow over the next years. On this basis, it is possible to uphold the assumption that the cash flow that can be generated in regular operation will be sufficient to ensure that the debt level will be repaid over a period that is customary in the industry group.

Exposure development of countries/regions

The following tables show the comprehensive 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	
	2018	2017	2018	2017
Germany	137,700	156,316	891	1,092
Italy	8,729	9,413	784	1,567
France	8,076	6,181	448	257
Spain	7,542	6,911	131	126
Ireland	6,290	6,046	43	46
Luxembourg	5,023	5,605	74	98
Netherlands	4,434	4,138	183	171
Austria	1,928	1,854	378	304
Belgium	1,340	319	34	94
Finland	339	330	40	21
Greece	201	237	—	—
Portugal	102	48	52	3
Cyprus	53	157	—	1
Malta	42	17	—	—
Slovenia	23	45	4	22
Lithuania	9	16	9	16
Latvia	6	2	4	—
Slovakia	3	7	1	2
Estonia	2	2	2	2
Supranational organisations and multilateral banks	2,481	2,057	99	—
HVB Group	184,323	199,701	3,177	3,822

Exposure developed within the framework set by the risk strategy for 2018. This was specifically true in light of the stabilisation seen to date in the eurozone economy. The increasing uncertainty engendered by Brexit could, however, have a negative impact on this. HVB Group will monitor this development on an ongoing basis and, if necessary, take suitable measures.

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. This portfolio is actively managed in accordance with market standards. The exposure to Italy also includes the exposure with UniCredit S.p.A., for which a separate strategy was defined. Italy's economic growth weakened in the second half of 2018, which means that growth is likely to amount to 0.8% for the full year 2018,

after 1.5% in 2017. The parliamentary elections in spring 2018 led to a strengthening of the Movimento Cinque Stelle and Lega political parties, who have now joined up to form a government. This government's intention to simultaneously increase expenditure and to significantly reduce taxes, regardless of the fiscal rules of the European Economic and Currency Union (EECU), has led to a serious conflict with the EU Commission. This conflict has been defused for the time being by the government declaring its willingness to plan a somewhat lower budget deficit for 2019. But a corrected budget will not significantly reduce the very high sovereign debt (in relation to the gross domestic product) either. One noteworthy positive aspect is that, contrary to previous declarations, the leaders of both government parties have now stated that they no longer strive towards Italy leaving the Eurozone, which is also rejected by a clear majority of the population.

Development of the weaker eurozone countries

The intense austerity and reform measures implemented in Spain and Portugal, countries formerly severely impacted by the euro crisis, have shown success, which in turn has led to an improved assessment overall by the capital markets. Spain, in particular, deserves special mention in this connection. It is likely to record relatively strong growth of 2.6% for 2018 despite a slight year-on-year slowdown. Real GDP growth of 2.1% is expected for 2019 against the backdrop of a weaker pace of global economic growth. Alongside the robust economic growth, Spain has significantly reduced the level of unemployment since 2015. Moreover, a gradual but persistent reduction in the sovereign debt ratio is becoming apparent. The political crisis in connection with the secessionist movement in Catalonia is a factor causing uncertainty, but it has not

yet had any major impact on the Spanish economy. The snap general election called for April 2019 is likely to result in a situation where it is once again difficult to form a government as the political landscape in Spain is also becoming increasingly fragmented. To date, even difficult political circumstances, such as the minority government of Pedro Sanchez, have not seriously affected economic development.

The portfolio in the weaker eurozone countries was again actively managed in 2018, albeit with different strategies.

The strategy of reduction continued to be applied for Greece in 2018.

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		OF WHICH ISSUER RISK IN TRADING BOOK	
	2018	2017	2018	2017
UK	11,316	9,194	243	249
USA	9,934	8,986	136	161
Switzerland	6,681	5,494	259	142
Japan	6,246	1,481	3	0
Asia/Oceania (without Japan, China, Hong Kong)	4,036	3,616	23	25
Western Europe (without Switzerland, UK)	2,248	1,788	124	104
China (including Hong Kong)	1,944	1,593	0	0
Turkey	1,925	2,441	12	5
Near/Middle East	1,761	1,686	—	0
Eastern Europe (without eurozone countries)	1,278	1,416	226	145
CIS/Central Asia (without Turkey)	1,193	1,007	28	86
Africa	1,148	1,149	5	10
North America (including offshore jurisdictions, without USA)	1,133	1,616	11	63
Central/South America	635	644	23	23
Without country classification	—	15	—	—
HVB Group	51,478	42,126	1,093	1,013

Risk Report (CONTINUED)

Over 2018, the total exposure to countries/regions outside the eurozone increased by €9,352 million especially on account of the growth in business in Japan.

Brexit

HVB Group is taking account of the possible consequences of Brexit in terms of the future development of its exposure in the UK, among other things.

Geopolitical flashpoints

On account of the ongoing conflict in eastern Ukraine and the difficult economic situation throughout the country, unsecured transactions with Ukrainian banks remain on hold. Russia's acts of intervention in Ukraine have led to a continuation of the existing sanctions imposed by the EU and USA that impact the cross-border business with Russia. This is reflected in the decline in exposure, as new business is not written unless all the sanctions are observed and customer interests have been taken into account on a case-by-case basis. Excluded from this are transactions with the UniCredit subsidiary in Russia, which shows an increase in business, with the result that the exposure of the CIS/Central Asia region increased year on year.

The Turkish economy has come under pressure primarily from the domestic policy issues since the failed coup d'état in the summer of 2016 and from the environment of gradually rising interest rates in the USA which is likely to make investments in emerging economies, such as Turkey, generally less attractive. In the second half of 2018, there was thus a substantial decrease in the foreign portfolio investments that have financed the country's large current account deficit to date. In view of this fact, the economy is likely to have entered a recession and an even greater contraction of the real gross domestic product can be expected for 2019. As a result, a strategy of reduction was adopted for business with Turkey posing a country risk.

The Near/Middle East region is additionally suffering from the growing tensions between Saudi Arabia and Iran and the fall in the oil price to a significantly lower level since mid-2014. This is forcing Saudi Arabia and the Gulf States to make downward adjustments to public spending in the medium term despite their considerable fiscal reserves, an action that might give rise to discontent in their respective populations. Furthermore, there are political risks due to the confrontation between several Gulf States including Saudi Arabia and Qatar.

Financial derivatives

Alongside the goal of generating returns, derivatives are employed to manage market risks (in particular, risks arising from interest-rate fluctuations and currency fluctuations) resulting from trading activities, 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 2018 totalled €60.7 billion (31 December 2017: €59.0 billion).

In accordance with the regulatory provisions under Basel III and 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 2018 (31 December 2017: €4.7 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.

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	2018	2017	2018	2017	2018	2017
Interest rate derivatives	852,766	899,350	761,605	2,513,721	2,267,118	46,707	48,233	42,543	44,105
OTC products									
Forward rate agreements	243,160	—	—	243,160	42,402	5	2	4	2
Interest rate swaps	526,207	814,350	660,050	2,000,607	1,940,630	42,589	44,078	38,238	39,207
Interest rate options									
– purchased	6,786	36,809	52,462	96,057	96,376	3,533	3,467	471	382
– written	8,427	41,192	49,053	98,672	96,202	576	435	3,829	4,251
Other interest rate derivatives	11,388	17	—	11,405	51	4	—	1	1
Exchange-traded products									
Interest rate futures	50,036	6,982	—	57,018	42,867	—	—	—	—
Interest rate options	6,762	—	40	6,802	48,590	—	251	—	262
Foreign exchange derivatives	224,235	35,652	6,937	266,824	306,464	3,234	3,508	3,624	3,776
OTC products									
Foreign exchange forwards	180,126	22,072	1,837	204,035	244,408	2,677	3,024	3,008	3,156
Foreign exchange options									
– purchased	21,203	6,925	2,686	30,814	30,707	356	343	205	175
– written	22,686	6,655	2,414	31,755	31,085	175	132	411	445
Other foreign									
exchange derivatives	220	—	—	220	262	26	9	—	—
Exchange-traded products									
Foreign exchange futures	—	—	—	—	2	—	—	—	—
Foreign exchange options	—	—	—	—	—	—	—	—	—
Cross-currency swaps	56,050	100,238	43,975	200,263	181,678	5,666	4,405	5,519	3,943
Equity/index derivatives	34,015	34,411	11,486	79,912	87,385	3,271	2,111	3,119	2,913
OTC products									
Equity/index swaps	5,077	5,620	567	11,264	12,710	526	160	452	163
Equity/index options									
– purchased	2,286	2,189	765	5,240	6,015	268	251	48	190
– written	8,211	8,139	4,417	20,767	26,108	384	70	562	593
Other equity/index derivatives	425	299	131	855	1,204	55	34	2	1
Exchange-traded products									
Equity/index futures	4,988	770	1,023	6,781	7,594	—	9	—	9
Equity/index options	12,682	16,591	4,506	33,779	33,754	2,038	1,587	2,055	1,957
Equity swaps	346	803	77	1,226	—	—	—	—	—
Credit derivatives¹	13,380	13,805	1,399	28,584	40,731	223	385	341	443
Other transactions	8,655	3,248	435	12,338	12,535	1,568	375	807	529
HVB Group	1,189,101	1,086,704	825,837	3,101,642	2,895,911	60,669	59,017	55,953	55,709

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 €738,277 million as at 31 December 2018 (thereof credit derivatives: €3,194 million).

Risk Report (CONTINUED)

Derivative transactions by counterparty type

(€ millions)

	FAIR VALUE			
	POSITIVE		NEGATIVE	
	2018	2017	2018	2017
Central governments and central banks	7,188	7,086	1,242	1,306
Banks	30,729	29,979	32,556	32,737
Financial institutions	19,232	19,701	20,164	19,719
Other companies and private individuals	3,520	2,251	1,991	1,947
HVB Group	60,669	59,017	55,953	55,709

Credit derivatives

(€ millions)

	NOMINAL AMOUNT			TOTAL		FAIR VALUE			
	RESIDUAL MATURITY					POSITIVE		NEGATIVE	
	UP TO 1 YEAR	MORE THAN 1 YEAR UP TO 5 YEARS	MORE THAN 5 YEARS	2018	2017	2018	2017	2018	2017
Banking book	14	72	8	94	25	2	—	9	—
Protection buyer									
Credit default swaps	14	72	5	91	25	2	—	9	—
Total return swaps	—	—	—	—	—	—	—	—	—
Credit-linked notes	—	—	3	3	—	—	—	—	—
Protection seller									
Credit default swaps	—	—	—	—	—	—	—	—	—
Total return swaps	—	—	—	—	—	—	—	—	—
Credit-linked notes	—	—	—	—	—	—	—	—	—
Trading book	13,366	13,733	1,391	28,490	40,706	220	385	331	443
Protection buyer									
Credit default swaps	6,616	6,770	599	13,985	18,588	73	14	137	356
Total return swaps	19	495	66	580	285	7	2	115	35
Credit-linked notes	10	101	60	171	2,494	5	6	2	29
Protection seller									
Credit default swaps	6,721	6,348	658	13,727	18,497	135	361	76	23
Total return swaps	—	—	—	—	—	—	—	—	—
Credit-linked notes	—	19	8	27	842	—	2	1	—
HVB Group	13,380	13,805	1,399	28,584	40,731	222	385	340	443

Credit derivatives by reference asset

(€ millions)

	NOMINAL VOLUME				
	CREDIT DEFAULT SWAPS	TOTAL RETURN SWAPS	CREDIT-LINKED NOTES	TOTAL 2018	TOTAL 2017
Public sector bonds	14,089	—	8	14,097	17,067
Corporate bonds	12,887	84	24	12,995	21,564
Equities	—	—	—	—	—
Other assets	827	496	169	1,492	2,100
HVB Group	27,803	580	201	28,584	40,731

Single-name credit derivatives make up 55.1% of the total; multi-name credit derivatives, relating notably to baskets or indices, account for a share of 44.9%.

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).

Summary and outlook

The Bank has put a strong focus on sustainable growth with simultaneous risk control in its business strategy. The goal is still to maintain a healthy credit portfolio on an ongoing basis.

Despite ongoing expectations of global economic growth, there remain numerous uncertainties of economic and geopolitical nature that have to be taken into consideration in any assessment of the macroeconomic environment.

2 Market risk

Definition

Market risk is defined as the potential loss of on- and off-balance-sheet positions in the trading and banking books that can arise in response to adverse changes in market prices (interest rates, equities, credit spreads, foreign exchange and commodities), other price-influencing parameters (volatilities, correlations) or trading-related events in the form of default or changes in credit ratings of securities (specific price risk for interest net positions).

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 and to a lesser – and diminishing – extent at our subsidiaries. As was already the case in previous years, the focus in 2018 was again on customer transactions. This made it possible to avoid material losses arising from sudden, large market movements.

The trade in financial instruments was restructured to a minor extent in 2018 with a view to boosting its efficiency. Some teams were reorganised more efficiently. Currency trading on electronic platforms saw further customer growth. A rapid expansion of these platforms is planned for the next few years.

Around one third of the market risk is in trading books while around two thirds – mainly invested in interest-bearing securities – lie in strategic investments or in liquidity reserve portfolios. All positions exposed to market risk are subject to corresponding limits.

Risk Report (CONTINUED)

Limit system

All transactions exposed to market risk in the trading and banking books of HVB Group are aggregated every day to form value-at-risk (VaR) metrics and set against the risk limits. 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 2018 when the risk strategy for HVB Group was adopted, the overall VaR limit of €90 million was confirmed without change and the trading book limit of €37 million was increased to €47 million.

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 over the last two years (observation period).

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%.
- The specific risks for securitisations and nth-to-default credit derivatives are covered by the regulatory Standard Approach.
- Based on the CRR regulations, we calculate risks with regard to the credit valuation adjustment (CVA). The CVA risk shows the risk of fair value losses 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 VaR warning levels.

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. In 2018, such reduction was, with a few exceptions, carried out within one day. If the specified limit was exceeded on the following day as well, the escalation process was again initiated immediately.

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 checks of the P/L on the following day. In this context, both the daily turnover and the P/L generated on intraday transactions 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.

To calculate and allocate the economic capital requirements for market risk, the hypothetical distribution used to determine the VaR has been expanded to an observation period of (at least) six years and combined with the results arising from the CVA risk. 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%. In the course of a hypothetical resolution, it is assumed that tradeable positions are sold or hedged within the one-year holding period.

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.

Interest rate risk in the banking book

The main objective of the strategy in the interest rate risk in the banking book is to reduce the negative effects on net interest income caused by fluctuations in interest rates in a multi-year horizon. The strategy aims at generating sustainable earnings that guarantee a return on investment in line with the strategic plan. The strategy does not imply any intended directional positioning or any scope of discretion for generating additional earnings, unless approved by relevant bodies and separately monitored. The only exception is for those functions authorised to carry interest rate positions within the approved limits. Management's strategy on the structural mismatch between non-interest bearing assets and non-interest bearing liabilities (free funds) aims to achieve a balance between a stable flow of earnings in a multi-year horizon and the opportunity cost of having a fixed interest rate. The interest rate risk strategy takes into account the potential impact of prepayments, which is estimated on the basis of historical prepayment data as well as trend analyses. The risk of premature repayments in German mortgage banking is driven by the level of the interest rates and by the behaviour of customers regardless of the interest rate level. The interest-rate-sensitive prepayments are rather low at the current level of interest rates and are hedged using swaptions. The non-interest rate sensitive prepayments are hedged using cash flow adjustments.

Risk Report (CONTINUED)

HVB Group measures and monitors this risk in line with the corresponding Group policy that establishes consistent methodologies and models and limits or thresholds to focus on, with regard to the sensitivity of net interest income and the economic value. Generally, the Treasury department hedges interest rate risk exposure from commercial banking transactions.

A key component of the measurement of interest rate risk in the banking book is the consideration of the economic value (present value perspective). This shows the effects of fluctuations in the interest rate on the economic value of assets and liabilities. The economic value of the Bank can be viewed as the present value of the Bank's expected net cash flows, defined as the expected cash flows on assets minus the expected cash flows on liabilities. A relevant risk measure from this perspective is the economic value sensitivity per time bucket for a 1bps interest rate shock. The result is reported to the relevant committees to assess the economic impact of various changes in the yield curve.

In compliance with the regulatory rules published, the change in the fair value of the banking book in the event of a sudden and unexpected interest rate shock of plus/minus 200bps is compared with the Bank's eligible equity funds on a monthly basis. This analysis is carried out both with and without the hedging effect from the equity capital model book. At 31 December 2018, the calculation of the present value from the managerial viewpoint taking into account the interest rate shocks of around 200bps gives rise to a capital requirement of 0.35% (31 December 2017: 0%). When calculated from the regulatory viewpoint, by contrast, a capital charge of 10.2% becomes apparent given an increase in interest rates of 200bps (31 December 2017: 8.4%). HVB Group is well below the 20% mark (in relation to the capital charge), above which the banking supervisory authorities consider a bank to have increased interest rate risk. These figures include the positions of HVB as well as the positions of the material Group companies, customer margins are not included.

Furthermore, additional stress test scenarios are performed on a regular basis to estimate the impact on short term interest rate up/down movements and nonparallel shocks, such as steepening and flattening scenarios. The two latter mentioned scenarios constitute a standardised interest rate shock scenario according to the Basel requirements with pivot point 3.5 or six years (steepening: short rate down and long rate up/flattening: short rate up and long rate down) while a short rate up/down scenario considers simply the short term interest rate changes.

In addition to the net present value approach, a simulation of the 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 of interest rates on net interest income. It shows the difference between income generated from interest-sensitive assets and the expense of interest-sensitive liabilities. An example of the management of the sensitivity of net interest income is a parallel interest rate shock of plus 100 basis points (bps). It provides an indication of the impact of such an interest rate shock on net interest income over the next 12 months if such a shock should occur. On the assumption of an unchanged balance sheet, i.e. assuming that balance sheet items remain constant during this period and that the expiring contracts are reinvested within this time horizon with the same product features, the net interest income would increase by €190 million (31 December 2017, plus 100bps: €147 million) by taking into account elasticity assumptions for sight and savings deposits. A parallel interest rate shock of minus 30bps for transactions in euro and foreign currencies combined with minus 100bps interest rate shock for foreign currencies in USD and GBP would reduce net interest income for the same period by minus €119 million (31 December 2017: minus 30/minus 100bps: minus €77 million). Depending on the contractual agreement with the customer a floor of 0.0% 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.

The resulting sensitivity analysis was carried out on the basis of the planned net interest income for the 2018 financial year. The change in results as of year-end can be explained by the changed positions held by the Bank and the persistently low interest rates.

Furthermore, additional stress test scenarios are performed on a regular basis to estimate the basis risk (resulting from the imperfect correlation in lending and borrowing interest rates for different instruments and products) and nonparallel shocks. Model assumptions are also incorporated into the analysis. This relates notably to products with unknown and/or undefined maturities and included options. The interest rate risk inherent in these product types in the banking book is measured on the basis of assumptions and analyses of customer behaviour in the lending and deposit-taking business.

Quantification and specification

The economic capital for market risk at HVB Group, without taking account of diversification effects between the risk types, amounts to 2,357 million and has hardly changed in comparison with the figure as at 31 December 2017 (€2,340 million).

The following table shows the aggregated market risk for the trading positions at HVB Group over the course of the year.

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

(€ millions)

	AVERAGES					PERIOD-END TOTALS	
	2018	Q4 2018	Q3 2018	Q2 2018	Q1 2018	31/12/2018	31/12/2017
Credit spread risks	4	3	3	4	5	3	6
Interest rate positions	5	5	5	5	4	4	5
Foreign exchange positions	2	2	2	2	3	1	3
Equity/index positions ¹	3	3	3	3	3	3	3
HVB Group²	7	7	8	7	6	6	7

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.

Risk Report (CONTINUED)

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

Regulatory metrics of HVB Group

(€ millions)

	31/12/2018	30/9/2018	30/6/2018	31/3/2018	31/12/2017
Value at risk	80	84	74	62	90
Stressed value at risk	288	255	289	272	251
Incremental risk charge	222	236	281	301	319
Market risk Standard Approach	25	20	17	17	16
CVA value at risk	10	11	12	19	29
Stressed CVA value at risk	86	83	79	87	153
CVA Standard Approach	26	27	30	26	27

Alongside the market risk relevant for regulatory reporting, further market risk arises from positions in the banking book. All transactions exposed to market risk in the trading and banking books of HVB Group

are consolidated for the purpose of risk controlling. Most of the market risk arises from positions of the CIB business segment at HVB Group.

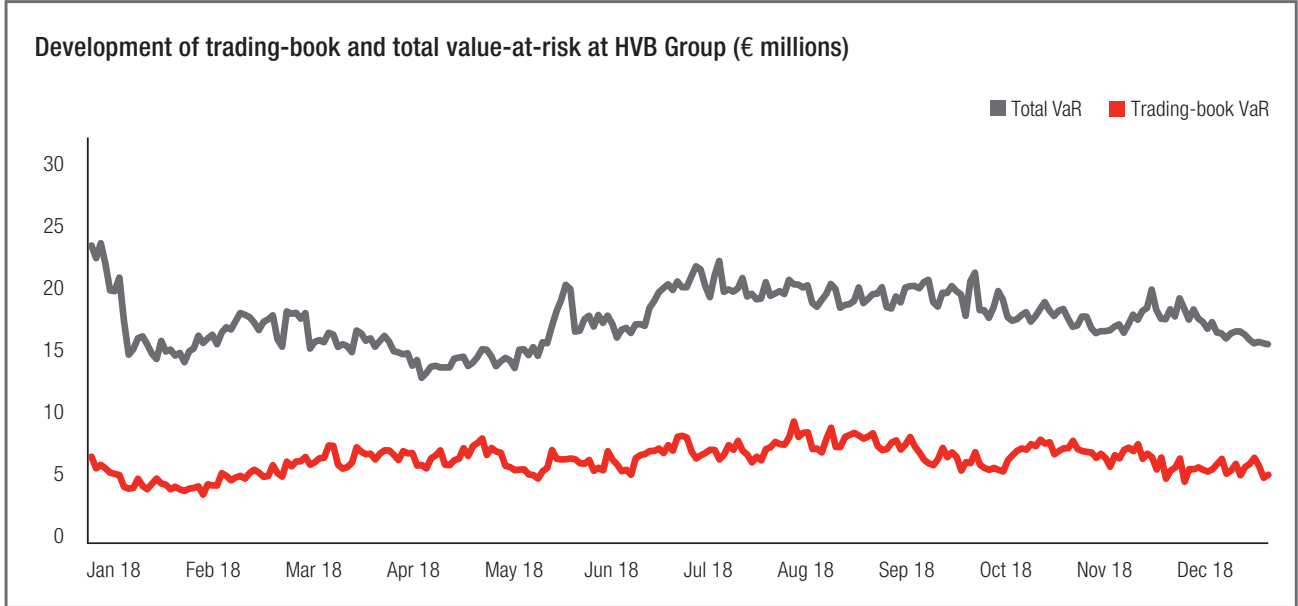
Market risk from trading- and banking-book activities of HVB Group (VaR, 99.00% confidence level, one-day holding period)

(€ millions)

	AVERAGES					PERIOD-END TOTALS	
	2018	Q4 2018	Q3 2018	Q2 2018	Q1 2018	31/12/2018	31/12/2017
Credit spread risks	18	17	18	16	20	13	21
Interest rate positions	6	6	7	6	4	5	5
Foreign exchange positions	4	4	4	4	5	4	6
Equity/index positions ¹	3	3	3	3	3	3	3
HVB Group²	18	18	20	16	17	16	24

¹ Including commodity risk.

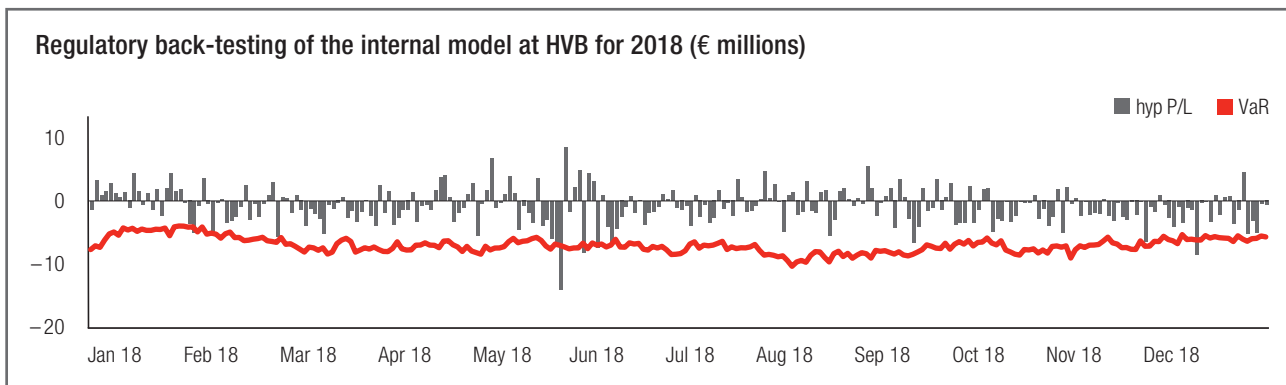
² Because of the diversification effect between the risk categories, the total risk is less than the sum of the individual risks.



The total value at risk (VaR) at HVB Group shows the VaR curve for market price risk arising from trading- and banking-book positions. The trading-book VaR represents the development of the VaR in the trading book. The decrease in total VaR in January 2018 is mainly

attributable to more stable market conditions while the increase in the total VaR in May 2018 was caused by severe market fluctuations. The VaR curve for the trading book reveals a relatively stable development of risk over the course of 2018.

Risk Report (CONTINUED)



The forecasting quality of the VaR measurement method is reviewed by means of regular back-testing that compares the computed regulatory VaR figures with the changes in the hypothetical portfolio value (hyp P/L). Five reportable back-testing outliers occurred in 2018. The hypothetical loss was larger than the forecast VaR figure on these days (see the chart “Regulatory back-testing of the internal model at HVB for 2018”). These five outliers were all caused by severe market fluctuations, for instance by significantly higher credit spreads for Italy and Italian banks (end of May 2018) or by strong fluctuations on the stock and interest rate market (beginning of December 2018).

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 2018, there were two instances of a limit being exceeded, which were due to regular adjustments to measurement and severe market fluctuations.

Besides back-testing, further methods are used at regular intervals 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 at regular intervals 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.

Greater volatility on the financial markets could also make it more difficult for HVB Group to establish a value for some of its assets and exposures. Significant changes to the fair values of such assets and exposures that might prove to be much lower than the present or estimated fair values could be a further consequence. All of these factors could force HVB Group to recognise amortisation charges or impairment losses, which would have a negative effect on its financial position, operating result and thus on the liquidity of HVB Group.

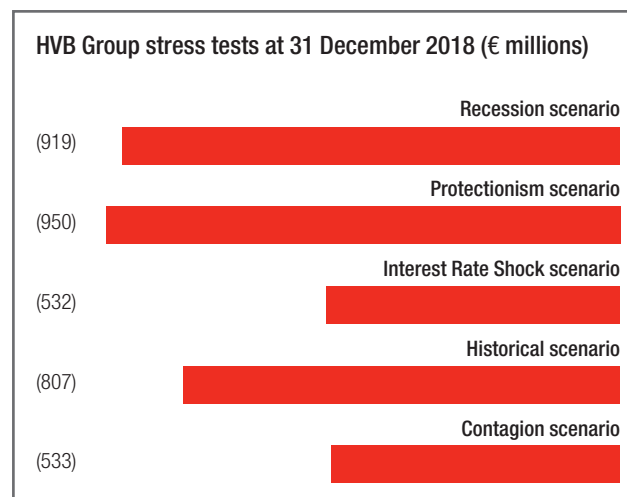
Stress tests

In addition to calculating the VaR and the other risk metrics, we regularly conduct stress tests 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 on a regular basis 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 Interest Rate Shock scenario is used to analyse the impact of a rapid rise in interest rates in the eurozone.

At 31 December 2018, the most significant stress test result of this package of stress test scenarios involves a potential loss of €0.9 billion in the Protectionism scenario (31 December 2017: loss of €1.5 billion). This scenario is also used in the cross-risk-type stress tests, where it is analysed for risk-taking capacity.



As described under the sub-header “Stress tests” in the section entitled “Implementation of overall bank management”, inverse stress tests were again performed in 2018. Risks resulting from market risk in the banking portfolio were also included in this analysis.

Summary and outlook

As was already the case in 2018, efforts will again be made in 2019 to concentrate on low market risk customer business in our trading activities on the financial markets. HVB Group will continue to invest in the development and implementation of electronic sales platforms for trading activities.

Risk Report (CONTINUED)

3 Liquidity risk

Definition

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 not being able to obtain sufficient liquidity when required or that liquidity will only be available at higher interest rates, and the risk that the Bank will only be able to liquidate assets on the market at a discount. Liquidity risk comprises the following risk categories:

- short-term liquidity risk
- operational liquidity risk (part of 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).

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) relates to the risk of the Bank not being able to fund its balance sheet in a sustainably stable, long-term manner (more than one year) or only being able to procure sufficient liquidity for funding at increased market interest rates and the future earnings of the company are impaired accordingly. Funding risk is not a significant risk but it requires observation and is assessed at regular intervals as part of the risk inventory.

Market liquidity risk

Market liquidity risk relates to the risk that the Bank would suffer losses due to the disposal of assets that can only be liquidated on the market at a discount. In the 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. Market liquidity risk is managed by the CRO organisation, which carries out expanded market liquidity analyses.

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. Limiting maturity mismatches between the long-term assets and liabilities ensures a balanced funding structure 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 the requirements of the "Bank for International Settlements". An 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.

Risk Report (CONTINUED)

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 continual 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.

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 well balanced thanks to the diversification of our funding across products, markets and investor groups. 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

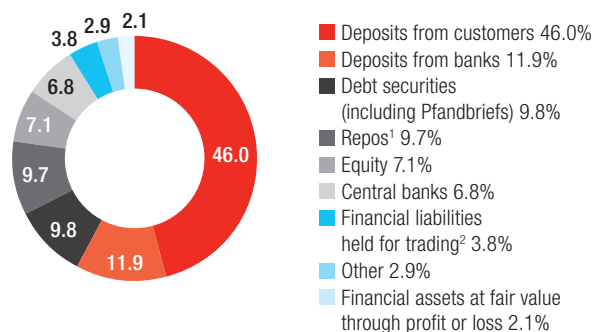
Within the framework of our limit system, we showed an overall positive balance of short-term liquidity risk of €36.0 billion at HVB Group for the three-month maturity bucket at the end of the year 2018 (31 December 2017: €42.0 billion). The holding of available securities eligible as collateral for central bank borrowings that can be employed on the next banking day to compensate for unexpected outflows of liquidity amounted to €17.7 billion at the end of December 2018 (31 December 2017: €15.1 billion).

The requirement of having a liquidity coverage ratio (LCR) of a minimum of 100% to ensure that an institution is able to meet its short-term payment obligations was significantly exceeded at HVB as at 31 December 2018 with a figure in excess of 100%.

Funding risk

The funding risk of HVB Group was again low in 2018 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 2018, HVB Group had obtained longer-term funding with a volume of €9.3 billion, in which connection no Targeted Longer-Term Refinancing Operation II of the ECB (TLTRO-II programme) was concluded (31 December 2017: €18.2 billion, including €5.6 billion under the ECB's TLTRO-II programme). There has been no regulatory minimum ratio for the NSFR to date. HVB adhered to a ratio of over 100% in 2018. The adjusted NSFR greater than three years was over 100% in 2018. We do not expect to face any significant liquidity risk in the future either. With their high credit quality and liquidity, our Pfandbrief-covered bonds still remain an important funding instrument.

Breakdown of sources of funding of HVB Group (31 December 2018)



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 2018 showed that the available liquidity reserves were sufficient to cover the funding requirements over the minimum period demanded.

Summary and outlook

There are uncertainties worldwide with regard to security, monetary and economic policy not only arising from the ongoing geopolitical conflicts, in the Arabian region among others, but also due to a number of trade policy disagreements in various directions, especially relating to the USA, China, Russia and the European Union (EU).

In Europe, the overall impact of the impending expected ultimate withdrawal of the United Kingdom from the EU can still not be conclusively assessed, and the shape of the potential future economic links between the EU and the UK as well as the underlying agreements are still unknown factors.

It is impossible to predict the extent and intensity of the reaction by the global financial markets to the developments worldwide seen as a whole.

HVB Group again put in a good performance in 2018 in a demanding market environment. Once again, the most important factors contributing to this development included our good liquidity situation, the sound financing structure and the liquidity management measures taken.

In this context, we expect our liquidity situation to remain comfortable in future. Our forward-looking risk quantification and regular scenario analysis will remain important factors in this regard going forward.

Risk Report (CONTINUED)

4 Operational risk

Definition

In accordance with the Capital Requirements Regulation (CRR), HVB Group defines operational risk as the risk of losses resulting from inadequate or failed internal processes, systems and people or from external events. The 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.

Strategy

The risk strategy for operational risk is part of the HVB Group risk strategy, which is updated and adopted by the Management Board of HVB on an annual basis.

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.

In this context, operational risk that could seriously damage the Bank must be subject to planning measures that go beyond mere profitability concerns.

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.

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.

Employees in Business Continuity Management, Outsourcing, Compliance and Legal perform a special function in a unique way in operational risk management in that they carry out risk-controlling and risk-monitoring tasks.

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 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 so as to minimise their impact on HVB. Several successfully completed contingency tests showed that the performance of the critical business processes also works in emergency situations. In addition, the emergency precautions are adapted constantly to accommodate new threats. Evidence of the appropriateness and proper functioning of the crisis management system was additionally provided by a crisis exercise in the first half of 2018.

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. The Compliance function forms part of the ICS that helps the Management Board to manage compliance risk.

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 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

A failure to deal appropriately with various legal and regulatory requirements may lead to litigation and administrative proceedings or investigations and subject HVB and/or other companies belonging to HVB Group to damage claims, regulatory fines or other penalties.

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, appropriate provisions have been set up based on the circumstances and consistent with IFRS accounting principles applied by HVB Group.

Risk Report (CONTINUED)

HVB and other companies belonging to HVB Group are involved in various legal proceedings. The following is a summary of cases against HVB or 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.

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 advice 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.

Closed-end funds

Investors filed lawsuits against HVB and claim insufficient advice was provided by the Bank within the scope of their investment in closed-end funds. In particular, the investors claim that HVB did not or did not fully disclose any refunds made to the Bank or they were advised on the basis of an allegedly incorrect prospectus. The questions regarding a correct and sufficient advice provided to a customer as well as questions regarding the limitation period and thus the success prospects in proceedings depend on the individual circumstances of the particular case and are therefore difficult to predict. As far as these proceedings were disputed, the experience of the past has shown that the deciding courts have largely ruled in favour of HVB.

Real-estate financing

In various cases, customers dispute their obligation to repay their property loan agreements because they are of the opinion that HVB gave insufficient advice about the intrinsic value of the acquired property and the expected rent. In the last few years only a small number of new lawsuits has been filed. In the light of the experience gained, HVB assumes that there are no significant risks expected in this context.

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 show that the characteristics of the relevant product and the individual circumstances of each case are decisive. In particular, the statute of limitations, the client's economic experience and risk tolerance, and the actual investment advice given may be relevant aspects.

Proceedings related to claims for withholding tax credits

On 31 July 2014, the Supervisory Board of HVB concluded its internal investigation 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 on the part of individuals. The Supervisory Board has submitted a claim 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 instigated 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 possible 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 came to a conclusion in November 2015 with, among other things, the payment by HVB of a fine of €9.8 million. The investigations by the Frankfurt/Main Prosecutor against HVB under section 30 of the Administrative Offences Act (Ordnungswidrigkeitengesetz) came to a conclusion in February 2016 by the payment of a fine of €5 million. The investigation by the Munich Prosecutor against HVB were legally completed in April 2017 following the payment of a forfeiture of €5 million. Currently, all criminal proceedings against HVB have come to a conclusion. In December 2018, in connection with a separate ongoing investigation against former bank employees by the Cologne Prosecutor, the Bank was informed of the initiation of additional proceedings in connection with an administrative offence regarding "cum-ex" transactions involving Exchange Traded Funds ("ETF"). The facts are being examined internally. The Bank continues to cooperate with the authorities.

The Munich tax authorities are currently performing a regular field audit of HVB for the years 2009 to 2012 which includes, among other things, review of other transactions in equities around the dividend record date. During these years HVB performed, among other things, securities-lending with different domestic counterparties which include but are not limited to different types of securities 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 distribution of dividends, and what the further consequences for the Bank will be in the event of different tax treatment. The same applies for the years 2013 until 2015 following the current regular tax audit mentioned above. 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 competent tax authorities regarding these matters. HVB has made provisions deemed appropriate.

Lawsuit for consequential damages

A customer 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. In the meantime the plaintiff has appealed against the court ruling to Frankfurt Higher Regional Court. Within the scope of the hearing on 20 November 2018, Frankfurt Higher Regional Court expressed its interim opinion according to which the plaintiff's appeal does not have any prospect of success.

Financial sanctions matters

In the past years, violations of US sanctions and certain US dollar payment practices have resulted in certain financial institutions entering into settlements and paying substantial fines and penalties to various US authorities, including the US Treasury Department's Office of Foreign Assets Control (OFAC), the US Department of Justice (DOJ), the District Attorney for New York County (NYDA), the US Federal Reserve (Fed) and the New York Department of Financial Services (DFS). More specifically, in March 2011, HVB received a subpoena from the NYDA relating to historical transactions involving certain Iranian entities designated by OFAC and their affiliates. In June 2012, the DOJ opened an investigation of OFAC-related compliance by HVB and its subsidiaries more generally.

Risk Report (CONTINUED)

In this context, HVB conducted a voluntary investigation of its US dollar payments practices and its historical compliance with applicable US financial sanctions, in the course of which certain historical non-transparent practices have been identified.

HVB is cooperating with the relevant US authorities and remediation activities relating to policies and procedures have commenced and are ongoing. Each Group entity subject to investigations is updating its regulators as appropriate. It is also possible that investigations into historical compliance practices may be extended and/or that new investigations or proceedings may be commenced.

Recent violations of US sanctions and certain US dollar payment practices by other European financial institutions have resulted in those institutions entering into settlements and paying material fines and penalties to various US authorities. The investigations and/or proceedings could therefore result in the payment of material fines and/or criminal or civil penalties.

HVB is continuing settlement discussions with the relevant US authorities to come to a resolution of these matters. Discussions are ongoing and HVB has not yet entered into any agreement with these authorities. Therefore, it is not possible to determine with certainty the terms and timing of any resolution with any relevant authorities, including what final costs, remediation, payments or other criminal or civil liability may occur in connection with a final resolution.

The investigation costs, remediation required and/or payment or other legal liability incurred in connection with the proceedings could lead to liquidity outflows, potentially adversely affect the net income and have a material adverse effect on reputation and business activities.

HVB has set up appropriate provisions.

The time when an agreement will be reached with the various US authorities cannot be determined at present, however it is possible that settlement talks may have been concluded by the end of the first half of 2019.

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

LBSF unsuccessfully appealed such decision to the US 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. A date for an oral hearing has not yet been set.

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 minor subsidiaries.

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 individual data sources are aggregated by applying the Bayesian model to the loss distribution parameters for each model risk category.

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

The economic capital for operational risk is determined as a whole for HVB Group using the internal AMA model and then allocated to HVB and its AMA subsidiaries using a risk-sensitive allocation mechanism.

The model was developed by UniCredit S.p.A. HVB checks the plausibility of the calculation results on a regular basis. The AMA model is validated at regular intervals to ensure that it is appropriate.

Implementation of the change made with effect as of the balance sheet date 31 December 2018 to the model for calculating AMA capital requirements for operational risk in order to calculate the economic capital is planned for the first half of 2019.

Stress tests

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

Summary and outlook

The risk strategy specifies the specific action areas that have been identified for strengthening, on an ongoing basis, risk awareness with regard to operational risk in the Bank and expanding the management of operational risk.

Risk Report (CONTINUED)

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

Real estate risk covers potential losses resulting from fluctuations 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.

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 2018, the general focus for the existing real estate portfolio was placed on measures targeting fair value and cost optimisation. In principle, no acquisitions are planned except where they would serve the interests of HVB Group (in other words only in defined exceptional cases). 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.

In terms of the central locations, for 2018 this related primarily to the next stages of the "HVB Tower" large-scale project. The first stage (renovation of the tower block with a view to turning it into a green building) was brought to a successful conclusion in March 2016 and the property was reoccupied. Another measure relating to the "HVB Tower" project relates to the renovation of a further section of the building ("Flachbau Nord"). As part of the further objective of consolidating areas at the Munich location, several projects were integrated into each other, packaged as the "Munich Campus Transformation" (MCT) project. In addition, further major renovation work is being carried out at the central locations that is unlikely to be completed before the end of 2019.

The main risks for the Bank-owned portfolio stem mainly from the development of the current fair value, which is always compared with the carrying amount. 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- to long-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 2018 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 limits are checked for adequacy mid-year and adjusted as necessary.

The Bank uses a variance-covariance model with a confidence level of 99.90% and a holding period of one year to quantify real estate risk. The Bank's proprietary real estate indices are employed as explanatory risk factors for the parametrisation of the model. These indices are broken down by property type (rented office areas, rented flats, owner-occupied homes (houses or flats), land for housing construction, agricultural properties, retailers with small floor areas, retailers with large floor areas, land for commercial construction, warehouse/logistics properties) and geographical location. In the case of foreign real estate, there is currently only one index that is derived from the present portfolio in terms of its composition due to the current strategic orientation of the portfolio. For German properties, time series are currently available for the most important municipalities.

The economic capital for the real estate risk is determined by the Credit Risk Modelling & Systems (CRS) unit. 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 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 €636 million at 31 December 2018, which represents an increase of €37 million (31 December 2017: €599 million). The fully diversified economic capital for the real estate risk at HVB Group stands at 475 million (31 December 2017: €386 million). The increase in economic capital is mainly attributable to a rise in the fair value of the real estate portfolio.

The risk figures relate to a portfolio valued at €3,881 million.

Breakdown of the real estate portfolio by type

	PORTFOLIO VALUE € millions		SHARE in %	
	2018	2017	2018	2017
Strategic real estate	2,216	2,073	57.1	55.6
Non-strategic real estate	1,665	1,659	42.9	44.4
HVB Group	3,881	3,732	100.0	100.0

From a geographical perspective, the focus is on the Munich region with 50.6% of the value of the portfolio located there.

The impact of macroeconomic scenarios on real estate risk is analysed within the scope of the cross-risk-type stress tests. These quarterly analyses deliver information on the estimated, scenario-related lower real estate prices that would ensue compared with the base scenario, should the scenario materialise. This is the basis on which stressed VaR is determined.

For 2019, there are also plans to make further disposals from the portfolio of non-strategic real estate. The situation on the real estate markets will depend on economic developments once again in 2019. There is currently great demand for properties in good locations.

Risk Report (CONTINUED)

Business risk

We define business risk 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 a 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.

The strategy for business risk is based on the direction of business over the medium term and is reflected in the planning. As part of its general cost and income management, each business unit is responsible for the operational management of business risk. HVB Group has specified corresponding initiatives intended to counter the earnings risks.

In the CIB business segment, the strategic focus in 2018 remained on growth in virtually all areas and product factories. Support for this objective came from our SQUARED growth strategy, which was already implemented in 2015 and has been refined and enhanced by Transform 2019. The original three pillars were combined into four strategic components:

- Confirm and improve market leadership
- Exploit synergies
- Ongoing cost discipline and simplification
- Constant risk culture awareness

By enhancing our strategy, we intend to further expand the central role of HVB and UniCredit with core CIB customers, exploit opportunities with Mittelstand customers (joint venture between CIB and Unternehmer Bank (UBK) for Mergers & Acquisitions, Equity Capital Markets UBK, Debt Capital Markets UBK, Corporate Treasury Sales, Corporate Finance Advisory) and become Europe's powerhouse for trade finance. We intend to increase our international footprint by selling our international services to customers in our core countries, strategically

expanding our presence in countries given special priority and standardising and refining our operating platform. At the same time, we are expanding our presence along the developments of trade flows with a view to winning as customers the best international actors outside of our home markets. We are positioning ourselves as a provider of holistic and customised solutions for corporate customers through all sales channels relevant to our 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.

The goal of the Commercial Banking business segment is to further expand its market position, despite the challenging market environment in 2018. Among other things, strategic initiatives intended to counter earnings risks are focused on risk-adjusted pricing, the central control of major transactions by higher-level bodies, reinforced value creation with the customer and new customer acquisition in order to generate earnings. Customer orientation is ensured by enhancing quality in the core business, by achieving sustainable cost management through high cost awareness and continuous cost controlling.

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. The limits are checked for adequacy mid-year and, if necessary, adjusted.

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 determined by the Credit Risk Modelling & Systems (CRS) unit. 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, remained almost constant at €380 million in 2018 (31 December 2017: €388 million). The fully diversified economic capital for HVB Group's business risk totals €234 million as at 31 December 2018 (31 December 2017: €280 million).

The impact of macroeconomic scenarios on business risk is analysed within the scope of the cross-risk-type stress tests. This quarterly analysis provides information on the estimated, scenario-related lower earnings that would result should the scenario occur compared with the base scenario. In addition, the stressed VaR is determined.

Pension risk

HVB Group has undertaken to provide a range of different pension plans to current and former employees, which are largely financed by various forms of investment, some of which are external. Pension risk may arise in connection with the pension plans on both 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 by an increase in the obligations on the liabilities side, for instance due to a reduction in the discount rate. Furthermore, actuarial risks such as longevity risk (changes to the mortality tables) may arise 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.

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 €874 million was determined as at 31 December 2018 for the total pension risk of HVB Group (31 December 2017: €924 million). 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.

Low interest rates continue to be seen as the main negative factor for both the amount of the pension commitments 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 perfectly conceivable that the discount rate will return to its all-time lows seen in 2016 (at year-end 2018, the discount rate stood at 2.1%), thus causing the pension obligations to rise. There are currently still no regulatory provisions for the measurement of pension risks that have been harmonised at a European level. This gives rise to uncertainty regarding the future development of the disclosed pension risk and, depending on how the provisions are ultimately structured, this might lead to an increase in the pension risk.

Financial investment risk

Financial investment risk covers potential losses arising from fluctuations in the measurement of HVB Group's equity interest. HVB Group's investment risk stems from losses on the equity held in companies that are not included in the consolidated financial statements according to IFRS principles or are not included in market risk.

Risk Report (CONTINUED)

The financial investment portfolio mainly consists of unlisted interests, private equity investments (co-investments and direct investments), 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 2018 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 limits are reviewed for adequacy mid-year and adjusted as necessary.

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 real estate risk is determined by the Credit Risk Modelling & Systems (CRS) unit. 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 €22 million and stands at €185 million as at 31 December 2018 (31 December 2017: €163 million). HVB Group's fully diversified economic capital amounts to €185 million as at 31 December 2018 (31 December 2017: €163 million).

Breakdown of the financial investment portfolio

	PORTFOLIO VALUE € millions		SHARE in %	
	2018	2017	2018	2017
Private equity investments	19	19	10.3	11.7
Other holdings ¹	166	144	89.7	88.3
HVB Group	185	163	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.

As was the case in 2018, HVB Group will continue to selectively dispose of non-strategic shareholdings in 2019. It will also look into setting up new companies and making fresh investments in line with its business strategy and the current market environment, provided these complement our structure and our business priorities, and generate added value for HVB and HVB Group.

Strategic 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.

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 arising from the overall economic environment

Based on HVB Group's focus with its Commercial Banking and CIB business segments and its concentration on its home market of Germany and further core countries, the overall economic developments in Germany and within the eurozone as well as developments on the international financial and capital markets are of great importance for the assets, financial position and operating result of HVB Group. As a consequence, the regular economic analysis carried out by HVB Group covers macroeconomic developments in the eurozone, the monetary policy of central banks and the discussions surrounding the deleveraging of highly indebted countries.

As a sound universal bank with excellent customer relationships, HVB Group considers itself fundamentally in good shape to continue operating successfully in this challenging environment. Should, however, the measures taken to stabilise the eurozone fail to have the desired effect, for instance, or economic growth slow in Europe, or further turmoil roil the financial and capital markets, this could have a negative effect on the assets, financial position, and operating result of HVB Group.

Risk Report (CONTINUED)

Industry-specific risk

Since the financial and economic crisis (2007 and the following years), the bank sector has been and still is facing grave challenges and the necessity of constantly adapting quicker than in the past. Material factors influencing the entire banking sector, and thus also HVB Group, are as follows:

- Continuing low market interest rates with a negative deposit rate at the ECB
- Subdued customer demand in conjunction with weakened customer confidence
- Extremely tough competition also due in part to the ongoing existence of the three-pillar system with disproportionately large market shares being held by the public sector (savings banks and Landesbanks) and the cooperative sector (cooperative banks)
- Consolidation on the German and international banking and financial markets
- Wide-ranging trend towards digitalisation throughout society which entails massive changes also for the banking and financial services sector, both with regard to customer interaction (products, customer needs and customer perception) and with regard to opportunities to boost the efficiency of internal processes
- The entry of new market participants, known as FinTechs, that use modern technologies to provide or facilitate financial services such as e-commerce, mobile payments, crowd lending or crowd investing.

If, however, the competitive conditions in the financial sector were to continue to intensify, for example, and shifts in market shares were to occur, this could also have a negative impact on the assets, financial position, and operating result of HVB Group.

HVB Group is facing up to these external market influences and is making the corresponding strategic adjustments to its strategic measures. The Bank's strong profitability and capital base in conjunction with its willingness to undergo constant change are a sound foundation enabling it to remain a stable and successful market actor also in the future.

Risks arising from the strategic orientation of HVB Group's business model

HVB Group as a universal bank focuses on the regional management of the German market and also acts as the centre of competence for the investment banking activities of UniCredit as a whole. As a consequence, the Bank's business model is built upon several pillars. However, depending on developments on external markets, it cannot always be ruled out that imbalances in earnings contributions could arise. Thus, the business segments are impacted by the persistently low interest rate environment each in their own way.

The Commercial Banking business segment serves all customers in the Private Clients Bank and Unternehmer Bank business units in Germany with a need for standardised or personalised service and advice with regard to a wide range of bank services. The market environment in the Commercial Banking business segment is characterised by persistently low interest rates, a fragmented competition environment and rising regulatory costs. In parallel with persistently subdued customer demand, increasing digitalisation is bringing about lasting change in customer needs. HVB Group is facing up to the challenges posed by this framework in the Commercial Banking business segment with a premium positioning and a diverse set of measures of growth and efficiency activities that also extend to clearly defined digitalisation initiatives.

The strategic orientation of the CIB business segment is to generate additional value for customers by offering specific advisory models and a wide variety of products geared to the customers specific needs. Even though investment banking activities are customer-driven, revenues are traditionally volatile as customer demand for CIB products is influenced by the market environment. Whilst in a normal market environment investment banking is very profitable, there are increased risks to the assets, liabilities, financial position, and profit or loss under difficult market conditions.

Risks arising from changes to the regulatory and statutory environment

The activities of HVB Group are regulated and supervised by the central banks and regulatory authorities in the countries and regions where HVB Group does business. HVB Group comes under the supervision of the ECB as part of the Single Supervisory Mechanism (SSM).

The regulatory requirements in the individual countries/regions are subject to changes and may vary. This might impact the competitive situation and necessitate further measures on the part of HVB Group. Besides a higher cost of capital and additional expenses arising from the implementation of regulatory requirements, adjustments to the business model may become necessary.

The failure of HVB or one of its subsidiaries to fully satisfy the regulatory requirements of the supervisory authorities could lead to the responsible authority imposing sanctions. In the worst case, the business activities of HVB or its subsidiaries could be discontinued.

All in all, this could give rise to a negative impact on the assets, financial position, and operating result of HVB Group.

Risks arising from a change in HVB's rating

HVB has an investment grade rating from the external rating agencies Standard & Poor's (S&P), Moody's and Fitch. The implementation of new regulations (specifically the Bank Recovery and Resolution Directive (BRRD)) has led to adjustments to the rating methods on the part of the rating agencies in recent years. In this context, the rating agencies have aligned the ratings of the individual financing instruments to the anticipated liability cascade. As consequence, adjustments were made to ratings at HVB.

A rating downgrade could make funding costs higher for HVB or have a negative impact on the business opportunities of HVB as a counterparty in the interbank market or with rating-sensitive customers. The possibility cannot be excluded that the risk-reward profile of business activities affected will alter so significantly that modifications are made to business units with potentially negative consequences for the assets, financial position, and operating result of HVB Group. The possible negative effects arising from this risk will depend notably on whether HVB's rating changes less than, the same as or more than that of its competitors.

Reputational risk

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 other primary risks.

Risk Report (CONTINUED)

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 SPVs) 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 counter-measures 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 RepRisk Report covering the largest reputational risks at HVB.

Risks arising from outsourcing activities

Outsourcing involves the transfer of activities and processes to external service providers. This involves the transfer of some of the liability for operational risk, 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 material”, “material without significant impact” and “material with significant impact”. In accordance with the group-wide regulations on outsourcing management, these arrangements are also subdivided into “not relevant” and “relevant” in line with the provisions of the Bank of Italy’s Circular no. 263. An in-depth risk analysis covering the other risk types as well as operational risk is performed for all outsourcing arrangements classified as “material” or “relevant”. A retained organisation (RTO) responsible for the arrangement is set up for each material 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.

Within the scope of the introduction of the revised Markets in Financial Instruments Directive (MiFID II) as at 3 January 2018, a new material outsourcing arrangement without significant impact with Deutsche Börse AG relating to reporting pursuant to Section 34h of the Securities Trading Act (Wertpapierhandelsgesetz – WpHG, ensuring post-trade transparency) was put in place by an instance of outsourcing relating to reporting services as part of an approved publication arrangement (APA) and an approved reporting mechanism (ARM). Furthermore, an

already existing arrangement with the subsidiary UniCredit Capital Markets LLC relating to various services associated with broker/dealer activities in New York was classified as a material outsourcing arrangement without significant impact. This did not give rise to any material change to the risk for HVB.

There were major changes in the outsourcing portfolio within HVB Group mainly due to instances of deconsolidation. Two relevant outsourcing arrangements ceased to apply due to the deconsolidation of Redstone Mortgages Ltd. and four relevant outsourcing arrangements on account of the deconsolidation of Mobility Concept GmbH. Four relevant outsourcing arrangements were no longer required thanks to the merger of Structured Lease GmbH into UniCredit Leasing GmbH; furthermore, intragroup services associated with rating models were transferred into existing agreements meaning that one relevant outsourcing arrangement each was terminated at UniCredit Leasing GmbH, UniCredit Leasing Finance GmbH and UniCredit Leasing Aviation GmbH. The transformation of UniCredit Luxembourg S.A. into the Luxembourg branch of HVB meant that five material outsourcing arrangements with HVB ceased to exist. Changes in the task structure within the Wealth Management Capital Group led to the termination of three relevant outsourcing arrangements. Within the scope of these task changes, the outsourcing of ICT operations of Wealth Cap Kapitalverwaltungsgesellschaft mbH was classified as a material outsourcing arrangement without significant impact and a new material outsourcing arrangement without significant impact was set up with Immobilien Holding AG relating to property management services for real estate funds. This did not give rise to any material change to the risk for HVB.

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 makes sure 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 best possible 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 ICS-related projects and measures.

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 (OSI) 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, from which the responsible Management Board member can draw on staff with the required skills and experience. Sets of values such as the Integrity Charter, the Code of Conduct and compliance rules have been implemented in all UniCredit countries for many years, and hence also in HVB Group. These values form the basis for responsible action on the part of all employees, including those involved in the financial reporting process.

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) monitors compliance with all tax laws on the one hand and on the other hand, advises its customers (Management Board, business lines and competence lines) on all tax-related concerns of HVB, including its foreign branches.

ICS – Internal Control System (CONTINUED)

Regional Planning & Controlling (CCP) is tasked with central business management, cost controlling and equity capital management 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 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.

Controls in the ICS for risk minimisation

To minimise 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 permanent 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 ("the 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 detailed presentations of both the individual process steps and the organisational units involved in the processes. At the same time, risk and control are 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 sufficiently reduced through defined control steps. Periodic random sampling serves to document the implementation of these controls and provide adequate records. If the controls do not sufficiently reduce risk, or no controls are in place, appropriate measures are initiated to eliminate the identified deficiencies. The timely implementation of these measures is reviewed on a quarterly basis.

In a half-yearly certification process, the Management Board confirms to the departments in charge of processes that reporting to the CFO of HVB Group, and from the CFO to UniCredit, is correct.

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 entered 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 agreed by the CRO and CFO units on an ongoing basis.
- 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. All 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 minimise 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 ensured notably 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 automatically implies a time restriction of no more than one year.

Furthermore, appropriate contingency plans are in place to ensure the availability of human and technical resources to handle processes regarding financial reporting. These contingency plans are constantly 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 Board Spokesman (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 – if deemed useful and appropriate. 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, taking into account the findings of any audits performed by internal audit departments in those 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 promptly to audited units and the responsible Management Board members, the Management Board as a whole receives quarterly reports and an annual report which include a comprehensive 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) AktG and Section 25d (9) Nos. 1 and 2 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 performed by reviewing and approving the consolidated financial statements 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 a substantial impact on the accounting processes, a corresponding project is set up to cover all 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 regular 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 is checked on an ongoing basis and, if necessary, further relevant processes added and assessed, and integrated into routine ICS operations.

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Consolidated Income Statement

Consolidated Income Statement

Income/Expense	NOTES	2018	2017	CHANGE	
		€ millions	€ millions	€ millions	in %
Interest income ¹		3,753	3,818	(65)	(1.7)
Negative interest on financial assets		(154)	(137)	(17)	+ 12.4
Interest expense		(1,387)	(1,401)	+ 14	(1.0)
Negative interest on financial liabilities		272	261	+ 11	+ 4.2
Net interest	38	2,484	2,541	(57)	(2.2)
Dividends and other income from equity investments	39	25	11	+ 14	>+ 100.0
Net fees and commissions	40	1,014	1,103	(89)	(8.1)
Net trading income	41	693	928	(235)	(25.3)
Net gains/losses on financial assets and liabilities at fair value	42	(110)	n/a		
Net gains/losses on derecognition of financial instruments measured at cost	43	52	n/a		
Net other expenses/income	44	524	399	+ 125	+ 31.3
Payroll costs		(1,468)	(1,600)	+ 132	(8.3)
Other administrative expenses		(1,405)	(1,443)	+ 38	(2.6)
Amortisation, depreciation and impairment losses on intangible and tangible assets		(206)	(227)	+ 21	(9.3)
Operating costs	45	(3,079)	(3,270)	+ 191	(5.8)
Net write-downs of loans and provisions for guarantees and commitments IAS 39	46	n/a	(195)		
Credit impairment losses IFRS 9	47	(16)	n/a		
Provisions for risks and charges	48	(919)	(25)	(894)	>+ 100.0
Restructuring costs	49	(14)	(7)	(7)	+ 100.0
Net income from investments	50	n/a	112		
Net gains/losses on disposals on investments	51	26	n/a		
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL		680	1,597	(917)	(57.4)
Impairment on goodwill	52	(288)	—	(288)	
PROFIT BEFORE TAX		392	1,597	(1,205)	(75.5)
Income tax for the period	53	(154)	(261)	+ 107	(41.0)
PROFIT AFTER TAX		238	1,336	(1,098)	(82.2)
CONSOLIDATED PROFIT		238	1,336	(1,098)	(82.2)
attributable to the shareholder of UniCredit Bank AG		236	1,332	(1,096)	(82.3)
attributable to minorities		2	4	(2)	(50.0)

¹ The item "Interest income" contains interest of €2,960 million calculated using the effective interest method. The figure is based on classification according to IFRS 9, which means that statement of a previous-year figure is deemed unnecessary.

Earnings per share

(in €)

	NOTES	2018	2017
Earnings per share (undiluted and diluted)	54	0.29	1.66

Consolidated statement of total comprehensive income

(€ millions)

	2018	2017
Consolidated profit recognised in the income statement	238	1,336
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)	(101)	218
Change in fair value attributable to change in the credit risk of financial liability designated at FVTPL (own credit spread reserve)	31	n/a
Other changes	—	—
Taxes on income and expenses not to be reclassified to the income statement in future periods	22	(68)
Income and expenses to be reclassified to the income statement in future periods		
Changes from foreign currency translation	2	(8)
Changes from companies accounted for using the equity method	—	—
Changes in valuation of financial instruments (AfS reserve)	n/a	(19)
Unrealised gains/(losses)	n/a	89
Gains/(losses) reclassified to the income statement	n/a	(108)
Changes in valuation of financial instruments (hedge reserve)	6	(3)
Unrealised gains/(losses)	7	1
Gains/(losses) reclassified to the income statement	(1)	(4)
Changes in valuation of financial instruments at FVTOCI (FVTOCI reserve)	(31)	n/a
Unrealised gains/(losses)	(28)	n/a
Gains/(losses) reclassified to the income statement	(3)	n/a
Other changes	(7)	—
Taxes on income and expenses to be reclassified to the income statement in future periods	11	(2)
Total income and expenses recognised in equity under other comprehensive income	(67)	118
Total comprehensive income	171	1,454
of which:		
attributable to the shareholder of UniCredit Bank AG	169	1,450
attributable to minorities	2	4

Consolidated Balance Sheet

ASSETS	NOTES	2018	2017	CHANGE	
		€ millions	€ millions	€ millions	in %
Cash and cash balances	55	19,990	36,414	(16,424)	(45.1)
Financial assets held for trading	56	68,957	75,493	(6,536)	(8.7)
Financial assets at FVTPL (FVO)	57	n/a	21,456		
Financial assets at FVTPL	58	16,683	n/a		
Financial assets at FVTOCI	59	7,370	n/a		
Available-for-sale financial assets	60	n/a	6,816		
Held-to-maturity investments	61	n/a	23		
Loans and receivables with banks (at cost)	62	33,648	30,330	+ 3,318	+ 10.9
Loans and receivables with customers (at cost)	63	133,706	121,178	+ 12,528	+ 10.3
Hedging derivatives	66	276	390	(114)	(29.2)
Hedge adjustment of hedged items in the fair value hedge portfolio		36	72	(36)	(50.0)
Investments in associates and joint ventures	67	23	34	(11)	(32.4)
Property, plant and equipment	68	2,489	2,599	(110)	(4.2)
Investment properties	69	256	808	(552)	(68.3)
Intangible assets	70	149	445	(296)	(66.5)
of which: goodwill		130	418	(288)	(68.9)
Tax assets		1,375	1,363	+ 12	+ 0.9
Current tax assets		132	113	+ 19	+ 16.8
Deferred tax assets		1,243	1,250	(7)	(0.6)
Non-current assets or disposal groups held for sale	71	742	511	+ 231	+ 45.2
Other assets	72	988	1,128	(140)	(12.4)
TOTAL ASSETS		286,688	299,060	(12,372)	(4.1)

LIABILITIES	NOTES	2018	2017	CHANGE	
		€ millions	€ millions	€ millions	in %
Deposits from banks	74	62,943	67,354	(4,411)	(6.5)
Deposits from customers	75	121,038	124,284	(3,246)	(2.6)
Debt securities in issue	76	24,360	25,552	(1,192)	(4.7)
Financial liabilities held for trading	77	48,105	56,217	(8,112)	(14.4)
Financial liabilities at fair value through profit or loss	78	5,152	n/a		
Hedging derivatives	79	598	469	+ 129	+ 27.5
Hedge adjustment of hedged items in the fair value hedge portfolio	80	1,210	1,215	(5)	(0.4)
Tax liabilities		429	693	(264)	(38.1)
Current tax liabilities		275	604	(329)	(54.5)
Deferred tax liabilities		154	89	+ 65	+ 73.0
Liabilities of disposal groups held for sale	81	—	102	(102)	(100.0)
Other liabilities	82	1,649	1,699	(50)	(2.9)
Provisions	83	3,453	2,601	+ 852	+ 32.8
Shareholders' equity	84	17,751	18,874	(1,123)	(5.9)
Shareholders' equity attributable to the shareholder of UniCredit Bank AG		17,748	18,867	(1,119)	(5.9)
Subscribed capital		2,407	2,407	—	—
Additional paid-in capital		9,791	9,791	—	—
Other reserves		4,998	5,289	(291)	(5.5)
Changes in valuation of financial instruments		32	80	(48)	(60.0)
AfS reserve		n/a	52		
Hedge reserve		28	28	—	—
FVTOCI reserve		4	n/a		
Consolidated profit 2018		520	1,300	(780)	(60.0)
Minority interest		3	7	(4)	(57.1)
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		286,688	299,060	(12,372)	(4.1)

The 2018 profit available for distribution disclosed in the annual financial statements of UniCredit Bank AG (corresponding to the consolidated profit of HVB Group), which forms the basis for the appropriation of profit, amounts to €520 million. We will propose to the Shareholders' Meeting to pass a resolution that a dividend totalling €520 million be paid to UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €0.65 per share after around €1.62 in the 2017 financial year. The consolidated profit disclosed in the previous year amounting to €1,300 million was distributed to UniCredit pursuant to the resolution of the Shareholders' Meeting of 11 June 2018.

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: PENSIONS AND SIMILAR OBLIGATIONS (IAS 19)
Shareholders' equity at 1/1/2017	2,407	9,791	5,107	n/a	(1,316)
Consolidated profit recognised in the consolidated income statement	—	—	—	n/a	—
Total income and expenses recognised in equity under other comprehensive income³	—	—	142	n/a	150
Changes in valuation of financial instruments not affecting income	—	—	—	n/a	—
Changes in valuation of financial instruments affecting income	—	—	—	n/a	—
Actuarial gains/(losses) on defined benefit plans	—	—	150	n/a	150
Reserve arising from foreign currency translation	—	—	(8)	n/a	—
Other changes	—	—	—	n/a	—
Total other changes in equity	—	—	40	n/a	5
Dividend payouts	—	—	—	n/a	—
Transfers from consolidated profit	—	—	32	n/a	—
Changes in group of consolidated companies	—	—	8	n/a	5
Capital decreases	—	—	—	n/a	—
Shareholders' equity at 31/12/2017	2,407	9,791	5,289	n/a	(1,161)
Shareholders' equity at 1/1/2018	2,407	9,791	5,289	—	(1,161)
Changes on initial application of IFRS 9	—	—	38	(21)	—
Shareholders' equity restated at 1/1/2018	2,407	9,791	5,327	(21)	(1,161)
Consolidated profit recognised in the consolidated income statement	—	—	—	—	—
Total income and expenses recognised in equity under other comprehensive income³	—	—	(46)	21	(69)
Changes in valuation of financial instruments not affecting income	—	—	21	21	—
Changes in valuation of financial instruments affecting income	—	—	—	—	—
Actuarial gains/(losses) on defined benefit plans	—	—	(69)	—	(69)
Reserve arising from foreign currency translation	—	—	2	—	—
Other changes	—	—	—	—	—
Total other changes in equity	—	—	(283)	—	—
Dividend payouts	—	—	—	—	—
Transfers from consolidated profit	—	—	(284)	—	—
Changes in group of consolidated companies	—	—	1	—	—
Capital decreases	—	—	—	—	—
Shareholders' equity at 31/12/2018	2,407	9,791	4,998	—	(1,230)

¹ The Shareholders' Meeting of 22 May 2017 resolved to distribute the 2016 consolidated profit in the amount of €3,005 million to our sole shareholder UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €3.75 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 VALUATION OF FINANCIAL INSTRUMENTS			FVTOCI RESERVE	CONSOLIDATED PROFIT ¹	TOTAL SHAREHOL- DERS' EQUITY ATTRIBUTABLE TO THE SHAREHOL- DER OF HVB ²	MINORITY INTEREST	TOTAL SHAREHOL- DERS' EQUITY
AFS RESERVE	HEDGE RESERVE						
74	30	n/a	3,005	20,414	6	20,420	
—	—	n/a	1,332	1,332	4	1,336	
(22)	(2)	n/a	—	118	—	118	
62	1	n/a	—	63	—	63	
(84)	(3)	n/a	—	(87)	—	(87)	
—	—	n/a	—	150	—	150	
—	—	n/a	—	(8)	—	(8)	
—	—	n/a	—	—	—	—	
—	—	n/a	(3,037)	(2,997)	(3)	(3,000)	
—	—	n/a	(3,005)	(3,005)	(3)	(3,008)	
—	—	n/a	(32)	—	—	—	
—	—	n/a	—	8	—	8	
—	—	n/a	—	—	—	—	
52	28	n/a	1,300	18,867	7	18,874	
52	28	—	1,300	18,867	7	18,874	
(52)	—	25	—	11	—	11	
n/a	28	25	1,300	18,878	7	18,885	
n/a	—	—	236	236	2	238	
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	—	—	(1,016)	(1,299)	(6)	(1,305)	
n/a	—	—	(1,300)	(1,300)	—	(1,300)	
n/a	—	—	284	—	—	—	
n/a	—	—	—	1	(6)	(5)	
n/a	—	—	—	—	—	—	
n/a	28	4	520	17,748	3	17,751	

Statement of Changes in Consolidated Shareholders' Equity (CONTINUED)

The changes in the statement of changes in shareholders' equity are the result of the first-time adoption of the IFRS 9 standard. The adjustments made in the statement of changes in shareholders' equity are described in the Note "First-time adoption of IFRS 9 – Changes in disclosure principles compared with the previous year". The amounts shown in the line "Effect of first-time adoption of IFRS 9" relating to measurement adjustments performed are described in the Note "Effects of first-time adoption of IFRS 9". It should be noted that the Note "Effects of first-time adoption of IFRS 9" presents the effects in relation to the respective balance sheet item before tax (taxes constitute a separate balance sheet item), while the statement of changes in shareholders' equity shows the amounts after tax, i.e. taking account of tax effects.

The available-for-sale reserve is reversed upon first-time adoption of IFRS 9 from 1 January 2018 as the category "available for sale" no longer applies.

To the extent that certain securities are measured at fair value directly in equity, the difference between amortised cost and the fair value for such portfolios is added to the fair value through other comprehensive income reserve. For the portfolios recorded in this category for the first time as of 1 January 2018, this difference is recorded in the statement of changes in shareholders' equity through the line "Effect of first-time adoption of IFRS 9", while follow-up measurement is performed through other comprehensive income in the consolidated statement of total comprehensive income.

If the required new classification and measurement of assets cause measurement effects (e.g. transition from measurement at cost to fair value measurement in the case of shareholdings), such measurement effects are recorded in retained earnings as at 1 January 2018 and added to Other reserves in the statement of changes in shareholders' equity through the line "Effects of first-time adoption of IFRS 9". As IFRS 9 is generally applied retrospectively, these effects remain in retained earnings on a permanent basis.

The effects arising from the changes in fair value of the own credit spread for financial liabilities designated as measured at fair value through profit or loss give rise to a special effect: According to the provisions of IFRS 9, such effects, to the extent they relate to periods prior to 1 January 2018, are added to the newly created reserve for the own credit spread effect. As these instruments were previously allocated to financial liabilities held for trading and have thus already been measured at fair value through profit or loss, such effect from the change in the own credit spread is already recorded through profit or loss in previous periods and is included in retained earnings. This means that these instruments must be reclassified from retained earnings to the new "own credit spread reserve". As both reserves are part of the Other reserves in the statement of shareholders' equity, there is no effect on equity at this point. The increase in Other reserves of €38 million is attributable to the remaining adjustments in the measurement of the financial instruments, as described in the Note "Effects of first-time adoption of IFRS 9".

Consolidated Cash Flow Statement

(€ millions)

	2018	2017
Consolidated profit	238	1,336
Write-downs, provisions for losses on, and write-ups of, loans and receivables and additions to provisions for losses on guarantees and indemnities	49	241
Write-downs and depreciation less write-ups on non-current assets	409	292
Change in other non-cash positions	(1,636)	(796)
Profit from the sale of investments, property, plant and equipment	(31)	(146)
Other adjustments (net interest and dividend income from the income statement, taxes on income paid)	(2,627)	(2,758)
Subtotal	(3,598)	(1,831)
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	6,563	10,673
Loans and receivables with banks (at cost)	(3,998)	2,634
Loans and receivables with customers (at cost)	(13,399)	(211)
Other assets from operating activities	(36)	(1,218)
Deposits from banks	(3,718)	10,852
Deposits from customers	(3,169)	7,594
Debt securities in issue	(298)	1,636
Other liabilities from operating activities	(284)	(2,552)
Taxes on income	(351)	19
Interest received	4,110	3,705
Interest paid	(1,529)	(1,212)
Dividends received	345	268
Cash flows from operating activities	(19,362)	30,357
Proceeds from the sale of investments	5,767	2,120
Proceeds from the sale of property, plant and equipment	82	90
Payments for the acquisition of investments	(1,366)	(2,926)
Payments for the acquisition of property, plant and equipment	(160)	(193)
Effects of the change in the group of companies included in consolidation	38	68
Effect of the disposal of discontinued operations	—	—
Cash flows from investing activities	4,361	(841)

	2018	2017
Change in additional paid-in capital	—	—
Dividend payments	(1,300)	(3,005)
Issue of subordinated liabilities and hybrid capital	—	—
Repayment/buy-back of subordinated liabilities and hybrid capital	(45)	(45)
Other financing activities (debt, fund for general banking risks) (+)	(78)	178
Other financing activities (debt, fund for general banking risks) (-)	—	—
Cash flows from financing activities	(1,423)	(2,872)
Cash and cash equivalents at end of previous period	36,414	9,770
Net cash provided/used by operating activities	(19,362)	30,357
Net cash provided/used by investing activities	4,361	(841)
Net cash provided/used by financing activities	(1,423)	(2,872)
Effects of exchange rate changes	—	—
Less non-current assets or disposal groups held for sale	—	—
Cash and cash equivalents at end of period	19,990	36,414

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 globally active 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 2019 and approved by the Supervisory Board on 22 March 2019. 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 2018 financial year have been applied. Section 315e HGB also contains national regulations to be applied alongside the IFRS by capital-market-oriented companies.

Our listed subsidiary AGROB Immobilien AG has published the declaration of compliance required by Section 161 of the German Stock Corporation Act (Aktiengesetz – AktG) on its website.

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.

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 Beta 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
- Ocean Breeze Energy GmbH & Co. KG, Bremen
- 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 Capital Partners AG, 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
- Transterra Gesellschaft für Immobilienverwaltung 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. The first-time adoption of new or amended IFRS is described in the note "Initial adoption of 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.

In the opening balance sheet, we have designated own structured issues of €4.7 billion as measured at fair value through profit or loss. These are structured issues containing embedded derivatives. On account of the measurement at fair value through profit or loss, the obligation to separate out embedded derivatives no longer applies. These issued instruments are primarily intended to refinance the Bank's business activities. Disclosure outside of financial liabilities held for trading thus reflects the presentation of the business purpose and provides the user of the financial statements with a better insight into the assets position of HVB Group. Correspondingly, the net income from the fair value measurement of liabilities designated at fair value through profit or loss is disclosed in the new income statement item "Net gains/losses on financial assets and liabilities at fair value". The corresponding accounting provision governing how issues are reported was adapted for this purpose. In the previous year, the portfolio was disclosed in the financial liabilities held for trading and the net income was disclosed in net trading income. The previous-year figures were not restated.

Furthermore, negative interest, whether relating to financial assets or liabilities, is shown for the first time as a separate income statement item. Disclosure as a separate item takes account of the fact that negative interest on assets does not reflect an economic benefit and thus does not constitute any (interest) income. This applies correspondingly to negative interest on liabilities. The previous-year figures have been adjusted accordingly.

The impairment test performed on goodwill resulted in an impairment loss. As the impairment loss on goodwill constitutes a material amount and this write-down is attributed a special character, we have inserted a new subtotal "Profit before tax and impairment on goodwill". The impairment loss is shown below that as a separate income statement item before continuing with the existing subtotal "Profit before tax". Presentation in this way takes account of the fact that the impairment loss on goodwill is not only relevant in terms of its amount but also specific and not comparable with other matters. This is due to the fact that it is not incurred on a regular but on an unscheduled basis and the impairment item itself is of a special nature that deviates from other assets so that an impairment loss on goodwill is not comparable with impairment losses on other assets. For this reason, it is presented separately in the income statement and not aggregated with other items or subtotals.

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 Strategic Plan drawn up by HVB Group forms the main basis for the impairment test for goodwill. The Strategic 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.

– 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.

– Investment properties:

These assets are depreciated over the useful life of the property (excluding the land portion), meaning that a forecast is also required here.

Apart from this, the accounting, valuation and disclosure principles applied in the 2018 financial year are the same as those applied in the consolidated financial statements for 2017, with the exception of the new IFRS rules to be applied as described in the Note "Initial adoption of new IFRS accounting rules".

Accounting and Valuation (CONTINUED)

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 EU for the first time in the 2018 financial year:

Standards

- First time adoption IFRS 9 – “Financial Instruments”
- First time adoption IFRS 15 – “Revenue from Contracts with Customers”

Interpretations

IFRIC 22 – “Foreign Currency Transactions and Advance Consideration”

Amendments and improvements

- Annual improvements to the 2014–2016 IFRS cycle (IFRS 1, IFRS 12 and IAS 28)
- Clarifications to IFRS 15 – “Issues emerging from the Joint Transition Resource Group for Revenue Recognition (TRG) discussions”
- Amendments to IFRS 2 – “Clarifications of classification and measurement of share-based payment transactions”
- Amendments to IAS 40 – “Transfers of Investment Property”

The implementation of the first time adoption of the IFRS 9 standard has a major impact on the consolidated financial statements of HVB Group. The resulting changes to the disclosure and valuation methods will be dealt with in the Notes “First-time adoption of IFRS 9 – Changes to measurement methods compared with the previous year”, “First-time adoption of IFRS 9 – Changes to disclosure principles compared with the previous year” and “Effects of first-time adoption of IFRS 9”.

The **new IFRS 15 standard** “Revenue from Contracts with Customers” is mandatory for the financial years beginning on or after 1 January 2018 and supersedes IAS 11 “Construction Contracts”, IAS 18 “Revenue”, IFRIC 13 “Customer Loyalty Programmes”, IFRIC 15 “Agreements for the Constructions of Real Estate” and IFRIC 18 “Transfers of Assets from Customers” as well as SIC 31 “Revenue – Barter Transactions Involving Advertising Services”. IFRS 15 is to be applied to all contracts with customers with the exception of the following contracts:

- Leases that fall under IAS 17/IFRS 16 “Leases”
- Financial instruments and other contractual rights and obligations that fall under IFRS 9 “Financial Instruments”, IFRS 10 “Consolidated Financial Statements”, IFRS 11 “Joint Arrangements”, IAS 27 “Separate Financial Statements” or IAS 28 “Investments in Associates and Joint Ventures”
- Insurance contracts within the scope of application of IFRS 4 “Insurance Contracts”

The standard specifies how and when an IFRS reporting entity will recognise revenues as well as requiring such entities to provide users of financial statements with more informative and relevant disclosures than previously. According to the key principle of IFRS 15 a company should report income at the amount at which consideration is expected for the performance obligation(s) assumed, i.e. the transfer of goods and/or the provision of services. This key principle is implemented through a five-step model to be applied to all contracts with customers.

On account of the areas of exclusion named above, only commission income comes under the scope of application of the standard. The Bank has analysed the impact of IFRS 15 and has come to the conclusion that the application of the new standard has no effects on the accounting of commission income. It was not necessary to convert the timing or the amount of the revenue realisation.

According to the amended disclosure requirements of IFRS 15, the Bank broke down commission income by type of service provided. Please see the Note “Net fees and commissions” for further information.

We likewise implemented the remaining interpretations, amendments and improvements, which had no impact on the consolidated financial statements.

As a result of the **first-time adoption of IFRS 9** there have been significant changes to the methods for the recognition and measurement of financial instruments. In July 2014, the IASB published the definitive version of IFRS 9 "Financial Instruments" which besides IFRS 9 also covered further standards (particularly IFRS 7 and IAS 1). It was endorsed by the European Union in November 2016. IFRS 9 contains a revision of the main regulations concerning the classification and measurement of financial instruments, the measurement of impairments of financial assets and the recognition of hedges.

HVB exercised the option to continue applying the provisions of IAS 39 on Hedge Accounting. The new provisions on the classification and measurement of financial instruments and on the measurement of impairments of financial assets will be dealt with in greater detail below.

IFRS 9 generally provides the following valuation categories for assets: measurement at amortised cost, at fair value through other comprehensive income, or at fair value through profit or loss. A precondition for measurement at amortised cost is firstly that the asset is allocated to the "Hold to maturity" business model, i.e. HVB intends to hold the asset concerned until maturity and secondly, that the terms of contract only contain payments that are either interest or redemption payments. If this applies, the cash flow criteria required have been met. Measurement at fair value through other comprehensive income is subject to the following conditions: The asset must be allocated to a business model that provides for financial instruments to be both held to maturity and be available for sale. The asset must also meet the same cash flow criteria that are required for measurement at amortised cost. If an asset cannot be measured at amortised cost or at fair value through other comprehensive income, it is to be recognised at fair value through profit or loss.

The accounting methods for assets held for trading have been continued as part of the financial instruments measured at fair value through profit or loss without any change compared with IAS 39.

For assets measured at amortised cost, impairments are to be recognised based on the expected losses. If the default risk has not significantly increased since the initial recognition of the asset, an impairment is to be recognised at the amount of the 12-month credit loss (Stage 1), otherwise at the amount of the loss expected over the residual term. In this context, a distinction is made between whether default has already occurred (Stage 3) or not (Stage 2). While interest income is recognised for performing assets (Stage 1 and 2) using the effective interest method based on the gross carrying amount, interest income for non-performing loans (Stage 3) may only be recognised using the effective interest method based on the net carrying amount. In addition, the rules of Stage 3 apply to assets whose creditworthiness was already adversely affected upon initial recognition for the entire residual term, i.e. upgrading to Stages 1 and 2 is ruled out.

For assets measured at fair value without affecting profit or loss, these regulations on impairments are also to be recognised through profit or loss while the difference in the carrying amount calculated as such to the fair value is recognised under other comprehensive income.

The IFRS rules on impairments are also to be applied to guarantees and credit commitments that are not measured at fair value through profit or loss. With regard to credit commitments, both irrevocable credit commitments and revocable credit commitments, exposing HVB Group to a credit default risk, are included.

IFRS 9 largely adopts the existing accounting rules of IAS 39 for financial liabilities. Only in the case of financial liabilities designated to be measured at fair value through profit or loss are changes in fair value on account of a change in the default risk of the liability to be recognised in other comprehensive income provided this does not produce or increase any accounting mismatch.

Accounting and Valuation (CONTINUED)

5 First-time adoption of IFRS 9 – Changes to measurement methods compared with the previous year

Loans and receivables measured at cost

As the lending business for HVB Group puts a focus on customer care and customer relationships, the intention is generally to hold to maturity loans issued by the Bank. 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.

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 risk of credit default.

Depending on the allocation of the debtor, the loans and receivables measured at cost are reported in 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.

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”.

Assets measured at fair value through profit or loss

HVB Group has decided that all financial instruments measured at fair value through profit or loss will also be managed on this basis in order to avoid the otherwise imminent risk of differences between planning/internal management and accounting. All debt instruments that do not meet cash flow criteria are thus allocated to the “Other” business model and thus measured at fair value through profit or loss.

The portion of syndicated loans that the Bank wishes to place because these are earmarked for sale (placement) is also allocated to the “Other” business model and measured at fair value through profit or loss.

In addition, particularly securities holdings which to date were designated under IAS 39 as financial instruments to be measured at fair value through profit or loss continue to be managed unchanged on a fair value basis. As a result, these holdings were also allocated to the “Other” business model and are measured at fair value through profit or loss.

As holdings are generally to be measured at fair value through profit or loss in accordance with IFRS requirements, we have allocated our holdings to this balance sheet item, unless they are measured using the equity method or are fully consolidated. HVB Group did not exercise the option of measuring holdings at fair value without affecting profit or loss.

Impairments based on expected losses

Upon the introduction of IFRS 9, the method for determining impairments is being converted to the Expected Loss model. This is to be applied for loans and receivables measured at cost, assets measured at fair value without affecting profit or loss and credit commitments or financial guarantees that are measured at fair value without affecting profit or loss. In the case of the loans and receivables measured at cost, the impairments determined are posted to an impairment account and reduce the carrying amount. In the case of assets measured at fair value without affecting profit or loss, the impairments are determined for the asset and recognised in the statement of total comprehensive income as a result of the measurement at fair value. A provision is set up for the impairments of credit commitments and financial guarantees.

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 starting point in this connection are the supervisory procedures for the determination of the probability of default (PD), loss given default (LGD) and exposure at default (EAD). 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 Level 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 Level 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.

Accounting and Valuation (CONTINUED)

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.

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.

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 instruments 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 level 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.

A default is, as was the case to date, when either a material liability of the borrower is overdue for more than 90 days or HVB Group believes that the debtor is unable to meet the payment obligation in full without steps to realise collateral being taken. In such cases, an impairment is the difference between the carrying amount and the present value of the anticipated future cash flows. These are estimated by HVB Group and discounted at the respective interest rate. In the process, various realistic scenarios are then estimated, whereby the impairment is obtained from the expected value weighted with the probability of occurrence of default for each scenario. If the reasons for the default no longer apply, the liability is retransferred to Stages 1 or 2, depending on whether the default risk is still significantly increased or not compared with the default risk upon addition.

For financial assets that were already in default at the time of addition (purchased or originated credit impaired assets or POCI), interest income is likewise recognised only at the interest amount based on the net carrying amount. Only those new additions are recognised as a POCI asset that result not only in an insignificant increase in the existing exposure, i.e. do not exceed 20% of the unsecured, existing exposure. Loan losses expected at the time of addition are already taken into account in the carrying amount (fair value) when posted, which means that no impairment is recognised at the time of addition for POCI assets. In the subsequent measurement these are measured on the basis of the loss expected over the (residual) term whereby in the event of higher expected inflows than assumed at the time of addition, write-ups are also recognised in excess of the acquisition costs. The retrospective recognition of POCI assets was waived on account of cost-benefit considerations as the determination of the expected low level of POCI cases would have entailed an unreasonable amount of additional effort.

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 his creditworthiness. In such cases, the existing loan is derecognised and the modified loan posted as a new loan. Conversely, the cases where HVB Group accepts an adjustment to the contractual terms merely on account of the weak creditworthiness of the borrower are insignificant modifications. As a rule, this concerns non-performing credit exposures which means that HVB Group shows the result of insignificant modifications in the income statement item "Credit impairment losses IFRS 9".

The Bank waived the retrospective recognition of effects from insignificant modifications on account of cost-benefit considerations as the determination of the expected minor effects from this would have entailed an unreasonable amount of additional effort.

Accounting and Valuation (CONTINUED)

6 First-time adoption of IFRS 9 – Changes to disclosure principles compared with the previous year

Changes to the income statement

The structure of the income statement was adjusted with effect from the 2018 financial year onwards on account of new requirements (particularly IFRS 9 and IFRS 7) and the resulting consequences. The new structure of the income statement follows the measurement categories changed by IFRS 9, thus complementing or replacing the previous structure based on IAS 39 categories. To this end, new items have been created and existing items adjusted or derecognised for the 2018 financial year. Items previously used that are not continued in the 2018 financial year are shown for the last time with the previous-year figures. As the first-time adoption of IFRS 9 is not retrospective, the comparability particularly of income statement items will be restricted to the extent that they are affected by the changes to disclosure and measurement principles on the basis of IFRS 9.

In order to match the new measurement categories contained in IFRS 9, the new item “Net gains/losses on financial assets and liabilities at fair value” was inserted in the income statement. Due to the increase in assets that are accounted for at fair value, it is necessary to use a separate item for this.

This item contains the measurement results and realised net gains and losses on the disposal of financial instruments measured at fair value which are not part of the assets held for trading. This item thus contains the following:

- the net gains/losses on financial instruments measured at fair value through profit or loss (assets and liabilities),
- the net gains/losses on the disposal of financial instruments measured at fair value directly in equity and
- the net gains/losses from hedge accounting.

The item “Net gains/losses on derecognition of financial instruments measured at cost” is shown for the first time in the 2018 financial year in order to comply with the requirements of IFRS 9. This item contains the effects from the disposal of assets and buy-backs of liabilities relating to all financial instruments measured at amortised cost pursuant to IFRS 9. This includes other net trading income (buy-backs of issued securities) that was disclosed in net trading income in the 2017 financial year, and income from the sale of receivables/securities measured at cost that were shown in the item “Net other expenses/income” in the 2017 financial year.

As a consequence, the scope covered by the “Net trading income” item has been reduced such that in the 2018 financial year it contains only the measurement results or realised gains from the held-for-trading portfolio.

The previous IAS 39 item “Net write-downs of loans and provisions for guarantees and commitments” is no longer used in the 2018 financial year on account of the introduction of the Expected Loss model due to the first-time adoption of IFRS 9 (previously Incurred Loss model) and is replaced by the new item “Credit impairment losses IFRS 9”, which corresponds to the new Expected Loss model. The new item was created to show the fundamental changes to the methodology underlying the impairment model also in the income statement, as it does not simply involve a continuation of the former IAS 39 item and it is therefore not comparable with the previous-year figure.

The item “Net income from investments” was discontinued in the 2018 financial year and is shown for the last time with the figures for the 2017 financial year as the previously material components – available-for-sale and held-to-maturity financial instruments – no longer apply on account of IFRS 9, which means that net income from investments loses its original character. In order to provide a clear and meaningful income statement structure, the remaining components are reclassified to existing items or new ones especially created for this purpose. In this way, the gains on disposal of land and buildings and investment properties are shown in the item “Net other expenses/income” and the gains on disposal of shares in affiliated companies and companies accounted for using the equity method are shown in “Net gains/losses on disposal of investments”. Impairment on companies accounted for using the equity method will be recognised in this item in future. The former available-for-sale and held-to-maturity financial instruments are, depending on the business model and SPPI test, allocated either to the item “Net gains/losses on financial assets and liabilities at fair value” (business model: “Other” or “Held for sale” after passing the SPPI test) or to the item “Net gains/losses on derecognition of financial instruments measured at cost” (business model: “Hold to maturity” after passing the SPPI test).

The scope covered by the item "Net other expenses/income" was also adjusted to match the changes. A portion of other income – the net profit from the sale of receivables – was reclassified to "Net gains/losses on derecognition of financial instruments measured at cost". Net profit from the disposal of land and buildings as well as investment properties previously shown in the item "Net income from investments" is recorded in this item for the first time in the 2018 financial year.

The item "Net gains/losses on disposals of investments" is shown in the 2018 financial year for the first time; it contains the gains on disposal of shares in affiliated companies and companies accounted for using the equity method that were previously shown in net income from investments. It also contains write-downs and write-ups on companies accounted for using the equity method. This item was created to provide an informative grouping and presentation of the positions contained.

Changes to the balance sheet

The structure of the balance sheet was likewise adjusted as of the 2018 financial year on account of the new requirements (particularly IFRS 9 and IFRS 7) and the resulting effects of the same. The new balance sheet structure corresponds to the new measurement categories of IFRS 9, thus replacing for the 2018 financial year the balance sheet structure based on the categories of IAS 39 in use until the 2017 financial year.

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. This item contains all the debt instruments that are to be measured at fair value through profit or loss on account of the "Other" business model as well as the shareholdings that are likewise to be measured at fair value through profit or loss. This also includes debt instruments that do not meet the cash flow criteria and were shown in the 2017 financial year in the item "Loans and receivables with banks (at cost)" or "Loans and receivables with customers (at cost)" or "Available-for-sale financial assets". This item also includes the financial instruments of the former item "Financial instruments at fair value through profit or loss (fair value option)" that have to be measured at fair value on account of the "Other" business model. Furthermore, the part of the syndicated loans is recognised here that we intend to outplace. This can relate to both an already disbursed loan or an undrawn credit commitment which, pursuant to IFRS 9.2.3 (a) falls within the scope of application of IFRS 9 and must therefore be measured at fair value.

The 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 items measured at fair value directly in equity on account of the "Held for sale" business model and because the cash flow criteria are met. Only fixed-income securities reclassified from the previous available-for-sale portfolio are included.

The item "Financial instruments at fair value through profit or loss (fair value option)" no longer applies in the 2018 financial year and thus contains only previous-year figures for the 2017 financial year. This applies analogously for the items "Available-for-sale financial assets" and "Held-to-maturity investments".

Loans and receivables that cannot be measured at amortised cost on account of the "Other" business model are reclassified to the item "Financial assets at FVTPL" for the first time in the 2018 financial year on account of measurement at fair value through profit or loss. This means that the items "Loans and receivables with banks (at cost)" and "Loans and receivables with customers (at cost)" only contain loans and receivables that can be measured at amortised cost on account of the "Hold to maturity" business model and the fact that the cash flow criteria are met. The previous-year figures were not restated.

Equity/Statement of changes in shareholders' equity

The structure of equity, the statement of changes in shareholders' equity and the statement of total comprehensive income was adjusted as of the 2018 financial year on account of the requirements of IFRS 9 and the consequences therefrom. The item "AfS reserve" no longer applies from the 2018 financial year onwards, as the underlying category of financial instruments – available for sale – was discontinued upon the introduction of IFRS 9.

Accounting and Valuation (CONTINUED)

The item “Changes in valuation of financial assets at FVTOCI” is shown for the first time in the 2018 financial year to take account of the newly introduced category of measurement at fair value through profit or loss. To the extent that the difference between amortised cost and fair value of assets is recorded under this item, any reserve still in existence at this time is to be taken to the income statement.

Furthermore, the reserve for the own credit spread is introduced in “Other reserves”. This became necessary on account of the new rule introduced by IFRS 9 allowing changes in fair value to be recorded in equity on account of the own credit spread of liabilities. This option is applicable only to those liabilities that are designated for measurement at fair value through profit or loss. To the extent that, at the time of disposal of liabilities, there are still amounts in this reserve, recording these in the income statement is not permitted and the corresponding amounts are generally reclassified to retained earnings.

A line is inserted for only one time in order to show the changes in equity caused by the first-time adoption of IFRS 9 and in order to reconcile the equity from the closing IAS 39 balance sheet as at 31 December 2017 to the opening IFRS 9 balance sheet as at 1 January 2018.

Statement of total comprehensive income

The new item “Changes in valuation of financial instruments at FVTOCI” was included in order to record the measurement results of the assets measured at fair value without affecting profit or loss.

Following the option of recording in equity changes in fair value on account of the own credit spread with liabilities designated at fair value, the statement of total comprehensive income will contain for the first time in the 2018 financial year the item “Changes in fair value of financial liabilities at FVTPL”. This item contains changes in fair value attributable to changes in the default risk (own credit spread reserve).

The changes in the measurement of financial instruments (available-for-sale reserve) is shown for the last time in the 2017 financial year as the underlying reserve no longer applies in the 2018 financial year following the introduction of IFRS 9.

7 Effects of first-time adoption of IFRS 9

The following tables explain the adjustments and reconciliations performed as of 1 January 2018 on account of the first-time adoption of IFRS 9. For this purpose, these are initially introduced in an overview relating to the respective measurement categories. Subsequently, separate tables for each individual measurement category present the details of the reconciliation from the IAS 39 measurement categories or balance sheet items to the new balance sheet items. These constitute the opening balance sheet for the 2018 financial year.

Retrospective adoption of IFRS 9 was not applied. Correspondingly, the effects of measurement adjustments on account of the new accounting provisions contained in IFRS 9 are recorded in equity. For details, please refer to the notes relating to the statement of changes in shareholders' equity.

The adjustments made to the disclosure and measurement methods used are presented in the corresponding note.

Overview of the effects of first-time adoption of IFRS 9

(€ millions)

	IAS 39 CARRYING AMOUNT 31/12/2017	RECLASSI- FICATIONS	REMEASURE- MENTS	IFRS 9 CARRYING AMOUNT 1/1/2018
Financial assets measured at fair value	97,339	766	46	98,151
Financial assets measured at fair value through other comprehensive income	6,816	(669)	—	6,147
Financial assets measured at amortised cost	151,531	(97)	(13)	151,421
Tax assets	1,363	—	64	1,427
Tax liabilities	693	—	51	744
Hedge adjustment of hedged items in the fair value hedge portfolio (liabilities)	1,215	—	15	1,230
Provisions for off-balance sheet liabilities	180	—	20	200

The following tables provide a detailed overview of the effects of first time adoption of IFRS 9:

Financial assets measured at fair value

(€ millions)

	IAS 39 CARRYING AMOUNT 31/12/2017	RECLASSI- FICATIONS	REMEASURE- MENTS	IFRS 9 CARRYING AMOUNT 1/1/2018
Financial assets held for trading				
Closing balance under IAS 39 on 31/12/2017	75,493			
remaining in assets held for trading		—	—	
Opening balance under IFRS 9 on 1/1/2018				75,493
Financial assets at FVTPL (FVO)				
Closing balance under IAS 39 on 31/12/2017	21,456			
to financial assets at FVTPL		(21,456)	—	
Opening balance under IFRS 9 on 1/1/2018				—
Financial assets at FVTPL				
Closing balance under IAS 39 on 31/12/2017	—			
from loans and receivables with banks (at cost)		—	—	
from loans and receivables with customers (at cost)		513	(2)	
from available-for-sale financial assets		252	48	
from held-to-maturity investments		1	—	
from financial assets at FVTPL (FVO)		21,456	—	
Opening balance under IFRS 9 on 1/1/2018				22,268
Hedging derivatives				
Closing balance under IAS 39 on 31/12/2017	390			
remaining in hedging derivatives		—	—	
Opening balance under IFRS 9 on 1/1/2018				390
Total	97,339	766	46	98,151

Accounting and Valuation (CONTINUED)

The assets held for trading are not affected by the first-time adoption of IFRS 9. As the definition of the held-for-trading portfolio has not been altered by IFRS 9 in comparison to IAS 39, the portfolio of assets held for trading remains unchanged.

The previous fair value option under IAS 39 no longer applies as these portfolios are managed in the HVB Group on the basis of fair value. These are correspondingly allocated to the “Other” business model and are consequently subject to the requirement of measurement at fair value through profit or loss. This means that the entire item “Financial assets at FVTPL (FVO)” is reclassified to the item “Financial assets at FVTPL”. There were no changes in measurement.

The balance sheet item “Financial assets at FVTPL” contains all assets not counted as held for trading that are measured at fair value. The following were reclassified to this item:

- All financial assets at FVTPL (FVO) without any change in measurement
- Debt instruments measured at cost under IAS 39 from the balance sheet items “Loans and receivables with banks (at cost)”, “Loans and receivables with customers (at cost)” and “Held-to-maturity investments” do not meet the cash flow criteria; these are measured at fair value for the first time and the difference between the fair value and the previous amortised cost is recorded in Other reserves in equity
- Available-for-sale financial assets measured at fair value (equity instruments measured at fair value and debt instruments) have been reclassified to this balance sheet item; remeasurement was not performed
- Available-for-sale financial assets measured at cost (equity instruments that are not listed on an active market and whose fair value cannot be reliably determined): As the exception for the measurement at amortised cost ceased to apply upon introduction of IFRS 9, these equity instruments are to be measured at fair value from the 2018 financial year onwards. HVB Group performed such fair-value measurement on the basis of the best possible models for the determination of fair value and the difference between the previous cost and fair value is added to other reserves

There were no changes relating to hedging derivatives. HVB Group exercises the respective option and continues to apply the hedge accounting provisions contained in IAS 39.

Financial assets measured at fair value through other comprehensive income

(€ millions)

	IAS 39 CARRYING AMOUNT 31/12/2017	RECLASSI- FICATIONS	REMEASURE- MENTS	IFRS 9 CARRYING AMOUNT 1/1/2018
Financial assets at FVTOCI				
Closing balance under IAS 39 on 31/12/2017	—			
from available-for-sale financial assets		6,147	—	
Opening balance under IFRS 9 on 1/1/2018				6,147
Available-for-sale financial assets				
Closing balance under IAS 39 on 31/12/2017	6,816			
to financial assets at FVTPL		(252)	—	
to financial assets at FVTOCI		(6,147)	—	
to loans and receivables with banks (at cost)		(209)	—	
to loans and receivables with customers (at cost)		(208)	—	
Opening balance under IFRS 9 on 1/1/2018				—
Total	6,816	(669)	—	6,147

The item “Financial assets at FVTOCI” contains portfolios of assets allocated to the “Held for sale” business model that meet the cash flow criteria. These were previously contained in available-for-sale financial assets. No adjustment to measurement was performed in this respect.

The previous category “Available for sale” under IAS 39 ceased to apply upon the introduction of IFRS 9. All the equity instruments included here have been allocated to the item “Financial assets at FVTPL”. The allocation to a business model was decisive for the distribution of debt instruments: securities portfolios allocated to the “Held for sale” business model have become part of the item “Financial assets at FVTOCI”. Securities portfolios allocated to the “Held to maturity” business model have, depending on the debtor, become part of the items “Loans and receivables with banks (at cost)” or “Loans and receivables with customers (at cost)” and securities portfolios allocated to the “Other” business model have become part of the item “Financial assets at FVTPL”.

Financial assets measured at amortised cost

(€ millions)

	IAS 39 CARRYING AMOUNT 31/12/2017	RECLASSI- FICATIONS	REMEASURE- MENTS	IFRS 9 CARRYING AMOUNT 1/1/2018
Held-to-maturity investments				
Closing balance under IAS 39 on 31/12/2017	23			
to financial assets at FVTPL		(1)	—	
to loans and receivables with banks (at cost)		—	—	
to loans and receivables with customers (at cost)		(22)	—	
Opening balance under IFRS 9 on 1/1/2018				—
Loans and receivables with banks (at cost)				
Closing balance under IAS 39 on 31/12/2017	30,330			
remaining in loans and receivables with banks (at cost)		—	(32)	
to financial assets at FVTPL		—	—	
from available-for-sale financial assets		209	(18)	
from held-to-maturity investments		—	—	
Opening balance under IFRS 9 on 1/1/2018				30,489
Loans and receivables with customers (at cost)				
Closing balance under IAS 39 on 31/12/2017	121,178			
remaining in loans and receivables with customers (at cost)		—	36	
to financial assets at FVTPL		(513)	—	
from available-for-sale financial assets		208	1	
from held-to-maturity investments		22	—	
Opening balance under IFRS 9 on 1/1/2018				120,932
Total	151,531	(97)	(13)	151,421

Accounting and Valuation (CONTINUED)

The previous category for securities held to maturity under IAS 39 ceased to apply upon the introduction of IFRS 9. Accordingly, this item has to be distributed among other balance sheet items. Allocation to a business model was decisive for distribution: securities portfolios allocated to the “Held to maturity” business model have, depending on the debtor, become part of the items “Loans and receivables with banks (at cost)” or “Loans and receivables with customers (at cost)” and securities portfolios allocated to the “Other” business model have become part of the item “Financial assets at FVTPL”. As the intention in this case is generally to hold the assets to maturity, the question as to whether the cash flow criteria are met was decisive: To the extent that these criteria are not met, the security is to be measured at fair value through profit or loss, which will lead to management on the basis of fair value, which necessitates allocation to the “Other” business model. If the cash flow criteria are met, the securities are allocated to the “Held to maturity” business model.

With assets disclosed in the items “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at cost)”, the general intention is to hold them to maturity. If these assets meet the cash flow criteria, they are allocated to the “Held to maturity” business model and remain within the respective balance sheet item. There are measurement effects on these financial instruments on account of the transition in the method used to determine impairment losses to the Expected Loss model. If the cash flow criteria are not met, the debt instrument is to be measured at fair value through profit or loss, which will lead to management on the basis of fair value and therefore to allocation to the “Other” business model. Correspondingly, these financial instruments were reclassified to the item “Financial assets at FVTPL”. This item also took in the debt instruments that were previously accounted for as held-to-maturity investments or available-for-sale financial instruments and were allocated to the “Held to maturity” business model. In cases of reclassification from the item “Available-for-sale financial assets”, measurement has been adjusted as these debt instruments are no longer accounted for at fair value but at amortised cost. As, under IAS 39, the difference between amortised cost and fair value for available-for-sale assets was shown in the available-for-sale reserve in equity, this was reversed and the carrying values were adjusted correspondingly, to maintain consistency.

Income tax

(€ millions)

	IAS 39 CARRYING AMOUNT 31/12/2017	RECLASSI- FICATIONS	REMEASURE- MENTS	IFRS 9 CARRYING AMOUNT 1/1/2018
Tax assets	1,363	—	64	1,427
Current tax assets				
Closing balance under IAS 39 on 31/12/2017	113			
remaining in current tax assets		—	—	
Opening balance under IFRS 9 on 1/1/2018				113
Deferred tax assets				
Closing balance under IAS 39 on 31/12/2017	1,250			
remaining in deferred tax assets		—	64	
Opening balance under IFRS 9 on 1/1/2018				1,314
Tax liabilities	693	—	51	744
Current tax liabilities				
Closing balance under IAS 39 on 31/12/2017	604			
remaining in current tax assets		—	—	
Opening balance under IFRS 9 on 1/1/2018				604
Deferred tax liabilities				
Closing balance under IAS 39 on 31/12/2017	89			
remaining in deferred tax assets		—	51	
Opening balance under IFRS 9 on 1/1/2018				140

The effects of first-time adoption on deferred taxes are a consequence of the adjustment of the measurement methods for assets on account of the first-time adoption of IFRS 9. As the carrying values change accordingly, while the values stated for tax reporting purposes remain unchanged as a rule, there is an impact on the recognition and measurement of deferred taxes.

Hedge adjustment of hedged items in the fair value hedge portfolio

(€ millions)

	IAS 39 CARRYING AMOUNT 31/12/2017	RECLASSI- FICATIONS	REMEASURE- MENTS	IFRS 9 CARRYING AMOUNT 1/1/2018
Hedge adjustment of hedged items in the fair value hedge portfolio				
Closing balance under IAS 39 on 31/12/2017	1,215			
remaining in hedge adjustment of hedged items in the fair value hedge portfolio		—	15	
Opening balance under IFRS 9 on 1/1/2018				1,230
Total	1,215	—	15	1,230

On account of classification of a specific security (allocation to the “Other” business model on account of the cash flow criteria not being met), the hedge adjustment attributable to such security was released. The hedge adjustment on the liabilities side generally constitutes a net figure, such that elimination of the hedge adjustment attributable to this specific security results in an increase in the remaining balance (increase in the hedge adjustment on the liabilities side).

Overview of the effects of first-time adoption of IFRS 9 – Impairment losses

(€ millions)

	IAS 39 IMPAIRMENTS FOR CREDIT DEFAULT AND PROVISIONS FOR OFF-BALANCE SHEET LIABILITIES IN THE LENDING BUSINESS 31/12/2017	CHANGE DUE TO RECLASSI- FICATION	CHANGE DUE TO THE IMPLEMENTATION OF THE IFRS 9 ECL-MODEL	IFRS 9 IMPAIRMENTS FOR CREDIT DEFAULT AND PROVISIONS FOR OFF-BALANCE SHEET LIABILITIES IN THE LENDING BUSINESS 1/1/2018
Financial assets measured at fair value	—	—	—	—
Financial assets measured at fair value through other comprehensive income	—	—	—	—
Financial assets measured at amortised cost	2,204	(61)	(3)	2,140
Total	2,204	(61)	(3)	2,140
Provisions for off-balance sheet liabilities	180	—	20	200

Accounting and Valuation (CONTINUED)

The recognition of an impairment loss for financial assets at fair value is no longer necessary on account of the fair value measurement. For instruments reclassified to this item, the corresponding reversal of the impairment loss is shown in the receiving balance sheet item.

The effects on financial assets measured at fair value through other comprehensive income are so minor that, after rounding, they come to a figure of €0 million. The corresponding portfolio is of such prime ranking that it is completely allocated to Stage 1.

The increase in impairment losses for off-balance sheet liabilities arises from the transition to the expected credit loss model.

Financial assets measured at amortised cost

(€ millions)

	IAS 39 IMPAIRMENTS FOR CREDIT DEFAULT AND PROVISIONS FOR OFF-BALANCE SHEET LIABILITIES IN THE LENDING BUSINESS 31/12/2017	CHANGE DUE TO RECLASSI- FICATION	CHANGE DUE TO THE IMPLEMENTATION OF THE IFRS 9 ECL-MODEL	IFRS 9 IMPAIRMENTS FOR CREDIT DEFAULT AND PROVISIONS FOR OFF-BALANCE SHEET LIABILITIES IN THE LENDING BUSINESS 1/1/2018
Held-to-maturity investments				
Closing balance under IAS 39 on 31/12/2017	—			
to financial assets at FVTPL		—	—	
to loans and receivables with banks (at cost)		—	—	
to loans and receivables with customers (at cost)		—	—	
Opening balance under IFRS 9 on 1/1/2018				—
Loans and receivables with banks (at cost)				
Closing balance under IAS 39 on 31/12/2017	55			
remaining in loans and receivables with banks (at cost)		—	32	
to financial assets at FVTPL		—	—	
from available-for-sale financial assets		—	—	
from held-to-maturity investments		—	—	
Opening balance under IFRS 9 on 1/1/2018				87
Loans and receivables with customers (at cost)				
Closing balance under IAS 39 on 31/12/2017	2,149			
remaining in loans and receivables with customers (at cost)		—	(36)	
to financial assets at FVTPL		(61)	—	
from available-for-sale financial assets		—	1	
from held-to-maturity investments		—	—	
Opening balance under IFRS 9 on 1/1/2018				2,053
Total	2,204	(61)	(3)	2,140

The increase in the impairment losses in the balance sheet item “Loans and receivables with banks (at cost)” arises from the introduction of the expected credit default model.

The net reversal of the impairment losses in the balance sheet item “Loans and receivables with customers (at cost)” constitutes the net balance of two effects: firstly, the transition to the expected credit default model is reflected here; secondly, the effect arising from taking account of several scenarios has an impact here (impairment corresponds to the difference between the carrying amount of the net write-downs of loans and provisions for guarantees and commitments and the expected proceeds upon realisation, with the proceeds upon realisation in various scenarios being estimated, discounted and weighted with the probability of occurrence of the respective scenario).

8 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 2019 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:

- IFRS 16 “Leases”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2019.
- IFRIC 23 “Uncertainty over Income Tax Treatments”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2019.
- Amendments to IFRS 9 “Prepayment Features with Negative Compensation”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2019.
- Amendments to IAS 28 “Long-term Interests in Associates and Joint Ventures”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2019.

The EU has not yet adopted the following into European law:

- IFRS 17 “Insurance Contracts”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2021.
- Amendments to IAS 19 “Plan Amendment, Curtailment or Settlement”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2019.
- Amendments to IFRS 3 “Definition of a Business”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2020.
- Amendments to IAS 1 and IAS 8 “Definition of Material”. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2020.
- Annual Improvements to IFRS Standards 2015–2017 Cycle. The provisions are subject to mandatory adoption for reporting periods beginning on or after 1 January 2019.
- Amendments of 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.

Accounting and Valuation (CONTINUED)

The new provisions to be applied in the future that are relevant for HVB Group are discussed below:

On 13 January 2016 IASB published the new accounting standard IFRS 16 "Leases", which will replace the existing standard covering the accounting treatment of leases, IAS 17, and the accompanying interpretations IFRIC 4, SIC-15 and SIC-27 as of 1 January 2019. These were adopted into European law (referred to as endorsement) on 31 October 2017.

According to the new definition of leases in IFRS 16, an agreement is or contains a lease if it grants the right to control the use of a specific asset for a specific period of time in return for payment. IFRS 16 abolishes the previous classification of leases on the lessee side and instead introduces a standardised lessee accounting model (referred to as right-of-use approach). For lease agreements the lessee thus generally recognises an asset for the right to use the underlying leased asset and correspondingly a lease liability for the obligation to make lease payments. As a result, previously unrecognised leases will have to be recognised in the balance sheet in future – largely comparable to the current accounting treatment of finance leases. HVB Group will use the accounting simplifications provided by the standard for lessees of presenting short-term lease agreements with a term of up to twelve months and lease agreements for low-value assets in a simplified manner. The previous criteria of IAS 17 were adopted into the new IFRS 16 for classifying lease agreements with lessors as finance and operating lease agreements. The new standard covering leases also contains provisions on disclosure, on information to be provided in the notes to the financial statements and on sale-and-lease-back transactions.

The project on the implementation of the new requirements, including IT-related implementation, has been completed for the most part. The required analyses were conducted under the management of Corporate Finance & Accounting together with experts from real estate management and contract management. Specialist concepts were developed on the basis of the results. The largest part of the rights of use and liabilities to be recognised are the properties rented by HVB Group. According to our findings so far, the potential first-time application effect of IFRS 16 consists in a balance sheet extension on account of the recognition of the rights of use and corresponding liabilities. HVB Group's total assets are expected to increase to an amount running into the mid-triple digit million range. In addition, the application of IFRS 16 has led to changes in presentation in the income statement as the expenses for operating lease agreements incurred by the lessee to date have been replaced by amortisation expenses for the rights of use and interest expense for the lease liabilities.

HVB Group will apply the new provisions as of the 2019 financial year for the first time. During the transition to IFRS 16, we are using the accounting simplification option existing for lessees and lessors regarding the new definition of lease agreements. According to this option, already existing agreements do not need to be examined retrospectively to determine whether they are to be classified in whole or in part as a lease (referred to as grandfathering). Furthermore, HVB Group will apply the new standard retrospectively in a modified way and thus waive an adjustment of the previous-year figures.

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.

9 Companies included in consolidation

The group of companies included in consolidation by HVB Group encompasses 139 (previous year: 187) controlled companies, of which 37 (previous year: 42) are classified as structured entities within the meaning of IFRS 12.

	2018	2017
Total controlled companies	307	321
Consolidated companies	139	187
of which: structured entities according to IFRS 12	37	42
Non-consolidated companies	168	134
Joint ventures	3	4
of which: accounted for using the equity method	—	—
Associated companies	6	7
of which: accounted for using the equity method	5	5

At year-end 2018, we had a total of 172 (previous year: 140) controlled and associated companies, 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 three borrowers (previous year: four) 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. Three (previous year: four) 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 1.25% (previous year: 1.04%) of the consolidated profit of HVB Group, while such companies provide around 0.06% (previous year: 0.33%) 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 associated companies) amounts to 0.07% (previous year: 0.08%) of the consolidated profit, their share in the Group capital is 0.001% (previous year: 0.003%). 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 2018.

37 (previous year: 42) fully consolidated controlled entities are classified as structured entities pursuant to IFRS 12. 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/CAAP regarding their capital base. The 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 2018 have no significant effects on the consolidated financial statements of HVB Group either individually or in aggregate. At 31 December 2018 third parties hold non-controlling interests in 47 (previous year: 58) 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.

Accounting and Valuation (CONTINUED)

The following companies were newly added to the group of companies included in consolidation at HVB Group in 2018:

- Elektra Purchase No. 56 DAC, Dublin
- Elektra Purchase No. 63 DAC, Dublin

The following companies left the group of companies included in consolidation of HVB Group in 2018 due to merger, sale, or imminent or completed liquidation:

- BV Grundstücksentwicklungs-GmbH & Co. Verwaltungs-KG, Munich
- Elektra Purchase No. 35 DAC, Dublin
- Elektra Purchase No. 40 DAC, Dublin
- Elektra Purchase No. 42 DAC, Dublin
- Elektra Purchase No. 47 DAC, Dublin
- Elektra Purchase No. 58 DAC, Dublin
- GELDILUX-TS-2013 S.A., Luxembourg
- Mobility Concept GmbH, Oberhaching
- Omnia Grundstücks-GmbH & Co. Objekt Eggenfeldener Straße KG, Munich
- UniCredit Luxembourg S.A., Luxembourg
- WealthCap Objekte Südwest GmbH & Co. KG, Munich

The following companies left the group of companies included in consolidation in 2018 for materiality reasons:

- “Portia” Grundstücksverwaltungs-Gesellschaft mit beschränkter Haftung, Munich
- Antus Immobilien- und Projektentwicklungs GmbH, Munich
- ARRONDA Immobilienverwaltungs GmbH, Munich
- Aufbau Dresden GmbH, Munich
- B.I. International Limited, George Town
- Bayerische Wohnungsgesellschaft für Handel und Industrie Gesellschaft mit beschränkter Haftung, Munich
- BV Grundstücksentwicklungs-GmbH, Munich
- CUMTERRA Gesellschaft für Immobilienverwaltung mbH, Munich
- Cuxhaven Steel Construction GmbH, Cuxhaven
- Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co. Windpark Grefrath KG, Oldenburg
- Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co. Windpark Krähenberg KG, Oldenburg
- Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co. Windpark Mose KG, Oldenburg
- GIMMO Immobilien-Vermietungs- und Verwaltungs GmbH, Munich
- Golf- und Country Club Seddiner See Immobilien GmbH, Munich
- H & B Immobilien GmbH & Co. Objekte KG, Munich
- HVB Export Leasing GmbH, Munich
- HVB Gesellschaft für Gebäude Beteiligungs GmbH, Munich
- HVB Investments (UK) Limited, George Town
- HVB London Investments (AVON) Limited, London
- HVB Profil Gesellschaft für Personalmanagement mbH, Munich
- HVBFF International Greece GmbH, Munich
- HVBFF Internationale Leasing GmbH, Munich
- HVBFF Objekt Beteiligungs GmbH, Munich
- Hypo-Bank Verwaltungszentrum GmbH, Munich
- HYPO-REAL Haus- und Grundbesitz Gesellschaft mbH & Co. Immobilien-Vermietungs KG, Munich
- Life Management Zweite GmbH, Grünwald
- MILLETERRA Gesellschaft für Immobilienverwaltung mbH, Munich
- Movie Market Beteiligungs GmbH, Munich
- NF Objekt München GmbH, Munich
- RHOTERRA Gesellschaft für Immobilienverwaltung mbH, Munich
- Roncasa Immobilien-Verwaltungs GmbH, Munich
- Salvatorplatz-Grundstücksgesellschaft mit beschränkter Haftung, Munich
- Terronda Development B.V., Amsterdam
- Trinitrade Vermögensverwaltungs-Gesellschaft mit beschränkter Haftung, Munich
- UniCredit (China) Advisory Limited, Peking
- WealthCap Aircraft 27 GmbH & Co. KG, Grünwald
- WealthCap Aircraft 27 Komplementär GmbH, Grünwald
- WealthCap Stiftungstreuhand GmbH, Munich
- WealthCap USA Immobilien Verwaltungs GmbH, Munich

On account of the deconsolidation of the companies listed above, HVB realised a deconsolidation result in accordance with IFRS 10.25 of €6 million recognised in the item “Net other expenses/income” and €28 million in the item “Net gains/losses on disposals of investments” in the income statement.

Associated companies

No financial statements at 31 December 2018 were available for the associated companies 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 2018
– Nautilus Tankers Limited, Valletta	30 September 2018
– SwanCap Partners GmbH, Munich	30 September 2018

There were no significant events at these companies between the date when the above financial statements were prepared and 31 December 2018 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.

10 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 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.

Accounting and Valuation (CONTINUED)

The most recent Strategic 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 Strategic 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 Strategic Plan also reflects the experience gained by management from past events and an assessment of the underlying economic conditions.

We have used the Strategic 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' Strategic Plans are included as cash flows. Furthermore, changes to the allocated capital are taken into account for the first time 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 Strategic Plan are assumed for the subsequent period, while in the previous year the average was taken as a basis in this regard. The segment-specific cost of capital rates used for discounting average 14.1% (previous year: 12.7%) for the Corporate & Investment Banking business segment and 13.2% (previous year: 12.4%) 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. No such impairment was necessary for the 2017 financial year – even when the aforementioned refined method for reviewing write-downs to goodwill is applied. 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 higher than the carrying amount to be tested (including the goodwill allocated to this business segment), whereas the value in use for the CIB business segment is lower than the carrying amount (including the goodwill) to be tested of this business segment so that the goodwill assigned to it has to be written down. 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 CIB 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 et seq. 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.

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 eliminated.

11 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

The changes to the classes required by IFRS 7.6 are attributable to the first-time adoption of IFRS 9 in the 2018 financial year. Accordingly, classes based on IAS 39 categories have been eliminated and classes based on IFRS 9 categories have been added.

For the presentation of the accounting and valuation methods in accordance with IAS 39, please refer to the Note "Accounting and valuation methods in relation to IAS 39". Only the accounting and valuation methods applied in the 2018 financial year are presented below.

With regard to the classes, the balance sheet disclosures and profit contributions of the financial instruments, among other things, must be presented separately according to 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.

Accounting and Valuation (CONTINUED)

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. The 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 issued for the first time in 2018 are designated on the basis of the fair value-based management of the portfolios concerned. In addition, with effect from 1 January 2018, financial instruments issued in previous years were designated as financial instruments at fair value through profit or loss in order to better reflect the business purpose of these financial instruments and thus provide the reader of the balance sheet with a better insight into the financial position of HVB Group.

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.

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 risk of credit default.

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.

Accounting and Valuation (CONTINUED)

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.

Embedded derivatives

Outside the portfolio held for trading purposes or designated at FVTPL, embedded derivative financial instruments that must be separated within a structured product are detached from the underlying contract and recorded as separate derivative financial instruments. The underlying contract is then accounted for in accordance with the classification made. The change in value arising from the derivatives that are detached and carried at fair value is recognised in net trading income in the income statement.

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.

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.

Accounting and Valuation (CONTINUED)

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.

12 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.

13 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. It 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".

14 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".

15 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.

16 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.

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.

Accounting and Valuation (CONTINUED)

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 starting point in this connection are the supervisory procedures for the determination of the probability of default (PD), loss given default (LGD) and exposure at default (EAD). 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 Level 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 Level 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 positive and stable economic growth albeit losing momentum in comparison to 2018. This applies to the eurozone as well as to most CEE countries. Account is also taken of the slow growth of short-term interest rates in the euro area, which, however, remain at a historically low level.

In detail, annual real growth in eurozone GDP of 1.7% for 2019, 1.1% for 2020 and 1.3% for 2021 is forecast (for Germany up 1.7%, up 1.5% and up 1.7%). This scenario implies that the 3-month Euribor will remain slightly negative in 2019 and will be positive again in 2020.

- The positive scenario is based on the hypothesis that the positive economic growth seen in 2018 both at a global level and at a European level will only weaken slightly in 2019, buoyed by the trend in global trade and continuation of a business-friendly policy. In this scenario, growth in the eurozone consolidates mainly on account of the contribution by Germany, accelerates in 2020, which will be reflected in higher annual growth in the gross domestic product (in comparison to the baseline scenario) of between 0.2% and 0.6% over the 2019–2021 three-year horizon. Specifically, the annual growth in real gross domestic product for the eurozone would be 2.0% in 2019, then slow to 1.7% over the course of 2020 and to 1.5% in 2021 (for Germany, stable at 2.0% in 2019, 2.1% in 2020 and 1.9% in 2021), in the context of still negative short-term interest rates in 2019 and constant albeit slow growth over the period from 2020 to 2021, driven by a more aggressive, more stringent monetary policy in comparison to the baseline scenario. 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, one and a half percentage points per year lower for the real growth in gross domestic product in the three-year horizon) and in the CEE countries. In detail, the annual real growth of the gross domestic product in the eurozone would stand at 0.3% in 2019, minus 0.5% in 2020 and 0.5% in 2021 (for Germany at 0.8% in 2019, 0.5% in 2020 and 1.2% in 2021). In this context, it is assumed that short-term interest rates (three-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.

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.

Accounting and Valuation (CONTINUED)

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 level 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. Like 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.

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.

Accounting and Valuation (CONTINUED)

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".

17 Investments in associates and joint ventures

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

18 Property, plant and equipment

Property, plant and equipment is valued at acquisition or production cost less depreciation – insofar as the assets are depreciable – using the straight-line method 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. 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	USEFUL 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.

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 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.

Depreciation, impairments and write-ups on items of property, plant and equipment are recognised in the 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.

19 Lease operations

Under IAS 17, a lease is an agreement under which the lessor transfers the right to use an asset to the lessee for an agreed period against payment.

Lease agreements are divided into finance leases and operating leases. A lease is classified as an operating lease if the lessor retains substantially all the risks and rewards incident to ownership of the asset. By contrast, a finance lease transfers substantially all the risks and rewards incident to ownership of the asset to the lessee. Title may or may not eventually be transferred.

HVB Group nevertheless treats agreements concluded without the legal form of a lease as leases provided compliance with the agreement depends on the use of a given asset and the agreement transfers a right to use the asset.

HVB Group leases both movable assets and real estate.

HVB Group as lessor

– Operating leases

The 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 under property, plant and equipment, investment properties or intangible assets in the consolidated balance sheet and valued 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 derecognise the leased asset in 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 a finance charge recognised in the income statement and a redemption payment. 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 payment represents a repayment of the principal that reduces the amount of the receivable outstanding.

HVB Group as lessee

– Operating leases

The lease payments made by the lessee under operating leases are recognised as expense on a straight-line basis over the lease term and carried under other operating expenses or operating costs to the extent that they represent lease expenses. The lease term commences as soon as the lessee controls the physical use of the leased asset. The lessee does not capitalise the leased assets involved.

– Finance leases

In the case of finance leases, the lessee recognises the leased assets under property, plant and equipment, investment properties or intangible assets in the balance sheet as well as a liability on the liabilities side. 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. The internal rate of return underlying the lease is used to calculate the present value of the minimum lease payments. The lease payments under finance leases are divided into a finance charge and redemption payment. The redemption payment reduces the outstanding liability while the finance charge is treated as interest expense.

Conditional lease payments made under operating and finance leases are normally recognised as income by the lessor and expense by the lessee in the period in which they accrue. None of HVB Group's current lease agreements contain any conditional lease payments.

Please refer to the Note "Information regarding lease operations" for more information.

Accounting and Valuation (CONTINUED)

20 Investment properties

Compliant with IAS 40.30 in conjunction with IAS 40.56, land and buildings held by us as investments with a view to generating rental income and/or capital gains are carried at amortised cost and written down on a straight-line basis over a useful economic life of 25 to 60 years.

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

Current expenses and rental income from investment properties are disclosed in net other expenses/income. Scheduled depreciation on such investments carried at amortised acquisition or production cost is included in operating costs, whereas impairments and write-ups are also recognised in the item "Net other expenses/income".

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, making it impossible to account for the two parts 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 insignificant. The whole property is classified as property, plant and equipment if the part of the property leased externally totals 90% or less.

21 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. 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. 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. 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. 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 impairment loss compliant with IAS 36. Should the reason for the impairment no longer apply, write-ups are taken to the income statement in an amount no more than the amortised acquisition or production cost.

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

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.

22 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 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.

23 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.

24 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.

25 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 for the first time in 2018 are designated on the basis of fair value-based management of the portfolios concerned. In addition, with effect from 1 January 2018, financial instruments already issued in previous years were designated as financial instruments at fair value through profit or loss in order to better reflect the business purpose of these financial instruments and thus provide the reader of the balance sheet with a better insight into the financial position of HVB Group.

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.

Accounting and Valuation (CONTINUED)

26 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”).

27 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.

28 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 et seq. 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.

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 deducted 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.

Accounting and Valuation (CONTINUED)

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".

29 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.

30 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.

31 Accounting and valuation methods in relation to IAS 39

The following describes the accounting and valuation methods under IAS 39 that were to be applied in the previous year and are still reported as previous-year figures due to the prospective application of IFRS 9.

The classes required by IFRS 7.6 are defined as follows:

- Cash and cash reserves
- Financial assets and liabilities held for trading
- Financial assets at FVTPL
- Available-for-sale financial assets (at cost)
- Available-for-sale financial assets (at fair value)
- Held-to-maturity investments
- Loans and receivables with banks (classified as loans and receivables)
- Loans and receivables with customers (classified as loans and receivables)
- Receivables under finance leases (classified as loans and receivables)
- Hedging derivatives
- Other deposits from banks
- Other deposits from customers
- Other debt securities in issue
- Financial guarantees and irrevocable credit commitments

Among other things, the balance sheet disclosures and earnings contributions of the financial instruments must be shown separately, broken down by the IAS 39 valuation categories. In the present consolidated financial statements, we have included these changes 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 lending commitments, the nominal amount disclosed in the Note "Fair values of financial instruments compliant with IFRS 7" for the guarantee/amount of the lending commitments not yet utilised.

IAS 39 requires all financial instruments to be recognised in the balance sheet, classified in the given categories and measured in line with this classification.

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.

Accounting and Valuation (CONTINUED)

Financial assets and liabilities at fair value through profit or loss

The financial assets and liabilities at fair value through profit or loss category is subdivided into two 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. Financial assets and liabilities held for trading purposes are shown under the Notes “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).

– All financial assets designated as financial instruments measured at fair value through profit or loss upon initial recognition (fair value option)

We only use financial instruments at FVTPL (FVO) for certain financial assets designated as at fair value through profit or loss upon initial recognition. In this context, for most of the actual cases, we have exercised the designation option of the accounting mismatch by means of which valuation or profit-recognition inconsistencies are avoided or considerably reduced in economic hedges for which hedge accounting is not applied. Only for a specific, smaller portfolio is the designation based on fair value-based risk management or structured products that must be separated.

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

Both financial assets held for trading and fair value option portfolios are measured at fair value. Changes in value are recognised in the income statement.

Loans and receivables

The category “loans and receivables” includes non-derivative financial assets – both originated by us and acquired – with fixed or determinable payments that are not quoted in an active market unless they are classified as at fair value through profit or loss or available for sale. Loans and receivables are measured at amortised cost and capitalised under the items “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at 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. Loans and receivables are disclosed upon initial recognition at their fair value including any transaction costs.

Held-to-maturity investments

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity that an entity has the positive intention and ability to hold to maturity, unless they are designated as at FVTPL, loans or receivables or available for sale. We take a very restrictive approach when assessing whether the intention to hold to maturity exists and premature resale can be excluded. This means that investments are only classified as held-to-maturity in exceptional cases. When classifying financial instruments as held-to-maturity investments, we ensure that it is possible to hold the instruments to maturity taking liquidity considerations into account. Held-to-maturity investments are disclosed upon initial recognition at their fair value including any transaction costs and thereafter measured at amortised cost, with premiums and discounts taken to the income statement under net interest over the term of the underlying items. This is done using the effective interest method.

HVB Group has classified interest-bearing assets as held to maturity and recognised them under the balance sheet item "Held-to-maturity investments". Held-to-maturity investments are measured at amortised cost; the resulting interest income is included in net interest.

Available-for-sale financial assets

All other non-derivative financial assets are classified as available-for-sale (AfS) securities and receivables. A distinction is made within this category between measurement at fair value and measurement at cost:

- Debt instruments and equity instruments for which the fair value can be reliably determined are measured at fair value. The difference between the fair value and amortised cost is carried in a separate item under shareholders' equity (AfS reserve) in the balance sheet until the asset is sold or an impairment to be recognised in profit or loss has occurred. Premiums and discounts on debt instruments are taken to the income statement under net interest over the term of the underlying items.
- Equity instruments for which there is no quoted market price in an active market and whose fair value cannot be reliably determined are measured at cost. Besides shares in unlisted companies, this primarily concerns investments in private equity funds, which we measure at cost. It is not possible to reliably determine a fair value for these equity instruments since there is no active market in these instruments and, especially with regard to investments in private equity funds, the Bank as shareholder with a small holding does not have enough influence to obtain the necessary data promptly for a model-based determination of fair value. Consequently, they are not included in the AfS reserve.

With the exception of the effect on results arising from the translation of monetary available-for-sale financial assets denominated in foreign currency, gains or losses on available-for-sale financial assets are recognised in net income from investments in the income statement (see the Note "Net income from investments").

We recognise interest-bearing securities, equities and other equity-related securities, investment certificates and participating interests as available-for-sale financial instruments under the balance sheet item "Available-for-sale financial assets" in the balance sheet.

Interest-bearing securities are accrued in accordance with the effective interest method. Should the estimated cash inflows and outflows underlying the calculation of the effective interest change, the effects are recognised in the income statement as net interest compliant with IAS 39 AG 8.

Provided they are not significant, both shares in non-consolidated subsidiaries and joint ventures and associates accounted for using the equity method are subsumed in available-for-sale financial assets. Listed companies are always carried at fair value. Where the fair value cannot be determined reliably for non-listed companies, they are valued at cost.

Accounting and Valuation (CONTINUED)

Financial assets at FVTPL

In most cases, HVB Group applies the fair value option for financial assets with economic hedges for which hedge accounting is not applied. The designation removes or significantly reduces valuation or profit-recognition incongruences resulting from an accounting mismatch. The portfolio mostly comprises interest-bearing securities not held for trading that are hedged against interest rate risks by means of interest rate swaps. In the case of promissory note receivables similarly included here, there is no material fair value change in terms of the credit risk on account of the top rating of the issuers. Changes in fair value of the hedged items and the associated derivatives are shown separately in net trading income; current interest income/expenses are recognised in net interest. Given a fundamental intention to hold to maturity, the new investments were made primarily with a view to being able to sell the holdings again quickly if necessary (liquidity reserve). Alongside an accounting mismatch as the main grounds for designation, the designation for a specific, smaller portfolio is based on fair value-based risk management or structured products that must be separated.

Impairment of financial assets

Impairment losses are recognised for financial assets that are measured at amortised cost and classified as available for sale.

An impairment loss is determined in two steps. First, an assessment is made to see if there is any objective evidence that the financial asset is impaired. The second step involves assessing whether the financial instrument is actually 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. In the case of equity instruments, significant or prolonged lower fair values compared with the initial costs represent objective evidence of impairment. An equity instrument is considered impaired as soon as an impairment loss has been recognised.

Objective evidence is provided only by events that have already occurred, not anticipated events in the future.

How an impairment is determined for each relevant category is described below.

In the case of loans and receivables, objective evidence of an impairment exists when a default has occurred in accordance with Article 178 of the Capital Requirement Regulation (CRR). This is the case when either a material liability of the borrower is at least 90 days overdue or HVB believes that the debtor is unable to meet the payment obligations in full without steps to realise collateral being undertaken. In this context, an event of default notably includes the period of 90 days in arrears, an application for or opening of insolvency proceedings, the expectation of liquidity problems as a result of the credit-monitoring process or the need for restructuring or collateral realisation steps such as terminating loans, putting loans on a non-accrual basis or enforcing realisation of collateral by HVB.

The assessment of the borrower's creditworthiness using internal rating processes is applicable. This assessment is reviewed periodically and when negative events occur. When 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 with regard to the borrower. Based on internal procedures, the classification of the borrower is updated to "in default" or "not in default". As a result, the borrower's credit rating is always assessed with regard to his ability to meet outstanding liabilities.

The credit rating of the borrower and his ability to meet outstanding payment obligations is normally assessed irrespective of whether the borrower is already in arrears with payments or not.

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). It should be noted, however, that not every modification of a lending agreement is due to difficulties of the borrower and represents forbearance. Different 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.

Exposures that are modified or refinanced to ease the burden on borrowers in financial difficulties (forbearance) are subject to the same risk-provisioning processes as other loans. A possible deferral agreement aimed at avoiding arrears does not automatically lead to the Bank not recognising impairments. Where repayments are deferred or terms adjusted (with longer periods allowed for repayment deferred or covenant clauses waived) as a result of a deterioration in credit quality, and there is objective evidence of an impairment with regard to the restructured payments, this is considered a separate impairment trigger for testing whether an impairment needs to be recognised. The simple deferral of payment obligations does not always have an influence on the borrower's financial position and his ability to meet outstanding liabilities in full. Should a borrower not be in a position to meet all outstanding liabilities, a deferral of the liabilities does not alter the overall situation. A deferral neither reduces the amount of the payment obligations nor does it influence the amount of payments received by the borrower.

Where the Bank waives payments by the borrower (such as waived fees, reduction of contractual interest rates, etc.) as a result of a deterioration in credit quality, such a waiver represents objective evidence of the borrower defaulting. The write-off of such payments accruing to the Bank 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).

Please refer to the Note "Forbearance" for more information about the forbearance portfolio of the HVB Group.

An impairment is the difference between the carrying amount and the present value of the anticipated future cash flows. The future cash flows are determined taking into account past events (objective evidence). The anticipated future cash flows may comprise the repayments and/or interest payments still expected and the income from the realisation of collateral. A specific loan-loss provision is recognised for the impairment determined in this way.

If a receivable is considered uncollectible, the amount concerned is written down, which leads to the receivable being written off.

The same method is applied for held-to-maturity investments.

In the case of loan receivables, the impairment determined in this way is posted to an impairment account, which reduces the carrying amount of the receivable on the assets side. In the case of securities, an impairment directly reduces the carrying amount of the security.

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

Accounting and Valuation (CONTINUED)

Specific loan-loss allowances are also determined on a collective basis for individual cases where the amounts involved are not significant. The classification as impaired is also based primarily on the individual rating of the borrower in these cases. These allowances are recognised and disclosed within specific loan-loss allowances at HVB Group. Specific loan-loss allowances or provisions to the amount of the anticipated loss have been made individually to cover all identifiable default risks arising from lending operations (loans, receivables, financial guarantees and credit commitments), with the amount of the expense being estimated. Both changes in the anticipated future cash flows and the time effect arising from a shortening of the discounting period are taken into account in the subsequent measurement. Specific loan-loss allowances are reversed as soon as the reason for forming the allowance no longer exists, or used if the receivable is classified as uncollectible and written off. Where a specific loan-loss allowance is reversed because the reason for its formation no longer exists, the borrower concerned is classified as recovered, meaning that the classification as "in default" is reversed. The amount is written off 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 included in this process.

In the case of receivables (and guarantees and credit commitments) for which no specific allowances have been formed, portfolio allowances are set up to cover losses (= impairments) that have been incurred but not yet recognised by the Bank at the reporting date. We apply the loss confirmation period method for this. The loss confirmation period represents the period between a default event occurring or a borrower defaulting, and the point at which the Bank identifies the default. The loss confirmation period is determined separately for various credit portfolios on the basis of statistical surveys. The loss that has occurred but has not yet been recognised is estimated by means of the expected loss.

In the case of assets classified as available-for-sale, a distinction is made between debt and equity instruments.

A debt instrument is impaired when an event occurs that results in the borrower not being able to settle his contractual obligations in full or at the agreed date. Essentially, an impairment exists in the same cases as for credit receivables from the same borrower (issuer).

The amount of the impairment is defined as the difference between the amortised cost and the current fair value, whereby the difference first recognised in the AfS reserve in the balance sheet is taken to the income statement when an impairment occurs.

Should the reason for the impairment no longer apply, the difference between the higher fair value and the carrying amount at the previous reporting date is written back in the income statement up to the amount of amortised cost. If the current fair value at the reporting date exceeds the amortised cost, the difference is recognised in the AfS reserve under shareholders' equity.

In the case of equity instruments carried at fair value, an impairment exists if the current fair value is significantly below the initial cost or if the fair value has remained below the initial cost for a prolonged period of time. When impairment is first identified, the difference between the current fair value and initial cost is recognised as profit or loss in the income statement. Upon subsequent measurement, a further impairment loss is only taken to the income statement if the current fair value is below the initial cost less any impairment losses already recognised (amortised cost). If the fair value rises in the future, the difference between a higher fair value and the amortised cost is recognised in the AfS reserve under shareholders' equity.

Equity instruments valued at cost are considered impaired if the present value is significantly or permanently less than the acquisition cost (or, if an impairment has already been recognised in the past, it is less than the acquisition cost less the recognised impairment). If there is objective evidence of an impairment, the present value of the equity instruments must be determined. The estimated future cash flows discounted by the current market return on a comparable asset are used as the basis for determining this value. The amount of the impairment is calculated as the difference between the present carrying amount and the value of the equity instrument determined as described above. The impairment is taken to the income statement. An impairment of an equity instrument is not permitted to be reversed if the reasons for the impairment no longer apply.

Segment Reporting

32 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/consolidation

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 Basel III) 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 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 Basel III, this involves allocating 12.5% (previous year: 12.0%) of core capital from risk-weighted assets to the business segments. The average tied 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 1.07% in 2018 after 1.02% 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 and the Corporate Centre business units of the Other/consolidation business segment 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 of the Other/consolidation business segment.

Segment Reporting (CONTINUED)

As part of a reorganisation, the first half of 2018 basically saw shifts in the net income between all business segments in the income statement, broken down by business segment. These shifts are mainly attributable to a recalculation of the return on investment. In the second half of the year, there were essentially minor shifts in income and operating costs, largely due to the new allocation of a subsidiary in the Commercial Banking and Group Corporate Centre and a smaller shift between income and operating costs on account of changes in a service agreement.

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

The profit of €4 million (previous year: €1 million) from shares in associated companies relates to the following companies accounted for using the equity method: Adler Funding LLC, Dover, Comtrade Group B.V., Rotterdam, Nautilus Tankers Limited, Valetta, paydirekt Beteiligungsgesellschaft privater Banken mbH, Berlin and SwanCap Partners GmbH, Munich. All of these companies with the exception of paydirekt Beteiligungsgesellschaft privater Banken mbH are assigned to the CIB business segment. paydirekt Beteiligungsgesellschaft privater Banken mbH is assigned to the Commercial Banking 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 €23 million (previous year: €34 million). The carrying amount of SwanCap Partners GmbH of €9 million is recognised under “Non-current assets or disposal groups held for sale” at 31 December 2018 and is no longer included in the carrying amount of companies accounted for using the equity method at the reporting date.

33 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. In this context, 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. In the process, 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 the second largest lender (of the major private banks) 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.

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 (CIB) business segment

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

Segment Reporting (CONTINUED)

Corporate & Investment Banking				
		Product Lines		
		Financing & Advisory	Global Transaction Banking	Markets
Coverage	Financial Institutions Group			
	Multinational Corporates/ Investment Holdings			
	CIB Americas			
	CIB Asia Pacific			

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. RESF and CSF portfolios are managed by PPM in cooperation with representatives of the sales channels at the level of UniCredit Bank AG. Furthermore, we provide services to the subsidiary Ocean Breeze Energy GmbH & Co. KG.

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.

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 segment incorporates the net income from securities holdings for which the Management Board is responsible. Also incorporated in this business segment 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/consolidation business segment

The Other/consolidation business segment encompasses the Chief Operating Office and consolidation effects. 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.

Segment Reporting (CONTINUED)

34 Income statement, broken down by business segment

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/ CONSOLIDATION	HVB GROUP
Net interest	1,467	997	51	(31)	2,484
Dividends and other income from equity investments	10	14	—	1	25
Net fees and commissions	761	263	(7)	(3)	1,014
Net trading income	57	500	22	—	579
Net other expenses/income	12	219	88	88	407
OPERATING INCOME	2,307	1,993	154	55	4,509
Payroll costs	(607)	(388)	(367)	(106)	(1,468)
Other administrative expenses	(1,064)	(792)	329	122	(1,405)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(9)	(115)	(27)	(55)	(206)
Operating costs	(1,680)	(1,295)	(65)	(39)	(3,079)
OPERATING PROFIT	627	698	89	16	1,430
Net write-downs of loans and provisions for guarantees and commitments	(197)	130	51	—	(16)
NET OPERATING PROFIT	430	828	140	16	1,414
Provisions for risks and charges	(298)	(620)	1	(2)	(919)
Restructuring costs	(30)	—	6	10	(14)
Net income from investments	10	(1)	123	67	199
PROFIT BEFORE TAX	112	207	270	91	680
Income tax for the period	(61)	(125)	61	(29)	(154)
PROFIT AFTER TAX	51	82	331	62	526
Impairment on goodwill	—	(288)	—	—	(288)
CONSOLIDATED PROFIT	51	(206)	331	62	238
attributable to the shareholder of UniCredit Bank AG	51	(206)	329	62	236
attributable to minorities	—	—	2	—	2

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	2,484	—	2,484
Dividends and other income from equity investments	25	—	25
Net fees and commissions	1,014	—	1,014
Net trading income	579	114 ¹	693
Financial assets mandatorily at FVTPL		42	
Financial liabilities designated at FVTPL		95	
Buy-backs of securities issued		1	
Effects arising from hedge accounting		(13)	
Fair value equity		(12)	
Net gains/(losses) on financial assets and liabilities at fair value	n/a	(110)	(110)
Financial assets mandatorily at FVTPL		(42)	
Financial liabilities designated at FVTPL		(95)	
Net gains/(losses) on the sale of securities (Held-for-sale business model)		2	
Effects arising from hedge accounting		13	
Fair value equity		12	
Net gains/(losses) on derecognition of financial instruments measured at cost	n/a	52	52
Net gains/(losses) on the sale of performing loans and receivables and securities		53	
Buy-backs of securities issued		(1)	
Net other expenses/income	407	117 ¹	524
Net gains/(losses) on the sale of performing loans and receivables and securities		(53)	
Income from the sale of land and buildings		1	
Income from valuation/disposals of investment properties		160	
Income from the sale of other assets		10	
OPERATING INCOME	4,509	173	4,682
Payroll costs	(1,468)	—	(1,468)
Other administrative expenses	(1,405)	—	(1,405)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(206)	—	(206)
Operating costs	(3,079)	—	(3,079)
OPERATING PROFIT	1,430	173	1,603
Net write-downs of loans and provisions for guarantees and commitments/ Credit impaired losses IFRS 9	(16)	—	(16)
NET OPERATING PROFIT	1,414	173	1,587
Provisions for risks and charges	(919)	—	(919)
Restructuring costs	(14)	—	(14)
Net income from investments	199	(199)	n/a
Net gains/(losses) on the sale of securities (Held-for-sale business model)		(2)	
Income from the sale of land and buildings		(1)	
Income from valuation/disposals of investment properties		(160)	
Income from the sale of other assets		(10)	
Net gains/(losses) on disposals of investments		(26)	
Net gains/losses on disposals on investments	n/a	26	26
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL	—	—	680
Impairment on goodwill	—	(288)	(288)
PROFIT BEFORE TAX	680	(288)	392
Income tax for the period	(154)	—	(154)
PROFIT AFTER TAX	526	(288)	238
Impairment on goodwill	(288)	288	—
CONSOLIDATED PROFIT	238	—	238
attributable to the shareholder of UniCredit Bank AG	236	—	236
attributable to minorities	2	—	2

¹ Rounding difference.

Segment Reporting (CONTINUED)

Income statement, broken down by business segment for the period from 1 January to 31 December 2017

(€ millions)

INCOME/EXPENSES	COMMERCIAL BANKING	CORPORATE & INVESTMENT BANKING	GROUP CORPORATE CENTRE	OTHER/ CONSOLIDATION	HVB GROUP
Net interest	1,443	919	210	(31)	2,541
Dividends and other income from equity investments	2	6	2	1	11
Net fees and commissions	793	324	(16)	2	1,103
Net trading income	57	859	15	(3)	928
Net other expenses/income	28	193	99	79	399
OPERATING INCOME	2,323	2,301	310	48	4,982
Payroll costs	(639)	(438)	(401)	(122)	(1,600)
Other administrative expenses	(1,146)	(808)	349	162	(1,443)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(8)	(114)	(31)	(74)	(227)
Operating costs	(1,793)	(1,360)	(83)	(34)	(3,270)
OPERATING PROFIT	530	941	227	14	1,712
Net write-downs of loans and provisions for guarantees and commitments	(164)	(73)	42	—	(195)
NET OPERATING PROFIT	366	868	269	14	1,517
Provisions for risks and charges	(28)	5	(2)	—	(25)
Restructuring costs	(5)	—	(2)	—	(7)
Net income from investments	(2)	58	51	5	112
PROFIT BEFORE TAX	331	931	316	19	1,597
Income tax for the period	(49)	(247)	37	(2)	(261)
PROFIT AFTER TAX	282	684	353	17	1,336
Impairment on goodwill	—	—	—	—	—
CONSOLIDATED PROFIT	282	684	353	17	1,336
attributable to the shareholder of UniCredit Bank AG	282	684	349	17	1,332
attributable to minorities	—	—	4	—	4

Development of the Commercial Banking business segment

(€ millions)

INCOME/EXPENSES	2018	2017
Net interest	1,467	1,443
Dividends and other income from equity investments	10	2
Net fees and commissions	761	793
Net trading income	57	57
Net other expenses/income	12	28
OPERATING INCOME	2,307	2,323
Payroll costs	(607)	(639)
Other administrative expenses	(1,064)	(1,146)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(9)	(8)
Operating costs	(1,680)	(1,793)
OPERATING PROFIT	627	530
Net write-downs of loans and provisions for guarantees and commitments	(197)	(164)
NET OPERATING PROFIT	430	366
Provisions for risks and charges	(298)	(28)
Restructuring costs	(30)	(5)
Net income from investments	10	(2)
PROFIT BEFORE TAX	112	331
Income tax for the period	(61)	(49)
PROFIT AFTER TAX	51	282
Impairment on goodwill	—	—
CONSOLIDATED PROFIT	51	282
attributable to the shareholder of UniCredit Bank AG	51	282
attributable to minorities	—	—
Cost-income ratio in % ¹	72.8	77.2

¹ Ratio of operating costs to operating income.

The Commercial Banking business segment increased its operating profit (before net write-downs of loans and provisions for guarantees and commitments) by 18.3%, or €97 million, to €627 million in the reporting year.

At €2,307 million, operating income fell slightly by €16 million, or 0.7%, compared with the previous-year period (€2,323 million). It contains net interest of €1,467 million, which in spite of the still extremely low level of interest rates was 1.7% higher than in the previous year. This positive development trend was supported in the retail banking business by a rise in real estate financing and a strong increase in consumer lending activities (34% increase in volume). In the corporate customer business, it is attributable particularly to higher income from medium and long-term credit transactions and to foreign currency deposits. The customer deposit business continued to be weighed down by the persistently very low level of interest rates.

Compared with the previous year, there was a decrease of €32 million, or 4.0%, to €761 million in net fees and commissions. Net trading income remained unchanged at €57 million. In the reporting year, there was an income of €12 million in net other expenses/income. The decline of €16 million compared with the previous-year period is due to a higher charge for the European bank levy and a decline in contributions from our WealthCap subsidiary on account of non-recurring effects in the previous-year period. Dividends and other income from equity investments in the reporting year contributed €10 million to the operating income (previous year: €2 million).

In the reporting year, a significant reduction was achieved in operating costs, which were down by 6.3%, or €113 million, to €1,680 million compared with the previous-year period. This is attributable to both the sharp decrease in payroll costs by 5.0%, or €32 million, to €607 million as a result of a lower headcount and to lower other administrative expenses, which fell by 7.2%, or €82 million, to €1,064 million, compared with the previous-year period. Among other things, this decline is due to lower marketing expenses coupled with lower contributions to the voluntary deposit guarantee funds and a decrease in internal charges from other service units of the Bank on account of a lower number of employees.

The cost-income ratio improved from 77.2% in the previous-year period to 72.8% in the current reporting year on the back of the consistent cost reductions.

In the reporting year, there was a net addition of €197 million to net write-downs of loans and provisions for guarantees and commitments, which is equivalent to an increase of €33 million or 20.1% (previous year: €164 million). On account of our strict cost management in the reporting year, higher net operating income of €430 million was generated compared with the previous year (previous-year period: €366 million).

The additions to the provisions for risks and charges in the non-lending business, recorded with a net addition of €298 million in the current reporting period, are mainly related to legal risks (previous year: €28 million). This is offset by a €12 million increase in net income from investments totalling €10 million in the reporting year (previous year: net loss of €2 million) from gains on the disposal of financial investments.

With operating income remaining almost stable coupled with the cost reduction measures still in place and taking account of the non-recurring effect in provisions for risks and charges, the Commercial Banking business segment generated a profit before tax of €112 million in the reporting year (previous-year figure: €331 million).

In the reporting year, income tax expense comes to €61 million (previous-year period: €49 million). In Commercial Banking, a consolidated profit of €51 million was achieved in the reporting year (previous-year period: €282 million).

Segment Reporting (CONTINUED)

Development of the Corporate & Investment Banking business segment

(€ millions)

INCOME/EXPENSES	2018	2017
Net interest	997	919
Dividends and other income from equity investments	14	6
Net fees and commissions	263	324
Net trading income	500	859
Net other expenses/income	219	193
OPERATING INCOME	1,993	2,301
Payroll costs	(388)	(438)
Other administrative expenses	(792)	(808)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(115)	(114)
Operating costs	(1,295)	(1,360)
OPERATING PROFIT	698	941
Net write-downs of loans and provisions for guarantees and commitments	130	(73)
NET OPERATING PROFIT	828	868
Provisions for risks and charges	(620)	5
Restructuring costs	—	—
Net income from investments	(1)	58
PROFIT BEFORE TAX	207	931
Income tax for the period	(125)	(247)
PROFIT AFTER TAX	82	684
Impairment on goodwill	(288)	—
CONSOLIDATED PROFIT/(LOSS)	(206)	684
attributable to the shareholder of UniCredit Bank AG	(206)	684
attributable to minorities	—	—
Cost-income ratio in % ¹	65.0	59.1

¹ Ratio of operating costs to operating income.

In the reporting period, the Corporate & Investment Banking business segment generated operating income of €1,993 million and was thus unable to match the year-ago figure of €2,301 million (down 13.4%), which benefited from a non-recurring effect.

The primary cause of this development is the decline in net trading income compared with the previous-year period, which fell a sharp €359 million, or 41.8%, to €500 million. In this context, lower income was posted in the areas of fixed-income products in particular. The decline is attributable, above all, to a non-recurring effect arising from a customer transaction in 2017 and mark-to-market effects occurring in 2018 as a result of high market volatility. By contrast, the profit contribution of valuation adjustments, which mainly include credit value adjustments and funding value adjustments, made a positive contribution to net trading income.

At €263 million, net fees and commissions were €61 million, or 18.8%, lower than in the previous-year period. On the one hand, this is due to less demand by companies for equity or borrowings using capital market products, such as bonds or share issues and, on the other hand, to lower loan commissions and advisory fees. In this context it should be taken into account that in the previous-year period fee and commission income benefited from larger capital measures.

By contrast, a positive trend was reported in net interest, which was up by €78 million, or 8.5%, to €997 million in the reporting period compared with the previous-year period. Besides an expansion of lending activities, this is also attributable to an increase in the Treasury contribution. Furthermore, higher interest income was generated from foreign currency deposits.

Net other expenses/income increased by 13.5% to €219 million (previous-year period: €193 million) and, at €14 million, dividends and other income from equity investments were also up on the previous-year period (€6 million).

Operating costs fell by €65 million, or 4.8%, to €1,295 million compared with the previous-year period. Within this total, payroll costs fell by €50 million, or 11.4%, to €388 million and other administrative expenses by €16 million, or 2.0%, to €792 million. At €115 million, amortisation, depreciation and impairment losses on intangible and tangible assets remained almost the same.

As a result of the declining earnings trend, the cost-income ratio rose from 59.1% to 65.0% in spite of the consistent reduction in costs. Operating profit decreased by €243 million, or 25.8%, to €698 million.

In the reporting period, there was a net reversal of €130 million in net write-downs of loans and provisions for guarantees and commitments after a net addition of €73 million in the previous-year period. Provisions for risks and charges of €620 million are primarily related to legal risks. A net reversal of €5 million was posted for this in the previous-year period. Net income from investments shows a negative amount of €1 million in the reporting period (previous-year period: income of €58 million).

In the reporting period, the Corporate & Investment Banking business segment generated a profit before tax of €207 million, which is thus significantly below the previous-year figure of €931 million.

The income tax expense totals €125 million in the reporting period (previous-year period: €247 million). On account of the goodwill amortisation of €288 million, Corporate & Investment Banking contributes a negative amount of €206 million to the consolidated profit in the reporting year.

Segment Reporting (CONTINUED)

Development of the Group Corporate Centre business segment

(€ millions)

INCOME/EXPENSES	2018	2017
Net interest	51	210
Dividends and other income from equity investments	—	2
Net fees and commissions	(7)	(16)
Net trading income	22	15
Net other expenses/income	88	99
OPERATING INCOME	154	310
Payroll costs	(367)	(401)
Other administrative expenses	329	349
Amortisation, depreciation and impairment losses on intangible and tangible assets	(27)	(31)
Operating costs	(65)	(83)
OPERATING PROFIT	89	227
Net write-downs of loans and provisions for guarantees and commitments	51	42
NET OPERATING PROFIT	140	269
Provisions for risks and charges	1	(2)
Restructuring costs	6	(2)
Net income from investments	123	51
PROFIT BEFORE TAX	270	316
Income tax for the period	61	37
PROFIT AFTER TAX	331	353
Impairment on goodwill	—	—
CONSOLIDATED PROFIT	331	353
attributable to the shareholder of UniCredit Bank AG	329	349
attributable to minorities	2	4
Cost-income ratio in % ¹	42.2	26.8

¹ Ratio of operating costs to operating income.

In the Group Corporate Centre business segment, which we are showing for the first time in the 2018 reporting period, the operating income of €154 million was significantly, or rather 50.3%, lower than the previous-year period (€310 million). This development is mainly due to the decline in net interest of €51 million (down 75.7%), which benefitted substantially from a positive non-recurring effect of €210 million on the reversal of provisions in the previous-year period.

With a decrease in operating costs of €18 million, or 21.7%, to €65 million compared with the previous-year period, the operating profit amounted to €89 million after €227 million in the previous-year period.

There was a net reversal of €51 million in net write-downs of loans and provisions for guarantees and commitments in the reporting period and of €42 million in the previous-year period. Net operating profit in the reporting period amounted to €140 million after €269 million in the previous-year period, thus representing a decline of 48.0%.

At €123 million, a significantly higher result was generated in net income from investments compared with the previous-year period (€51 million). This mainly relates to additions to investment properties.

Particularly on account of the positive non-recurring effect contained in net interest in the previous-year period, the profit before tax for the Group Corporate Centre business segment in the reporting period of €270 million was 14.6% lower than the year-ago figure of €316 million.

The income tax of €61 million for the reporting period and of €37 million in the previous-year period report tax income.

In the reporting period, the Group Corporate Centre business segment posted a consolidated profit of €331 million, which was a slight 6.2% lower than the figure of €353 million generated in the previous-year period.

Segment Reporting (CONTINUED)

Development of the Other/consolidation business segment

(€ millions)

INCOME/EXPENSES	2018	2017
Net interest	(31)	(31)
Dividends and other income from equity investments	1	1
Net fees and commissions	(3)	2
Net trading income	—	(3)
Net other expenses/income	88	79
OPERATING INCOME	55	48
Payroll costs	(106)	(122)
Other administrative expenses	122	162
Amortisation, depreciation and impairment losses on intangible and tangible assets	(55)	(74)
Operating costs	(39)	(34)
OPERATING PROFIT	16	14
Net write-downs of loans and provisions for guarantees and commitments	—	—
NET OPERATING PROFIT	16	14
Provisions for risks and charges	(2)	—
Restructuring costs	10	—
Net income from investments	67	5
PROFIT BEFORE TAX	91	19
Income tax for the period	(29)	(2)
PROFIT AFTER TAX	62	17
Impairment on goodwill	—	—
CONSOLIDATED PROFIT	62	17
attributable to the shareholder of UniCredit Bank AG	62	17
attributable to minorities	—	—
Cost-income ratio in % ¹	70.9	70.8

¹ Ratio of operating costs to operating income.

At €55 million, the operating income generated by the Other/consolidation business segment in the reporting period was higher than in the previous-year period (€48 million).

With stable year-on-year operating costs, the operating profit amounted to €16 million after €14 million in the previous-year period.

Net operating profit reflects the operating profit as in the reporting period and in the previous-year period no net write-downs of loans and provisions for guarantees and commitments were set up.

At €67 million, a significantly higher result was generated in net income from investments compared with the previous-year period (€5 million). This mainly relates to proceeds from investment properties. Particularly on account of the net income from investments, the profit before tax of €91 million for the Other/consolidation business segment in the reporting period was significantly higher than the equivalent year-ago figure (€19 million).

Income tax expense comes to €29 million for the reporting period compared with €2 million in the previous-year period.

The Other/consolidation business segment posted a consolidated profit of €62 million, which is significantly higher than the amount of €17 million generated in the previous-year period.

35 Balance sheet figures, broken down by business segment

(€ millions)

	COMMERCIAL BANKING	CORPORATE & INVESTMENT BANKING	GROUP CORPORATE CENTRE	OTHER/ CONSOLIDATION	HVB GROUP ²
Loans and receivables with customers (at cost)¹					
31/12/2018	83,502	41,487	1,177	(2,540)	123,626
1/1/2018	79,250	34,738	1,671	(2,631)	113,028
Goodwill					
31/12/2018	130	—	—	—	130
31/12/2017	130	288	—	—	418
Deposits from customers					
31/12/2018	90,299	29,234	1,623	(118)	121,038
31/12/2017	88,528	32,609	3,229	(82)	124,284
Risk-weighted assets compliant with Basel III (including equivalents for market risk and operational risk)					
31/12/2018	30,955	44,218	5,057	2,362	82,592
31/12/2017	28,797	43,559	5,277	1,078	78,711

1 The loans and receivables with customers 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".

36 Employees, broken down by business segment¹

	2018	2017
Commercial Banking	6,074	6,639
Corporate & Investment Banking	1,973	2,039
Group Corporate Centre	3,257	3,449
Other/consolidation	948	1,278
Total	12,252	13,405

1 In full-time equivalents (FTEs).

Segment Reporting (CONTINUED)

37 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)

	2018		2017	
	OPERATING INCOME	OPERATING PROFIT/(LOSS)	OPERATING INCOME	OPERATING PROFIT/(LOSS)
Germany	4,447	1,201	4,532	1,197
Italy	13	1	348	311
Luxembourg	104	115	121	88
United Kingdom	213	60	409	229
Rest of Europe	10	31	28	45
Americas	115	51	102	49
Asia	62	16	36	(13)
Consolidation	(455)	(45)	(594)	(194)
HVB Group	4,509	1,430	4,982	1,712

Total assets, broken down by region

(€ millions)

	2018	2017
Germany	263,327	279,941
Italy	25,688	28,690
Luxembourg	14,874	22,962
United Kingdom	11,384	12,428
Rest of Europe	8,016	9,739
Americas	7,230	7,048
Asia	9,811	4,309
Consolidation	(53,642)	(66,057)
HVB Group	286,688	299,060

Property, plant and equipment, broken down by region

(€ millions)

	2018	2017
Germany	2,455	2,561
Italy	—	—
Luxembourg	27	29
United Kingdom	3	5
Rest of Europe	1	1
Americas	2	2
Asia	1	1
Consolidation	—	—
HVB Group	2,489	2,599

Investment properties, broken down by region

(€ millions)

	2018	2017
Germany	235	786
Italy	—	—
Luxembourg	21	22
United Kingdom	—	—
Rest of Europe	—	—
Americas	—	—
Asia	—	—
Consolidation	—	—
HVB Group	256	808

Intangible assets, broken down by region

(€ millions)

	2018	2017
Germany ¹	149	444
Italy	—	—
Luxembourg	—	1
United Kingdom	—	—
Rest of Europe	—	—
Americas	—	—
Asia	—	—
Consolidation	—	—
HVB Group	149	445

¹ Includes goodwill.**Employees, broken down by region¹**

	2018	2017
Germany	11,236	12,165
Italy	226	222
Luxembourg	85	133
United Kingdom	379	419
Rest of Europe	62	194
Africa	2	3
Americas	121	127
Asia	141	142
HVB Group	12,252	13,405

¹ In full-time equivalents (FTEs).

Notes to the Income Statement

38 Net interest

(€ millions)

	2018	2017
Interest income	3,753	3,818
from financial assets at cost	2,943	n/a
from financial assets at FVTOCI	17	n/a
from financial assets at FVTPL and hedging derivatives	550	n/a
from financial assets held for trading	126	n/a
other interest income	117	n/a
Negative interest on financial instruments on the assets side	(154)	(137)
Interest expense	(1,387)	(1,401)
from financial liabilities at cost	(930)	n/a
from financial liabilities at FVTPL and hedging derivatives	(77)	n/a
from financial liabilities held for trading	(380)	n/a
other interest expense	—	n/a
Negative interest on financial liabilities	272	261
Total	2,484	2,541

In order to comply with the extended disclosure requirements in connection with the first-time adoption of IFRS 9 and the modifications in IFRS 7, we have performed a breakdown of interest income and interest expense according to the new IFRS 9 measurement categories. As these are not applicable to the previous year, we have not broken down the previous-year figures.

In the reporting year, HVB Group generated €36 million (previous-year period: €45 million) in interest income on impaired financial assets that are valued at cost.

In the previous-year period, interest income totalled €2,924 million and interest expense €700 million for financial assets and liabilities not carried at fair value through profit or loss. In this context, it should be noted that a comparison of these latter figures is of only limited informative value in economic terms, as the interest expenses for financial liabilities that are not measured at fair value through profit or loss also include refinancing for financial assets at FVTPL and in some cases for financial assets held for trading as well.

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)

	2018	2017
Non-consolidated affiliated companies	44	39
of which:		
UniCredit S.p.A.	17	6
Sister companies	26	32
Subsidiaries	1	1
Joint ventures	5	6
Associated companies	20	21
Other participating interests	11	15
Total	80	81

39 Dividends and other income from equity investments

(€ millions)

	2018	2017
Dividends and other similar income	21	10
Companies accounted for using the equity method	4	1
Total	25	11

40 Net fees and commissions

(€ millions)

	2018	2017
Fee and commission income	1,284	1,378
Securities services for clients	567	653
Payment transactions	293	290
Loan business	160	198
Guarantees	121	128
Distribution of third party products	85	71
Other commission income	58	38
Fee and commission expense	(270)	(275)
Securities services for clients	(171)	(162)
Payment transactions	(30)	(27)
Loan business	(7)	(10)
Guarantees	(5)	(9)
Distribution of third party products	—	—
Other commission expense	(57)	(67)
Net fees and commissions	1,014	1,103

In order to meet the new disclosure requirements of IFRS 15, we have performed a breakdown into commission income and commission expense. Furthermore, we have adjusted the breakdown of the commission income and commission expense to the current circumstances at HVB Group. The previous-year figures were adjusted accordingly.

For the effects of first-time adoption, please refer to the Note "Initial adoption of new IFRS accounting rules". All in all, there were no effects of first-time adoption for HVB Group.

Fee and commission income of €86 million (previous-year period: €113 million) and fee and commission expense of €1 million (previous-year period: €5 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)

	2018	2017
Non-consolidated affiliated companies	(20)	70
of which:		
UniCredit S.p.A.	(19)	20
Sister companies	(2)	50
Subsidiaries	1	—
Joint ventures	1	1
Associated companies	2	2
Other participating interests	—	—
Total	(17)	73

Notes to the Income Statement (CONTINUED)

41 Net trading income

(€ millions)

	2018	2017
Net gains on financial assets held for trading ¹	693	846
Effects arising from hedge accounting	n/a	77
Changes in fair value of hedged items	n/a	608
Changes in fair value of hedging derivatives	n/a	(531)
Net gains/(losses) on financial assets at FVTPL (FVO) ²	n/a	(4)
Other net trading income	n/a	9
Total	693	928

1 Including dividends on financial assets held for trading.

2 In the previous-year period, this item also includes the valuation results of derivatives of plus €244 million concluded to hedge financial assets at FVTPL.

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. The interest income from held-for-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 only carried in net trading income for the interest rate swap trading book, which exclusively contains interest rate derivatives.

As of 1 January 2018, HVB Group has designated structured liabilities as measured at fair value through profit or loss. The total amount of these contained in the previous year in “Net gains on financial assets held for trading” is now shown in the item “Net gains/losses on financial assets and liabilities at fair value”.

The item “Effects arising from hedge accounting” is contained in the item “Net gains/losses on financial assets and liabilities at fair value” as of 1 January 2018.

With regard to the item “Net gains/losses on financial instruments at FVTPL (FVO)”, please refer to the Note “Effects of first-time adoption of IFRS 9”.

As of 1 January 2018, the item “Other net trading income” is contained in the item “Net gains/losses on derecognition of financial instruments measured at cost”.

As a result, the scope of the item “Net trading income” is reduced such that it now only contains the measurement results or realised net gains or losses of net trading income for the reporting period.

In the previous-year period, the hedge accounting income includes the hedge results of the fair value hedge portfolio and the individual micro fair value hedges as a net aggregate total.

The net hedge accounting income of €77 million in the previous-year period is the difference between the increase of €608 million in the fair value of the hedged risk of underlying transactions and the decrease of €531 million in the fair value of hedging derivatives.

42 Net gains/losses on financial assets and liabilities at fair value

To reflect the new measurement categories of IFRS 9, a new item "Net gains/losses on financial assets and liabilities at fair value" has been included in the income statement. On account of the increase in assets accounted for at fair value, it is appropriate to show a separate item for this. This item contains the measurement results and realised net gains or losses on the disposal of financial instruments measured at fair value which are not part of the assets held for trading.

	(€ millions)	
	2018	2017
Financial assets mandatorily at FVTPL	(42)	n/a
Financial liabilities designated at FVTPL	(95)	n/a
Derecognition from OCI	2	n/a
Effects arising from hedge accounting	13	n/a
Fair value equity	12	n/a
Total	(110)	n/a

	(€ millions)	
	2018	2017
Fair value hedges	13	n/a
Changes in fair value of hedges items	21	n/a
Portfolio fair value hedges	(33)	n/a
Micro fair value hedges	54	n/a
Changes in fair value of hedging derivatives	(8)	n/a
Portfolio fair value hedges	46	n/a
Micro fair value hedges	(54)	n/a
Cash flow hedges	—	n/a
Net gains/(losses) of the cash flows hedge (only ineffective part)	—	n/a
Total	13	n/a

Notes to the Income Statement (CONTINUED)

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 AMOUNT		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 31/12/2018								
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)
Balance at 31/12/2017								
Nominal								
Hedged items	1,770	3,126	1,114					
Hedging transactions	1,770	3,126	1,114					
Interest rate sensitivities in BPV								
Hedged items	—	—	(1)					
Hedging transactions	—	—	1					
Balance sheet values								
Hedged items				6		6,147		
Hedging transactions						14	118	
Hedge result								—
Hedged items								(1)
Hedging transactions								1

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.

The balance-sheet item “Financial assets at FVTOCI” was created by reclassifying the securities from the previous balance-sheet item “Available-for-sale financial assets” as a result of the initial adoption of IFRS 9. No remeasurement of the assets was carried out. There was no change in the existing micro fair value hedges.

Notes to the Income Statement (CONTINUED)

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 2018.

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 euro millions if the interest rate changes by one basis point (BPV or 0.01%).

43 Net gains/losses on derecognition of financial instruments measured at cost

The item “Net gains/losses on derecognition of financial instruments measured at cost” is shown for the first time in the 2018 financial year in order to satisfy the requirements of IFRS 9. This contains the effects of the disposal of assets or buy-backs of liabilities relating to all financial instruments measured at cost pursuant to IFRS 9. This includes other net trading income (repurchases of issued securities) that was shown in net trading income in the 2017 financial year, as well as the gains on sale of receivables/securities measured at cost that were shown in other comprehensive income in the 2017 financial year.

	(€ millions)	
	2018	2017
Loans and receivables (performing)	27	n/a
Buy-backs of securities issued	(1)	n/a
Promissory notes (assets side)	26	n/a
Total	52	n/a

44 Net other expenses/income

(€ millions)

	2018	2017
Other income	773	654
Disposal of land and buildings	1	n/a
Rental income	131	n/a
Valuation/disposals of investment properties	162	n/a
Other	479	n/a
Other expenses	(249)	(255)
Disposal of land and buildings	—	n/a
Valuation/disposals of investment properties	(2)	n/a
Expenses of investment properties	(1)	n/a
Bank levy	(93)	n/a
Other	(153)	n/a
Total	524	399

Other income includes rental income of €186 million from investment properties and mixed usage buildings (previous-year period: €220 million). Current operating expenses (including repairs and maintenance) directly allocable to investment properties and current expenses from mixed usage buildings of €55 million are netted with the other income (previous-year period: €82 million). Net other expenses/income contains income in connection with BARD Offshore 1 wind farm of €188 million (previous-year period: €203 million).

Stating the previous year's figures for the total items in a condensed form within the table was waived as a comparable breakdown is not possible due to the changes made in presentation (see Note "First-time adoption of IFRS 9 – changes in disclosure principles compared with the previous year").

The scope of the item "Net other expenses/income" was similarly adjusted to the changes due to the first-time adoption of IFRS 9. The gains on sale of receivables as part of other income were reclassified to "Net gains/losses on derecognition of financial instruments measured at cost". In the 2018 financial year, the gains on disposal of land and buildings and of investment properties are recorded here for the first time having previously been shown in "Net income from investments".

In the previous-year period, this item disclosed gains of €67 million on the sale of unimpaired receivables.

Net other expenses/income attributable to related parties

The item "Net other expenses/income" includes the following amounts attributable to related parties:

(€ millions)

	2018	2017
Non-consolidated affiliated companies	87	87
of which:		
UniCredit S.p.A.	14	16
Sister companies	73	71
Joint ventures	—	—
Associated companies	—	—
Other participating interests	—	—
Total	87	87

Notes to the Income Statement (CONTINUED)

45 Operating costs

(€ millions)

	2018	2017
Payroll costs	(1,468)	(1,600)
Wages and salaries	(1,176)	(1,303)
Social security costs	(179)	(177)
Pension and other employee benefit costs	(113)	(120)
Other administrative expenses	(1,405)	(1,443)
Amortisation, depreciation and impairment losses	(206)	(227)
on property, plant and equipment	(195)	(212)
on software and other intangible assets, excluding goodwill	(11)	(15)
Total	(3,079)	(3,270)

Wages and salaries includes payments of €3 million (previous-year period: €4 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)

	2018	2017
Non-consolidated affiliated companies	(709)	(703)
of which:		
UniCredit S.p.A.	(22)	(16)
Sister companies	(687)	(687)
Joint ventures	—	—
Associated companies	—	—
Other participating interests	—	—
Total	(709)	(703)

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 three 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) and the “Let’s Share” employee share ownership plan.

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 overall risk 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 disbursed in tranches over a period of up to five years. Accordingly, this group of employees receives 20% to 30% of the bonus for 2018 in cash with the commitment at the beginning of 2019, and a further 10% to 20% will be disbursed after financial year-end 2019 and financial year-end 2021 or 2023.

At the beginning of 2019, the beneficiaries receive for the remaining 50% of the total bonus a commitment for an allocation of shares in UniCredit S.p.A. as part of the bonus for 2018, to be transferred to the beneficiaries after financial year-end 2020 to financial year-end 2022 or 2023.

The deferred payment after year-end 2019, 2021 and 2023 and the transfer of shares after year-end 2020, 2021, 2022 or 2023 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.

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 2019 regarding the granting, adjusted for a discount for expected dividends during the vesting period.

Notes to the Income Statement (CONTINUED)

In the reporting period, 1.9 million UniCredit S.p.A. shares were granted as a component of the bonus granted for 2017, with a fair value of €30.7 million. In the eventuality that a corporate action is implemented after the grant date, the number of shares granted will be adjusted accordingly. The shares granted in 2018 as part of the bonus for 2017 will be transferred in 2020, 2021, 2022 and 2023.

The following table shows the fair values per share at the time of granting:

	2018
Fair value of the shares to be transferred in 2020 (€ per share)	16.800
Fair value of the shares to be transferred in 2021 (€ per share)	16.137
Fair value of the shares to be transferred in 2022 (€ per share)	15.478
Fair value of the shares to be transferred in 2023 (€ per share)	14.825

The granted bonuses are recognised in the income statement on a pro rata basis over the respective vesting period.

Bonuses for the 2018 financial year falling due for disbursement in 2019 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 2018 are recognised as expense in the respective period (starting with the 2018 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.

Long-term Incentive Plan (LTI 2017–2019)

The Long-term Incentive Plan 2017–2019, introduced in the previous year 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, 76,722 UniCredit S.p.A. shares with a fair value of €1.0 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.

	2018
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)

	2018		2017	
	TOTAL	AVERAGE MATURITY	TOTAL	AVERAGE MATURITY
Outstanding at start of period	6,546,345	December 2019	20,745,754	October 2018
after corporate action ¹	—	—	4,138,428	October 2018
Additions				
Newly granted shares	1,893,842	March 2021	1,876,447	March 2020
From corporate transfers	27,089	August 2019	16,544	March 2019
Conditionally granted shares	76,722	July 2021	1,333,703	August 2021
Releases				
Forfeited shares	218,837	September 2021	71,682	September 2018
Transferred shares	1,738,152	May 2018	728,213	May 2017
From corporate transfers	135,328	February 2020	18,882	January 2019
Expired shares	—	—	—	—
Total at end of period	6,451,681	September 2020	6,546,345	December 2019

¹ As a consequence of the corporate actions implemented by UniCredit S.p.A. at the beginning of 2017, the outstanding shares were converted into new shares at the beginning of the period applying the official conversion factor.

In the 2018 financial year, prorated expenses of €29 million (previous-year period: €33 million) accrued for the share component arising from the bonuses promised for 2014 to 2018 in the form of share-based payments compliant with IFRS 2. These expenses are recognised under payroll costs. The provision set up totalled €123 million (previous-year period: €109 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), they are no longer expected to be exercised but will lapse. Correspondingly, there are no provisions in place as at year-end 2018 – as was the case in previous years. This also means that there are no longer any effects on operating costs. Of the total of 11 million options exercisable at year-end 2017, 10 million lapsed in the reporting year, the remaining 1 million stock options can only be exercised until year-end 2019, which is unlikely.

Employee share ownership plan (Let's Share)

An employee share ownership plan (Let's Share) that enabled UniCredit employees to purchase UniCredit shares at discounted prices was set up for the last time in 2017. The employee share ownership plan was of minor significance for the consolidated financial statements of HVB Group overall.

Notes to the Income Statement (CONTINUED)

46 Net write-downs of loans and provisions for guarantees and commitments according to IAS 39

The IAS 39 item “Net write-downs of loans and provisions for guarantees and commitments” ceased to apply upon first-time adoption of IFRS 9. For more information, please refer to the Note “First-time adoption of IFRS 9 - changes to disclosure principles compared with the previous year”.

(€ millions)

	2018	2017
Additions	n/a	(1,103)
Allowances for losses on loans and receivables	n/a	(904)
Allowances for losses on guarantees and indemnities	n/a	(199)
Releases	n/a	862
Allowances for losses on loans and receivables	n/a	668
Allowances for losses on guarantees and indemnities	n/a	194
Recoveries from write-offs of loans and receivables	n/a	46
Gains/(losses) on the disposal of impaired loans and receivables	n/a	—
Total	n/a	(195)

Income from the disposal of performing loans and receivables is disclosed under the item “Net other expenses/income” in the previous-year period. This gave rise to a gain of €67 million. The net expenses (net write-downs of loans and provisions for guarantees and commitments, and gains on disposal) for loans and receivables totalled a net expense of €123 million.

Net write-downs of loans and provisions for guarantees and commitments to related parties

In the previous-year period, the item “Net write-downs of loans and provisions for guarantees and commitments IAS 39” contained an addition of €7 million attributable to related parties. Further related parties were not affected.

47 Credit impairment losses IFRS 9

The new item "Credit impairment losses IFRS 9", which corresponds to the new expected credit loss model, has been created in order to show the underlying change in the methodology for the impairment model also in the income statement. This is not merely a continuation of the previous IAS 39 item "Net write-downs of loans and provisions for guarantees and commitments", which means it is not possible to make a comparison with the previous year.

Gains on the disposal of unimpaired assets measured at cost are recognised in the item "Net gains/losses on derecognition of financial instruments measured at cost" and come to €53 million. The net expenses (credit impairment losses IFRS 9 and gains on derecognition) for assets measured at cost amount to €20 million.

	(€ millions)	
	2018	2017
Additions	(1,051)	n/a
Allowances for losses on loans and receivables at amortised cost	(877)	n/a
Allowances for losses on loans and receivables at FVTOCI	—	n/a
Allowances for losses on guarantees and indemnities	(174)	n/a
Releases	1,002	n/a
Allowances for losses on loans and receivables at amortised cost	811	n/a
Allowances for losses on loans and receivables at FVTOCI	—	n/a
Allowances for losses on guarantees and indemnities	191	n/a
Gains/(losses) from not substantial modification	—	n/a
Recoveries from write-offs of loans and receivables	43	n/a
Gains/(losses) on the disposal of impaired loans and receivables	(10)	n/a
Total	(16)	n/a

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)	
	2018	2017
Non-consolidated affiliated companies	—	n/a
of which:		
UniCredit S.p.A.	—	n/a
Sister companies	—	n/a
Joint ventures	—	n/a
Associated companies	11	n/a
Other participating interests	—	n/a
Total	11	n/a

48 Provisions for risks and charges

In the reporting period, there were expenses of €919 million for provisions for risks and charges after €25 million in the previous-year period. These were primarily provisions for legal risks in both years. The legal risks of HVB Group are described in greater detail in the section entitled "Operational risk" in the Risk Report of this Management's Discussion and Analysis.

49 Restructuring costs

Restructuring costs of €14 million were incurred in the reporting period (previous-year period: €7 million).

Notes to the Income Statement (CONTINUED)

50 Net income from investments

The item “Net income from investments” ceased to apply upon the first-time adoption of IFRS 9. For more information, refer to the Note “First-time adoption of IFRS 9 – changes to disclosure principles compared with the previous year”.

Net income from investments		(€ millions)
	2018	2017
Available-for-sale financial assets	n/a	129
Shares in affiliated companies	n/a	(8)
Companies accounted for using the equity method	n/a	(4)
Held-to-maturity investments	n/a	—
Land and buildings	n/a	4
Investment properties ¹	n/a	(9)
Other	n/a	—
Total	n/a	112

¹ Gains on disposal, impairments and write-ups.

Net income from investments breaks down as follows: (€ millions)

	2018	2017
Gains on the disposal of	n/a	140
available-for-sale financial assets	n/a	141
shares in affiliated companies	n/a	(8)
companies accounted for using the equity method	n/a	—
held-to-maturity investments	n/a	—
land and buildings	n/a	4
investment properties	n/a	3
other	n/a	—
Write-downs, value adjustments and write-ups on	n/a	(28)
available-for-sale financial assets	n/a	(12)
shares in affiliated companies	n/a	—
companies accounted for using the equity method	n/a	(4)
held-to-maturity investments	n/a	—
investment properties	n/a	(12)
other	n/a	—
Total	n/a	112

In the previous-year period, the net income from investments amounted to €112 million. This figure amounted to €140 million and was generated almost exclusively with gains on disposal of available-for-sale financial assets (€141 million). These essentially relate to two disposals from our shareholdings. In contrast, net write-downs and impairment charges totalling €28 million were incurred relating to available-for-sale financial assets (€12 million), investment properties (€12 million) and companies accounted for using the equity method (€4 million).

51 Net gains/losses on disposals of investments

The item “Net gains/losses on disposals of investments” is shown for the first time in the 2018 financial year and contains the gains on disposal of shares in affiliated companies and companies accounted for using the equity method that were previously shown under “Net income from investments”. This item serves to group and present in a meaningful way the positions that it contains.

		(€ millions)
	2018	2017
Shares in affiliated companies	28	n/a
Disposal of companies accounted for using the equity method	—	n/a
Write-downs	(2)	n/a
Total	26	n/a

Shares in affiliated companies include the gains of €28 million on the disposal of our subsidiary Mobility Concept GmbH, Oberhaching.

The write-downs relate to shares in an associated company accounted for using the equity method.

52 Impairment on goodwill

In the reporting year, goodwill of €288 million was written off completely for the CIB 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. This is mainly due to the fact that the value in use for the business segment is lower compared with the previous year. 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.

53 Income tax for the period

(€ millions)

	2018	2017
Current taxes	(29)	(205)
Deferred taxes	(125)	(56)
Total	(154)	(261)

The current tax expense for 2018 includes tax income totalling €112 million for previous years (previous-year period: €140 million) due, among other things, to the reversal of provisions.

The deferred tax expense in the reporting period contains income totalling €122 million arising from value adjustments of deferred tax assets on tax losses carried forward and temporary differences. The counteracting deferred tax expense of €247 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 arises from income from the value adjustment of deferred tax assets on tax losses carried forward and temporary differences as well as an expense stemming from the origination 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)

	2018	2017
Profit before tax	392	1,597
Applicable tax rate	31.4%	31.4%
Computed income taxes	(123)	(501)
Tax effects		
arising from previous years and changes in tax rates	47	111
arising from foreign income	15	31
arising from non-taxable income	30	70
arising from different tax laws	(17)	(56)
arising from non-deductible expenses	(138)	(51)
arising from value adjustments and the non-recognition of deferred taxes	121	136
arising from amortisation of goodwill	(90)	—
arising from other differences	1	(1)
Recognised income taxes	(154)	(261)

Notes to the Income Statement (CONTINUED)

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.

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 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)

	2018	2017
Deferred tax assets		
Investments	n/a	2
Other financial instruments at FVTPL	255	230
Financial instruments at FVTOCI	3	n/a
Loans and receivables with banks (at cost)/customers (at cost), including provisions for losses on loans and receivables	n/a	92
Loans and receivables with banks (at cost)/customers (at cost)/ Deposits from banks/customers	50	n/a
Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (P&L)	286	236
Property, plant and equipment/intangible assets	116	123
Other assets/other liabilities	42	48
Provisions, pension fund and similar	736	625
Losses carried forward/tax credits	283	392
Other	3	2
Total deferred tax assets	1,774	1,750
Effect of offsetting	(531)	(500)
Recognised deferred tax assets	1,243	1,250
Deferred tax liabilities		
Other financial instruments at FVTPL	206	1
Financial instruments at FVTOCI	5	n/a
Loans and receivables with banks (at cost)/customers (at cost)/ Deposits from banks/customers	17	34
Investments	n/a	112
Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (P&L)	290	282
Hedging derivatives and Hedge adjustment of hedged items in the fair value hedge portfolio (OCI)	11	12
Property, plant and equipment/intangible assets	54	40
Other assets/other liabilities	70	69
Other	32	39
Total deferred tax liabilities	685	589
Effect of offsetting	(531)	(500)
Recognised deferred tax liabilities	154	89

As a result of the first-time adoption of IFRS 9 in 2018, the presentation of the deferred tax assets and deferred tax liabilities has been changed compared with the previous year. Deferred taxes on financial assets/liabilities held for trading (netted previous-year figure: €229 million) are shown under the item "Other financial instruments at FVTPL" as of the reporting period. Changes to the scope of the "Loans and receivables with banks (at cost)" item and the "Loans and receivables with customers (at cost)" item are explained under the respective note in these notes to the consolidated financial statements. The related deferred taxes were allocated accordingly. The deferred taxes on hedging derivatives and hedge adjustment of hedged items (netted previous-year figure: minus €58 million (income statement and OCI)) were shown in previous years together with other assets and liabilities and are reported separately for the first time in the reporting period.

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 €550 million (previous-year period: €501 million) were recorded directly in equity. These mainly arise from deferred tax assets of €564 million (previous-year period: €532 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. 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 unused tax losses of HVB Group of €935 million (previous-year period: €2,604 million), most of which do not expire, and deductible temporary differences of €1,007 million (previous-year period: €1,847 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 strategic plan. Where changes are made to the Strategic Plan over time, this may have an impact on the valuation of the volume of deferred tax assets already capitalised or to be capitalised.

54 Earnings per share

	2018	2017
Consolidated profit attributable to the shareholder (€ millions)	236	1,332
Average number of shares	802,383,672	802,383,672
Earnings per share (€) (undiluted and diluted)	0.29	1.66

Notes to the Balance Sheet

55 Cash and cash balances

(€ millions)

	2018	2017
Cash on hand	5,995	6,024
Balances with central banks	13,995	30,390
Total	19,990	36,414

56 Financial assets held for trading

(€ millions)

	2018	2017
Balance-sheet assets	26,694	32,082
Fixed-income securities	9,187	10,415
Equity instruments	7,520	12,636
Other financial assets held for trading	9,987	9,031
Positive fair value from derivative financial instruments	42,263	43,411
Total	68,957	75,493

The financial assets held for trading include, but are not limited to, 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 €140 million (previous year: €178 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)

	2018	2017
Non-consolidated affiliated companies	10,786	11,570
of which:		
UniCredit S.p.A.	7,534	7,940
Sister companies ¹	3,252	3,630
Joint ventures	86	10
Associated companies	1,007	931
Other participating interests	4	5
Total	11,883	12,516

¹ Mostly derivative transactions involving UniCredit Bank Austria AG.

57 Financial assets at FVTPL (FVO)

The item "Financial instruments at FVTPL (FVO)" ceased to apply upon the first-time adoption of IFRS 9. For further information, please refer to the Note "First-time adoption of IFRS 9 – changes to disclosure principles compared with the previous year".

	(€ millions)	
	2018	2017
Fixed-income securities	n/a	20,346
Equity instruments	n/a	—
Investment certificates	n/a	—
Promissory notes	n/a	1,110
Other financial assets at FVTPL	n/a	—
Total	n/a	21,456

In the previous year, 75% of the promissory notes were issued by the federal states and regional authorities in the Federal Republic of Germany. The portfolio also included two promissory notes issued by the Republic of Austria.

In the previous year, the fair value fluctuations contained only minor effects from changes in credit ratings on account of the prime ratings of promissory notes.

At 31 December 2017, the financial assets at FVTPL (FVO) included €7 million in subordinated assets.

58 Financial assets at FVTPL

The item "Financial assets at FVTPL" is shown for the first time in the 2018 financial year in order to correctly reflect the new measurement category introduced by IFRS 9. This item contains all the debt instruments that are to be measured at fair value through profit or loss on account of the "Other" business model as well as the shareholdings that are likewise to be measured at fair value through profit or loss. This also includes debt instruments that do not meet the cash flow criteria and were shown in the 2017 financial year in the items "Loans and receivables with banks (at cost)", "Loans and receivables with customers (at cost)" or "Available-for-sale financial instruments". These items also include the financial instruments of the former "Fair value option (financial instruments at FVTPL (FVO))" that have to be measured at fair value on account of the "Other" business model.

	(€ millions)	
	2018	2017
Fixed-income securities	15,135	n/a
Equity instruments	242	n/a
Loans and promissory notes	1,243	n/a
Other	63	n/a
Total	16,683	n/a

Financial assets at FVTPL include an amount of €399 million in subordinated loans and receivables in the reporting year.

In the reporting year the financial assets at FVTPL do not include any loans and receivables past due.

Notes to the Balance Sheet (CONTINUED)

59 Financial assets at FVTOCI

The item “Financial assets at FVTOCI” is shown for the first time in the 2018 financial year in order to correctly reflect the new measurement category introduced by IFRS 9. It contains all items measured at fair value directly in equity on account of the “Held for sale” business model and because the cash flow criteria are met. Only fixed interest bonds reclassified from the previous available-for-sale portfolio are included.

	(€ millions)	
	2018	2017
Fixed-income securities	7,370	n/a
Total	7,370	n/a

Development loss allowance

	(€ millions)				
	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2018	6,147	—	—	—	6,147
Transferal to another stage due to deterioration of credit quality	—	—	—	—	—
Transferal to another stage due to improvement of credit quality	—	—	—	—	—
Changes due to modification that did not result in derecognition	—	—	—	—	—
Changes within the stage (net) ¹	1,223	—	—	—	1,223
Derecognition (due to incollectibility)	—	—	—	—	—
Other changes	—	—	—	—	—
Total at 31/12/2018	7,370	—	—	—	7,370

1 Changes within the stage (net) include additions from purchases and disposals from sales and repayments.

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.

Debt securities and collateral, broken down by rating class

	(€ millions)				
	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
1/1/2018					
Not rated	—	—	—	—	—
Rating class 1–4	6,147	—	—	—	6,147
Rating class 5–8	—	—	—	—	—
Rating class 9–10	—	—	—	—	—
Fair Value at 1/1/2018	6,147	—	—	—	6,147
Impairment recognised in the statement of total comprehensive income for these instruments	0	—	—	—	0
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
Impairment recognised in the statement of total comprehensive income for these instruments	0	—	—	—	0

There were no modifications to fixed-income securities in the reporting period.

There is no collateral at FVTOCI in the reporting period.

60 Available-for-sale financial assets

The item "Available-for-sale financial instruments" ceased to apply upon the first-time adoption of IFRS 9. For further information, please refer to the Note "First-time adoption of IFRS 9 – changes to disclosure principles compared with the previous year".

	(€ millions)	
	2018	2017
Fixed-income securities	n/a	6,560
Equity instruments	n/a	117
Other available-for-sale financial assets	n/a	75
Impaired assets	n/a	64
Total	n/a	6,816

Available-for-sale financial assets as at 31 December 2017 include financial instruments of €147 million measured at cost.

At 31 December 2017, equity instruments with a carrying amount of €93 million had been sold, yielding a gain of €65 million.

Available-for-sale financial assets as at 31 December 2017 contain a total of €64 million in impaired assets.

As at 31 December 2017, none of the non-impaired debt instruments were financial instruments past due.

As at 31 December 2017, the available-for-sale financial assets include no subordinated assets.

61 Held-to-maturity investments

The item "Held-to-maturity investments" ceased to apply upon the first-time adoption of IFRS 9. For further information, please refer to the Note "First-time adoption of IFRS 9 – changes in disclosure principles compared with the previous year".

	(€ millions)	
	2018	2017
Fixed-income securities	n/a	23
Impaired assets	n/a	—
Total	n/a	23

The held-to-maturity investments at 31 December 2017 include no subordinated assets.

The held-to-maturity investments at 31 December 2017 include no impaired or past due assets.

Development of held-to-maturity investments

	(€ millions)	
	2018	2017
Balance at 1 January	n/a	36
Additions		
Purchases	n/a	—
Write-ups	n/a	—
Other additions	n/a	—
Disposals		
Sales	n/a	—
Redemptions at maturity	n/a	(8)
Write-downs	n/a	—
Other disposals	n/a	(5)
Balance at 31 December	n/a	23

Notes to the Balance Sheet (CONTINUED)

62 Loans and receivables with banks (at cost)

(€ millions)

	2018	2017
Current accounts	2,192	1,526
Cash collateral and pledged credit balances	6,847	7,306
Reverse repos	17,261	14,127
Securities	1,342	198
Other loans to banks	6,006	7,173
Non-performing loans and receivables	—	—
Total	33,648	30,330

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.

The other loans to banks consist mostly of term deposits and bonds.

The “Loans and receivables with banks (at cost)” include €2 thousand in subordinated assets as at the reporting date and in the previous year.

The scope of the item “Loans and receivables with banks (at cost)” has changed such that receivables that cannot be measured at amortised cost on account of the “Other” business model are reclassified to “Financial assets at FVTPL” in the 2018 financial year on account of measurement at fair value through profit or loss. This means that the item “Loans and receivables with banks (at cost)” only contains receivables that can be measured at amortised cost on account of the “Held for sale” business model and the fact that the cash flow criteria are met. The previous-year figures were not restated.

Development of the gross carrying amounts

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2018	30,276	223	38	—	30,537
Change in balance within the stage (including additions from new business and disposals)	2,729	427	2	—	3,158
Transfer 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	—	—	—	—	—
Transfer 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 modification 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 1/1/2018	6	4	38	—	48
Addition due to new business	5	—	—	—	5
Change in balance 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 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
1/1/2018						
Not rated	286	—	—	—	—	286
Rating class 1-4	28,895	18	—	—	889	28,913
Rating class 5-8	1,239	61	—	—	158	1,300
Rating class 9-10	—	—	38	—	—	38
Gross carrying amount at 1/1/2018	30,420	79	38	—	1,047	30,537
Impairment	(6)	(4)	(38)	—	n/a	(48)
Carrying amount at 1/1/2018	30,414	75	—	—	1,047	30,489
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)
Carrying amount at 31/12/2018	33,185	463	—	—	268	33,648

The previous-year figures stated for “Loans and receivables with banks (at cost)” are shown net of the associated allowances for losses on loans and receivables. These allowances break down as follows:

(€ millions)

	2017
Properly serviced loans and receivables – carrying amount	30,245
Carrying amount before allowances	30,262
Portfolio allowances	17
Properly serviced loans and receivables past due – carrying amount	85
Carrying amount before allowances	85
Portfolio allowances	—
Non-performing loans and receivables (rating classes 8-, 9 and 10) – carrying amount	—
Carrying amount before allowances	38
Specific allowances	38

Properly serviced loans and receivables with banks and value of collateral, broken down by period past due

(€ millions)

	2017
Properly serviced loans and receivables past due – carrying amount	
1–30 days	85
31–60 days	—
61–90 days	—
Value of collateral	
1–30 days	—
31–60 days	—
61–90 days	—

Loans and receivables with banks and value of collateral, broken down by rating class

(€ millions)

	2017
Loans and receivables	
Not rated	287
Rating class 1–4	28,634
Rating class 5–8	1,409
Rating class 9–10	—
Collateral	
Not rated	—
Rating class 1–4	889
Rating class 5–8	158
Rating class 9–10	—

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)

	2018	2017
Non-consolidated affiliated companies	3,892	4,667
of which:		
UniCredit S.p.A.	2,871	3,434
Sister companies ¹	1,021	1,233
Joint ventures	112	337
Associated companies	16	41
Other participating interests	24	60
Total	4,044	5,105

¹ Mainly UniCredit Bank Austria AG.

Notes to the Balance Sheet (CONTINUED)

63 Loans and receivables with customers (at cost)

(€ millions)

	2018	2017
Current accounts	6,641	6,548
Cash collateral and pledged cash balances	2,652	2,540
Reverse repos	3,842	1,422
Mortgage loans	46,635	44,667
Finance leases	1,847	1,689
Securities	11,248	8,125
thereof: ABS securities	8,266	6,113
Other loans and receivables	59,477	54,431
Non-performing loans and receivables	1,364	1,756
Total	133,706	121,178

The Bank's portfolio of asset-backed securities mainly consists of low-risk senior tranches. As the turbulence caused by the financial market crisis in 2007/2008, which particularly affected asset-backed securities, has settled, it is no longer necessary to report asset-backed securities in detail in a separate note. This note has thus been discontinued and the portfolio of asset-backed securities is shown separately in the table above.

Other loans and receivables largely comprise miscellaneous other loans, installment 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 €4,282 million (previous year: €5,665 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, the loans and receivables with customers (at cost) include €34 million (previous year: €58 million) in subordinated assets.

The scope of the item "Loans and receivables with customers (at cost)" has changed such that receivables that cannot be measured at amortised cost on account of the "Other" business model are reclassified to "Financial assets at FVTPL" in the 2018 financial year on account of measurement at fair value through profit or loss. This means that the item "Loans and receivables with customers (at cost)" only contains receivables that can be measured at amortised cost on account of the "Held for sale" business model and the fact that the cash flow criteria are met. The previous-year figures were not restated.

Development of gross carrying amounts

(€ millions)

	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance at 1/1/2018	112,514	6,818	3,874	—	123,206
Change in balance within the stage (including additions from new business and disposals)	14,113	(458)	(1,286)	—	12,369
Transfer 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 modification 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 1/1/2018	140	181	1,953	—	2,274
Addition due to new business	109	—	—	—	109
Change in balance 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 receivable)	(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 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
1/1/2018						
Not rated	6,851	156	5	—	290	7,012
Rating class 1–4	84,709	1,572	5	—	37,616	86,286
Rating class 5–8	20,954	5,090	33	—	17,386	26,077
Rating class 9–10	—	—	3,831	—	893	3,831
Gross carrying amount at 1/1/2018	112,514	6,818	3,874	—	56,185	123,206
Impairment	(140)	(181)	(1,953)	—	n/a	(2,274)
Carrying amount at 1/1/2018	112,374	6,637	1,921	—	56,185	120,932
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)
Carrying amount at 31/12/2018	124,614	7,728	1,364	—	55,871	133,706

The previous-year figures stated for “Loans and receivables with customers (at cost)” are shown net of the associated allowances for losses on loans and receivables. These allowances break down as follows:

	(€ millions)
	2017
Properly serviced loans and receivables – carrying amount	118,733
Carrying amount before allowances	119,020
Portfolio allowances	287
Properly serviced loans and receivables past due – carrying amount	689
Carrying amount before allowances	693
Portfolio allowances	4
Non-performing loans and receivables (rating classes 8-, 9 and 10) – carrying amount	1,756
Carrying amount before allowances	3,614
Specific allowances	1,858

Properly serviced loans and receivables with customers past due and the related value of collateral, broken down by period past due

	(€ millions)
	2017
Properly serviced loans and receivables past due – carrying amount	
1–30 days	660
31–60 days	22
61–90 days	7
Value of collateral	
1–30 days	194
31–60 days	9
61–90 days	1

Loans and receivables, and related collateral, broken down by rating class:

	(€ millions)
	2017
Loans and receivables	
Not rated	13,046
Rating class 1–4	77,354
Rating class 5–8	29,023
Rating class 9–10	1,755
Collateral	
Not rated	290
Rating class 1–4	37,616
Rating class 5–8	17,386
Rating class 9–10	893

The amount outstanding from assets written off in the reporting period which are subject to an enforcement measure totals €174 million.

Notes to the Balance Sheet (CONTINUED)

Loans and receivables with related parties

The item “Loans and receivables with customers (at cost)” includes the following amounts attributable to related parties:

(€ millions)

	2018	2017
Non-consolidated affiliated companies	6	6
of which:		
Sister companies	3	5
Subsidiaries	3	1
Joint ventures	15	20
Associated companies	115	16
Other participating interests	473	420
Total	609	462

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”.

64 Forbearance

The European Banking Authority (EBA) defines forbore 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 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 Level 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 forbore exposure portfolio at the reporting date:

(€ millions)

	2018			2017		
	CARRYING AMOUNT BEFORE ALLOWANCES	ALLOWANCES	CARRYING AMOUNT	CARRYING AMOUNT BEFORE ALLOWANCES	ALLOWANCES	CARRYING AMOUNT
Performing exposures	530	(8)	522	737	(14)	723
Non-Performing exposures	1,577	(882)	695	2,845	(1,178)	1,667
Total	2,107	(890)	1,217	3,582	(1,192)	2,390

An amount of €1,217 million is carried as forbore exposures under “Loans and receivables with customers (at cost)” (previous year: €2,390 million). No forbore 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 forbore exposures, the loans involved are exposed to increased default risk as they have already become conspicuous. They are thus allocated to Level 2. Such exposures are closely tracked by the restructuring units or subject to strict monitoring by the back-office units.

65 Allowances for losses on “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at cost)”

Analysis of loans and receivables for the 2017 reporting year according to IAS 39

(€ millions)

	SPECIFIC ALLOWANCES	PORTFOLIO ALLOWANCES	TOTAL
Balance at 1/1/2017	2,193	370	2,563
Changes affecting income			
Gross additions ¹	880	24	904
Releases	(584)	(84)	(668)
Changes not affecting income			
Changes due to make-up of group of consolidated companies and reclassifications of disposal groups held for sale	(13)	(1)	(14)
Use of existing loan-loss allowances	(520)	—	(520)
Effects of currency translation and other changes not affecting income	(59)	(1)	(60)
Non-current assets or disposal groups held for sale	—	—	—
Balance at 31/12/2017	1,897	308	2,205

¹ The gross additions include the losses on the disposal of impaired loans and receivables.

66 Hedging derivatives

(€ millions)

	2018	2017
Micro fair value hedge	7	14
Fair value hedge portfolio ¹	269	376
Total	276	390

¹ The cross-currency interest rate swaps used in hedge accounting are carried at their aggregate fair value in the fair value hedge portfolio.

67 Investments in associates and joint ventures

(€ millions)

	2018	2017
Associated companies accounted for using the equity method	23	34
of which: goodwill	—	8
Joint ventures accounted for using the equity method	—	—
Total	23	34

Three joint ventures and one associated company were not accounted for in the consolidated financial statements using the equity method for materiality reasons.

Notes to the Balance Sheet (CONTINUED)

Change in portfolio of shares in associated companies accounted for using the equity method

(€ millions)

	ASSOCIATED COMPANIES ACCOUNTED FOR USING THE EQUITY METHOD	
	2018	2017
Carrying amounts at 1/1	34	44
Additions	2	—
Purchases ¹	—	—
Write-ups	—	—
Changes from currency translation	1	—
Other additions ²	1	—
Disposals	(13)	(10)
Sales	—	(2)
Impairments	(2)	(4)
Changes from currency translation	—	(2)
Non-current assets or disposal groups held for sale	(9)	—
Other disposals ²	(2)	(2)
Carrying amounts at 31/12	23	34

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)

	2018	2017
Net interest	(5)	(4)
Net gains/(losses) on financial assets and liabilities at fair value	(6)	n/a
Net other expenses/income	104	86
Operating costs	(102)	(84)
Profit/(loss) before tax	(9)	(2)
Income tax	(1)	—
Consolidated profit/(loss)	(10)	(2)
Other comprehensive income	—	—
Total comprehensive income	(10)	(2)

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 associated companies.

68 Property, plant and equipment

(€ millions)

	2018	2017
Land and buildings	922	922
Plant and office equipment	329	364
Other property, plant and equipment	1,238	1,313
Total¹	2,489	2,599

¹ Including leased assets of €525 million (previous year: €449 million). More information about leases is contained in the Note "Information regarding lease operations".

Other property, plant and equipment mainly contains the BARD Offshore 1 wind farm which belongs to the Ocean Breeze Energy GmbH & Co. KG subsidiary.

This item also includes the 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.

Notes to the Balance Sheet (CONTINUED)

Development of property, plant and equipment

(€ millions)

	LAND AND BUILDINGS	PLANT AND OFFICE EQUIPMENT	TOTAL INTERNALLY USED PROPERTY, PLANT AND EQUIPMENT	OTHER PROPERTY, PLANT AND EQUIPMENT	TOTAL PROPERTY, PLANT AND EQUIPMENT ¹
Acquisition costs at 1/1/2018	2,126	991	3,117	1,699	4,816
Write-downs and write-ups from previous years	(1,204)	(627)	(1,831)	(386)	(2,217)
Carrying amounts at 1/1/2018	922	364	1,286	1,313	2,599
Additions					
Acquisition/production costs	29	88	117	36	153
Write-ups	21	—	21	—	21
Changes from currency translation	—	—	—	—	—
Other additions ²	—	4	4	—	4
Disposals					
Sales	—	(4)	(4)	—	(4)
Amortisation and write-downs	(32)	(53)	(85)	(111)	(196)
Impairments	(17)	(4)	(21)	—	(21)
Changes from currency translation	—	—	—	—	—
Non-current assets or disposal groups held for sale	—	—	—	—	—
Other disposals ²	(1)	(66)	(67)	—	(67)
Carrying amounts at 31/12/2018	922	329	1,251	1,238	2,489
Write-downs and write-ups from previous years plus year under review	1,129	561	1,690	497	2,187
Acquisition costs at 31/12/2018	2,051	890	2,941	1,735	4,676
2017					
Acquisition costs at 1/1/2017	2,116	1,178	3,294	1,707	5,001
Write-downs and write-ups from previous years	(1,185)	(654)	(1,839)	(293)	(2,132)
Carrying amounts at 1/1/2017	931	524	1,455	1,414	2,869
Additions					
Acquisition/production costs	20	138	158	15	173
Write-ups	11	—	11	—	11
Changes from currency translation	—	—	—	—	—
Other additions ²	—	15	15	—	15
Disposals					
Sales	(4)	(69)	(73)	(6)	(79)
Amortisation and write-downs	(33)	(95)	(128)	(110)	(238)
Impairments	(2)	—	(2)	—	(2)
Changes from currency translation	—	(1)	(1)	—	(1)
Non-current assets or disposal groups held for sale	(1)	(148)	(149)	—	(149)
Other disposals ²	—	—	—	—	—
Carrying amounts at 31/12/2017	922	364	1,286	1,313	2,599
Write-downs and write-ups from previous years plus year under review	1,204	627	1,831	386	2,217
Acquisition costs at 31/12/2017	2,126	991	3,117	1,699	4,816

1 Including leased assets. More information about leases is contained in Note "Information regarding lease operations".

2 Including changes in the group of companies included in consolidation.

69 Investment properties

The fair value of investment properties at HVB Group, which are measured at amortised cost, totalled €561 million (previous year: €1,141 million). The appraisals prepared to calculate the fair values are based on recognised appraisal methods used by external assessors, primarily taking the form of asset-value and gross-rental methods. The fair values determined in this way are classified as Level 3 (please refer to the Note "Fair value hierarchy" for the definition of the level hierarchy) due to the fact that each property is essentially unique and the fair value is determined using appraisals that reflect the special features of the real estate being valued. In the case of developed land, current market rents, operating costs and property yields are applied in the gross-rental method. Where necessary, property-specific considerations are also taken into account when determining the value. These property-specific factors include vacancy rates, deviations between current contractual rents and current market rents, the condition of the buildings' technical systems and so on. In the case of undeveloped land, figures for sales of nearby land that have been completed are normally taken as the 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.

The net carrying amount of the leased assets from finance leases included in investment properties amounted to €46 million (previous year: €11 million) for land and buildings at the reporting date.

Development of investment properties

(€ millions)

	INVESTMENT PROPERTIES MEASURED AT COST	
	2018	2017
Acquisition costs at 1/1	1,630	1,844
Write-downs and write-ups from previous years	(822)	(816)
Carrying amounts at 1/1	808	1,028
Additions		
Acquisition/production costs	1	2
Write-ups	112	10
Changes from currency translation	—	—
Other additions ¹	—	—
Disposals		
Sales	(1)	(25)
Amortisation and write-downs	(25)	(27)
Impairments	(1)	(23)
Changes from currency translation	—	—
Non-current assets or disposal groups held for sale	(638)	(157)
Other disposals ¹	—	—
Carrying amounts at 31/12	256	808
Write-downs and write-ups from previous years plus year under review	476	822
Acquisition costs at 31/12	732	1,630

¹ Also including changes in the group of companies included in consolidation.

The favourable development in the property market in Germany, which resulted in an increase in the fair values of the properties, is reflected in the write-up of investment properties. The unscheduled depreciation from previous periods thus had to be reversed in some cases.

Notes to the Balance Sheet (CONTINUED)

70 Intangible assets

(€ millions)

	2018	2017
Goodwill	130	418
Other intangible assets	19	27
Internally generated intangible assets	12	17
Other intangible assets	7	10
Total	149	445

Development of intangible assets

(€ millions)

	GOODWILL FROM AFFILIATED COMPANIES		INTERNALLY GENERATED INTANGIBLE ASSETS		OTHER INTANGIBLE ASSETS	
	2018	2017	2018	2017	2018	2017
Acquisition costs at 1/1	1,042	1,042	386	384	183	188
Write-downs and write-ups from previous years	(624)	(624)	(369)	(362)	(173)	(173)
Carrying amounts at 1/1	418	418	17	22	10	15
Additions						
Acquisition/production costs	—	—	1	2	2	3
Write-ups	—	—	—	—	—	—
Changes from currency translation	—	—	—	—	—	—
Other additions	—	—	—	—	—	—
Disposals						
Sales	—	—	—	—	—	—
Amortisation and write-downs	—	—	(6)	(7)	(5)	(7)
Impairments	(288)	—	—	—	—	—
Changes from currency translation	—	—	—	—	—	—
Non-current assets or disposal groups held for sale	—	—	—	—	—	(1)
Other disposals ¹	—	—	—	—	—	—
Carrying amounts at 31/12	130	418	12	17	7	10
Write-downs and write-ups from previous years plus year under review	912	624	375	369	176	173
Acquisition costs at 31/12	1,042	1,042	387	386	183	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.

71 Non-current assets or disposal groups held for sale

(€ millions)

	2018	2017
Cash	—	—
Financial assets at FVTPL	—	n/a
Financial assets at FVTOCI	—	n/a
Available-for-sale financial assets	n/a	—
Loans and receivables with banks (at cost)	—	—
Loans and receivables with customers (at cost)	—	201
Investments in associates and joint ventures	9	—
Property, plant and equipment	—	149
Investment properties	733	156
Tax assets	—	—
Other assets	—	5
Total	742	511

The investment properties designated as held for sale essentially relate to the disposal of non-strategic real estate. Also shown is the carrying amount of an associate accounted for using the equity method, the sale of which is planned. The assets of Mobility Concept GmbH, Oberhaching, recognised in the previous year are no longer included as the subsidiary left the group of companies included in consolidation at the close of 31 May 2018 following the disposal thereof.

The disposal of investment properties with carrying amounts totalling €89 million and the disposal of the investment accounted for using the equity method with a carrying amount of €9 million are planned in the first half of 2019. The disposal of the remaining investment properties with carrying amounts totalling €644 million is planned in the second half of 2019.

No valuation effects were recorded in the reporting period or in the previous year in connection with the non-current assets classified as for sale.

72 Other assets

Other assets include prepaid expenses of €131 million (previous year: €106 million).

This item also includes real estate of €306 million (previous year: €457 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 gains on disposal.

Notes to the Balance Sheet (CONTINUED)

73 Own securitisation

The Bank has securitised its own loan receivables for the purpose of obtaining cheap funding 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 securitisation (true sale), receivables are sold to a special purpose entity which in turn issues securities.

In the reporting year, the true sale transaction Geldilux TS 2013 was terminated. The Geldilux 2015 and Rosenkavalier 2015 transactions were restructured and the transaction volume of both transactions was increased.

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.

74 Deposits from banks

(€ millions)

	2018	2017
Deposits from central banks	16,886	19,857
Deposits from banks	46,057	47,497
Current accounts	2,691	2,590
Cash collateral and pledged credit balances	9,289	9,559
Repos	16,484	13,026
Term deposits	4,772	9,517
Other liabilities	12,821	12,805
Total	62,943	67,354

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.

Amounts owed to related parties

The item "Deposits from banks" includes the following amounts attributable to related parties:

(€ millions)

	2018	2017
Non-consolidated affiliated companies	6,103	10,536
of which:		
UniCredit S.p.A.	2,626	6,900
Sister companies ¹	3,477	3,636
Joint ventures	19	35
Associated companies	79	38
Other participating interests	23	22
Total	6,224	10,631

¹ The largest single item relates to UniCredit Bank Austria AG.

75 Deposits from customers

(€ millions)

	2018	2017
Current accounts	76,334	71,011
Cash collateral and pledged credit balances	3,948	3,874
Savings deposits	13,659	13,905
Repos	6,196	8,607
Term deposits	18,075	21,887
Promissory notes	1,638	3,361
Other liabilities	1,188	1,639
Total	121,038	124,284

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.

Amounts owed to related parties

The item "Deposits from customers" includes the following amounts attributable to related parties:

(€ millions)

	2018	2017
Non-consolidated affiliated companies	241	272
of which:		
Sister companies	236	242
Subsidiaries	5	30
Joint ventures	4	3
Associated companies	1	4
Other participating interests	320	282
Total	566	561

Notes to the Balance Sheet (CONTINUED)

76 Debt securities in issue

(€ millions)

	2018	2017
Bonds	21,746	23,062
of which:		
Registered mortgage Pfandbriefs	4,766	5,020
Registered public-sector Pfandbriefs	2,590	3,700
Mortgage Pfandbriefs	8,216	7,883
Public-sector Pfandbriefs	85	136
Registered bonds	3,146	2,869
Other securities	2,614	2,490
Total	24,360	25,552

Debt securities in issue, payable to related parties

The item "Debt securities in issue" includes the following amounts attributable to related parties:

(€ millions)

	2018	2017
Non-consolidated affiliated companies	1,000	—
of which:		
UniCredit S.p.A.	1,000	—
Sister companies	—	—
Joint ventures	—	6
Associated companies	—	125
Other participating interests	—	—
Total	1,000	131

77 Financial liabilities held for trading

(€ millions)

	2018	2017
Negative fair values arising from derivative financial instruments	37,224	40,024
Other financial liabilities held for trading	10,881	16,193
Total	48,105	56,217

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.

With regard to the decline in other financial liabilities held for trading, it should be noted that structured issues with a carrying amount of €4.7 billion were designated from financial liabilities held for trading to liabilities measured at fair value through profit or loss with effect from 1 January 2018.

78 Financial liabilities at FVTPL

The item "Financial liabilities at FVTPL" has been added to the balance sheet for the first time in the 2018 financial year as liabilities were designated as measured at fair value through profit or loss for the first time in the reporting year.

This item contains own structured issues of €5,152 million at the reporting date.

The difference between the carrying amount and the contractual amount payable amounts to €179 million.

79 Hedging derivatives

(€ millions)

	2018	2017
Micro fair value hedge	96	118
Fair value hedge portfolio ¹	502	351
Total	598	469

¹ The cross-currency interest rate swaps used in hedge accounting are carried at their aggregate fair value in the fair value hedge portfolio.

80 Hedge adjustment of hedged items in the fair value hedge portfolio

The net changes in fair value of portfolio hedged items for receivables and liabilities with interest rate hedges total €1,210 million (previous year: €1,215 million). The fair value of the netted fair value hedge portfolio derivatives represents an economic comparable amount.

81 Liabilities of disposal groups held for sale

(€ millions)

	2018	2017
Deposits from banks	—	78
Deposits from customers	—	—
Tax liabilities	—	3
Other liabilities	—	21
Provisions	—	—
Total	—	102

The liabilities of Mobility Concept GmbH, Oberhaching disclosed in the previous year are no longer included as the subsidiary left the group of consolidated companies at the time of its disposal at the close of 31 May 2018.

82 Other liabilities

This item totalling €1,649 million (previous year: €1,699 million) essentially encompasses deferred income and accruals compliant with IAS 37.

Accruals include, notably, commitments arising from accounts payable with invoices outstanding, short-term liabilities to employees, and other accruals arising from fees and commissions, interest, cost of materials, etc.

Notes to the Balance Sheet (CONTINUED)

83 Provisions

(€ millions)

	2018	2017
Provisions for pensions and similar obligations	801	734
Allowances for losses on financial guarantees and irrevocable credit commitments	214	180
Restructuring provisions	256	410
Other provisions	2,182	1,277
Payroll provisions	383	367
Provisions related to tax disputes (without income taxes)	28	48
Provisions for rental guarantees and dismantling obligations	154	134
Other provisions	1,617	728
Total	3,453	2,601

The effects arising from changes in the discount rate and compounding led to an increase of €3 million (previous year: €9 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)	
	2018	2017
Present value of funded pension obligations	4,859	4,809
Fair value of plan assets	(4,073)	(4,090)
Funded status	786	719
Present value of unfunded pension obligations	15	15
Net liability (net asset) of defined benefit plans	801	734
Asset ceiling	—	—
Capitalised excess cover of plan assets	—	—
Recognised pension provisions	801	734

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 (asset) 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 plan asset surplus capitalized as an asset 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 1/1/2018	4,824	(4,090)	734	—	—	734
Service cost component						
Current service cost	65	—	65	—	—	65
Past service cost	3	—	3	—	—	3
Gains and 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)	—	—	—	—	—	—
Remeasurements 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

(€ 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 1/1/2017	4,989	(4,091)	898	—	—	898
Service cost component						
Current service cost	73	—	73	—	—	73
Past service cost	—	—	—	—	—	—
Gains and losses on settlement	—	—	—	—	—	—
Net interest component						
Interest expense/(income)	94	(78)	16	—	—	16
Service costs and net interest of defined benefit plans recognised in profit or loss for the period	167	(78)	89	—	—	89
Remeasurement component						
Gains/(losses) on plan assets excluding amounts included in net interest on the net defined benefit liability (asset)	—	(27)	(27)	—	—	(27)
Actuarial gains/(losses) – demographic assumptions	—	—	—	—	—	—
Actuarial gains/(losses) – financial assumptions	(160)	—	(160)	—	—	(160)
Actuarial gains/(losses) – experience adjustments	(31)	—	(31)	—	—	(31)
Changes due to asset ceiling excluding amounts included in net interest on the net defined benefit liability (asset)	—	—	—	—	—	—
Remeasurements component of defined benefit plans recognised in OCI	(191)	(27)	(218)	—	—	(218)
Other changes						
Excess cover of plan assets	—	—	—	—	—	—
Exchange differences	(5)	5	—	—	—	—
Contributions to the plan:						
Employer	—	(44)	(44)	—	—	(44)
Plan participants	8	—	8	—	—	8
Pension payments	(146)	145	(1)	—	—	(1)
Business combinations, disposals and other	2	—	2	—	—	2
Balance at 31/12/2017	4,824	(4,090)	734	—	—	734

At the end of the reporting period, 32% (previous year: 34%) of the present value of the defined benefit obligations of €4,874 million (previous year: €4,824 million) was attributable to active employees, 23% (previous year: 22%) to former employees with vested benefit entitlements and 45% (previous year: 44%) 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:

	2018	2017
Actuarial interest rate	2.10	2.15
Rate of increase in pension commitments	1.70	1.60
Rate of increase in future compensation and over career	2.00	2.00

(in %)

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 (previous year: 2005 G) (generation tables) that allow for the probability of mortality to fall to 95% (previous year: 90%) for women and 80% (previous year: 75%) 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 31/12/2018				
	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)
Sensitivities at 31/12/2017				
	Basic value of the calculation of sensitivity	4,824		
Actuarial interest rate	Increase of 25 basis points	4,619	(205)	(4.2)
	Decrease of 25 basis points	5,040	216	4.5
Rate of increase in pension commitments	Increase of 25 basis points	4,966	142	2.9
	Decrease of 25 basis points	4,686	(138)	(2.9)
Rate of increase in future compensation/career trend	Increase of 25 basis points	4,827	3	0.1
	Decrease of 25 basis points	4,818	(6)	(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 2018 would rise by €163 million (3.3%) to €5,037 million (or by €149 million (3.1%) to €4,973 million at 31 December 2017) 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 (and 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 rent 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)

	2018	2017
Participating interests	61	56
Fixed-income securities	124	130
Properties	215	186
Mixed investment funds	3,034	3,136
Property funds	427	390
Cash and cash equivalents/term deposits	76	50
Other assets	136	142
Total	4,073	4,090

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 Pfandbriefs) 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 %)

	2018	2017
Equities	11.1	12.2
German equities	1.3	2.1
European equities	6.2	6.5
Other equities	3.6	3.6
Government bonds	32.8	29.8
Pfandbriefs	16.6	14.6
Corporate bonds	28.3	28.0
German corporate bonds	5.8	5.1
European corporate bonds	15.5	15.1
Other corporate bonds	7.0	7.8
Fund certificates	4.3	4.6
Cash and cash equivalents/term deposits	6.9	10.8
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)

	2018	2017
Participating interests	—	—
Fixed-income securities	15	15
Properties	—	—
Mixed investment funds	178	225
Property funds	—	—
Cash and cash equivalents/term deposits	46	50
Other assets	—	—
Total	239	290

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: €28 million) to defined benefit plans in the 2019 financial year.

The weighted average duration of HVB Group's defined benefit obligations at the reporting date amounted to 17.6 years (previous year: 17.5 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 €22 million for this pension plan in the 2019 financial year (previous year: €24 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 2019 financial year (previous year: €7 million).

Notes to the Balance Sheet (CONTINUED)

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 and Pensions-Sicherungs-Verein VVaG (PSVaG) recognised as current expense under payroll costs totalled €25 million during the reporting period (previous year: €27 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: €86 million).

Allowances for losses on financial guarantees and irrevocable credit commitments, restructuring provisions and other provisions

(€ millions)

	ALLOWANCES FOR LOSSES ON FINANCIAL GUARANTEES AND COMMITMENTS AND IRREVOCABLE CREDIT COMMITMENTS		RESTRUCTURING PROVISIONS ¹		OTHER PROVISIONS	
	2018	2017	2018	2017	2018	2017
Balance at 1/1	180	230	410	631	1,277	1,263
Changes on initial application of IFRS 9	20	n/a	n/a	n/a	n/a	n/a
Balance restated at 1/1	200	230	410	631	1,277	1,263
Changes in consolidated group	—	—	—	—	—	—
Changes arising from foreign currency translation	—	(1)	—	—	30	(4)
Transfers to provisions	160	151	75	5	1,042	179
Reversals	(146)	(200)	(83)	(9)	(70)	(69)
Reclassifications	—	—	(92)	(193)	27	55
Amounts used	—	—	(54)	(26)	(124)	(147)
Non-current assets or disposal groups held for sale	—	—	—	—	—	—
Other changes	—	—	—	2	—	—
Balance at 31/12	214	180	256	410	2,182	1,277

¹ The transfers and reversals are included in the income statement under 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 1/1/2018	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).

Restructuring provisions

The restructuring provisions essentially relate to measures taken by HVB Group as part of its “Transform 2019” strategy programme.

Other provisions

The payroll provisions carried under other provisions encompass long-term obligations to employees such as 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 2013, 2014, 2015, 2016, 2017 and 2018 financial years to be disbursed as of 2019 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 other provisions of €1,617 million (previous year: €728 million) include provisions of €1,535 million (previous year: €623 million) for legal risks, litigation fees and damage payments.

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.

Notes to the Balance Sheet (CONTINUED)

84 Shareholders' equity

The shareholders' equity of HVB Group at 31 December 2018 consisted of the following:

Subscribed capital

At 31 December 2018, 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 capital stock 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 2018 amounted to €9,791 million (previous year: €9,791 million).

Other reserves

Other reserves of €4,998 million (previous year: €5,289 million) predominantly contain retained earnings. The year-on-year decrease of €291 million in other reserves essentially reflects the reallocation to consolidated profit of €284 million.

Change in valuation of financial instruments

The reserves arising from changes in valuation of financial instruments recognised in equity totalled €32 million at 31 December 2018 (previous year: €80 million). The changes in the composition are the result of the first-time adoption of the IFRS 9 standard.

Upon initial adoption of IFRS 9 from 1 January 2018 onwards, the AfS reserve was reversed as the available-for-sale classification ceased to apply, which leads to a decrease of €52 million.

The hedge reserve remains in place, the amount recorded here of €28 million remains unchanged on the previous year.

Where certain securities are measured at fair value directly in equity, the difference between amortised cost and fair value for these holdings is added to the FVTOCI reserve. For the holdings reported in this category for the first time as of 1 January 2018, this difference is recorded in line "Effect of first-time adoption of IFRS 9" in the statement of changes in consolidated shareholders' equity, whereas subsequent measurement is made through other comprehensive income in the consolidated statement of total comprehensive income. There was a corresponding addition of €4 million in the reporting year.

85 Subordinated capital

The following table shows the breakdown of subordinated capital included in deposits from banks and customers and debt securities in issue:

(€ millions)

	2018	2017
Subordinated liabilities	493	523
Hybrid capital instruments	52	51
Total	545	574

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 set forth in Articles 62, para. 1a, 63 to 65, 66 para. 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)

	2018	2017
Deposits from customers	—	—
Deposits from banks	313	313
Debt securities in issue	232	261
Total	545	574

We have incurred interest expenses of €16 million (previous year: €17 million) in connection with this subordinated capital. Subordinated capital includes proportionate interest of €4 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

86 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 €45 million in the reporting period (previous year: €45 million).

Gains of €38 million were generated on the disposal of shares in fully consolidated companies in the 2018 financial year, of which €38 million was in cash. The gains on disposal generated in cash relate to the sale of the shareholding in Mobility Concept GmbH.

There were no significant acquisitions of subsidiaries or associated companies in the 2018 and 2017 financial years.

The following table shows the assets and liabilities of the fully consolidated companies sold:

(€ millions)

	2018		2017	
	ACQUIRED	SOLD	ACQUIRED	SOLD
Assets				
Cash and cash balances	—	—	—	—
Financial assets held for trading	—	—	—	—
Financial assets at FVTPL (FVO)	n/a	n/a	—	—
Financial assets at FVTPL	—	—	n/a	n/a
Financial assets at FVTOCI	—	—	n/a	n/a
Available-for-sale financial assets	n/a	n/a	—	—
Held-to-maturity investments	n/a	n/a	—	—
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 and joint ventures	—	—	—	—
Property, plant and equipment	—	—	—	—
Investment properties	—	—	—	—
Intangible assets	—	—	—	—
of which: goodwill	—	—	—	—
Tax assets	—	—	—	—
Non-current assets or disposal groups held for sale	—	457	—	1,300
Other assets	—	—	—	—
Liabilities				
Deposits from banks	—	—	—	—
Deposits from customers	—	—	—	—
Debt securities in issue	—	—	—	—
Financial liabilities held for trading	—	—	—	—
Financial liabilities at FVTPL	—	—	n/a	n/a
Hedging derivatives	—	—	—	—
Hedge adjustment of hedged items in the fair value hedge portfolio	—	—	—	—
Tax liabilities	—	—	—	—
Liabilities of disposal groups held for sale	—	442	—	1,233
Other liabilities	—	—	—	—
Provisions	—	—	—	—

Other Information

87 Events after the reporting period

In January 2019, we came to an agreement on the sale of SwanCap Partners GmbH, an associated company accounted for using the equity method. At year-end, the shares are presented in the balance sheet item "Non-current assets or disposal groups held for sale".

Furthermore, in February 2019, we came to an agreement with a buyer on the sale of the properties held by our companies Acis Immobilien- und Projektentwicklungs GmbH & Co. Oberbaum City KG and NF Objekte Berlin GmbH; these properties are likewise recorded in the balance sheet item "Non-current assets or disposal groups held for sale".

Ms Beate Dura-Kempf resigned from UniCredit Bank AG's Supervisory Board as employee representative effective from the end of 31 January 2019. Munich District Court appointed Ms Claudia Richter as employee representative on the Supervisory Board for the remaining period of her term of office, effective from 8 February 2019.

On 6 February 2019, UniCredit S.p.A. announced the reorganisation of the Group Senior Management Team of UniCredit S.p.A. This also involves the resignation of Gianni Franco Papa as General Manager of UniCredit S.p.A. Furthermore, Gianni Franco Papa will resign from his office as Chairman of UniCredit Bank AG's Supervisory Board.

88 Information regarding lease operations

HVB Group as lessor

Operating leases

HVB Group acts as a lessor under operating leases. The relevant lease agreements notably encompass real estate (land and buildings) and movable assets such as plant and office equipment, motor vehicles and industrial machinery in the reporting period. The lease agreements for real estate are based on customary market terms and contain extension options and price adjustment clauses in the form of stepped rents or index clauses; options to purchase have generally not been agreed. The lease agreements for movable assets have generally been concluded with lease periods of between four and ten years and an additional option to purchase; they do not contain any extension or price adjustment clauses.

The following table shows the breakdown of the minimum lease payments to be received on non-cancellable operating leases:

(€ millions)

	2018	2017
up to 1 year	64	65
from 1 year to 5 years	123	218
from 5 years and over	101	122
Total	288	405

The year-on-year decline in the amount of the minimum lease payments to be received in future is primarily due to the fact that the operating leases of investment properties held for sale, mainly relating to the sale of non-strategic real estate are no longer included in the figures disclosed at financial year-end (for more information on disclosure pursuant to IFRS 5 refer to the Note "Non-current assets or disposal groups held for sale").

Other Information (CONTINUED)

Finance leases

HVB Group leases mobile assets as a lessor under finance leases. This notably includes 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 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 amounts receivable from lease operations (finance leases) consist of the following:

	(€ millions)	
	2018	2017
Future minimum lease payment	1,955	1,798
+ Unguaranteed residual value	—	—
= Gross investment	1,955	1,798
– Unrealised finance income	(81)	(88)
= Net investment	1,874	1,710
– Present value of unguaranteed residual value	—	—
= Present value of future minimum lease payments	1,874	1,710

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 under a finance lease and any unguaranteed residual value accruing to the lessor.

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 present value of the minimum lease payments is calculated as the net investment in the lease less the present value of the unguaranteed residual value.

The following table shows the remaining maturity of the gross investment in the leases and the present value of the minimum lease payments:

	GROSS INVESTMENT		PRESENT VALUE OF FUTURE MINIMUM LEASE PAYMENTS	
	2018	2017	2018	2017
up to 1 year	722	669	692	635
from 1 year to 5 years	1,071	998	1,026	950
from 5 years and over	162	131	156	125
Total	1,955	1,798	1,874	1,710

The cumulative write-downs on uncollectible outstanding minimum lease payments in amounts receivable from customers under finance leases amounted to €13 million at the end of the reporting period (previous year: €12 million).

The receivables under finance leases included in the item "Loans and receivables with customers (at cost)", the gross carrying amounts, the breakdown by rating class and the development of impairments are presented below for the reporting period in accordance with the amended disclosure requirements according to IFRS 7 (see also the Note "Loans and receivables 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 (disposal in the previous stage, addition in the new stage) are also disclosed here.

Other Information (CONTINUED)

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

With regard to the previous-year figures, it should be noted that IFRS 9 was applied prospectively, which means that the previous-year figures have not been restated.

The previous-year figures of receivables contained under finance leases included in the item “Loans and receivables with customers (at cost)” are shown net of allowances for losses on loans and receivables in each case (see the Note “Loans and receivables with customers (at cost)”). These break down as follows:

(€ millions)

	2017
Properly serviced loans and receivables – carrying amount	1,630
Carrying amount before allowances	1,636
Portfolio allowances	6
Properly serviced loans and receivables past due – carrying amount	59
Carrying amount before allowances	59
Portfolio allowances	—
Non-performing loans and receivables (rating classes 8, 9 and 10) – carrying amount	21
Carrying amount before allowances	39
Specific allowances	18

Properly serviced loans and receivables past due and associated collateral, broken down by period past due

(€ millions)

	2017
Properly serviced loans and receivables past due – carrying amount	
1–30 days	57
31–60 days	2
61–90 days	—
Value of collateral	
1–30 days	12
31–60 days	1
61–90 days	—

Loans and receivables, and collateral, broken down by rating class

(€ millions)

	2017
Loans and receivables	
Not rated	—
Rating class 1–4	1,480
Rating class 5–8	209
Rating class 9–10	21
Value of collateral	
Not rated	—
Rating class 1–4	853
Rating class 5–8	117
Rating class 9–10	18

HVB Group as lessee

Operating leases

HVB Group acts as lessee under operating leases. The current obligations in the reporting period relate primarily to rental and lease agreements for real estate (land and buildings) and movable assets, mainly comprising plant, office equipment and motor vehicles. The lease agreements for real estate generally contain extension options and price adjustment clauses in the form of stepped rents or index clauses; options to purchase have been agreed in some cases. The lease agreements for movable assets have been concluded at customary market terms for lease periods of between three and nine years.

In the reporting period, the commitments arising from operating leases under lease and sublease agreements resulted in minimum lease payments of €58 million (previous year: €57 million) being recognised as expense in the income statement.

Other Information (CONTINUED)

Previously, the provision of hardware and software contained in the agreements regarding the outsourcing of information and communication technology processes to the UniCredit-wide service provider UniCredit Services S.C.p.A. (formerly UBIS) was classified as an operating lease relationship because a charged transfer of rights to use specific assets for an agreed period was assumed. However, a review performed as part of the project to implement the new lease standard IFRS 16 has revealed that fulfilment of the agreements does not depend on the use of specific assets and the agreements therefore do not constitute a lease relationship as defined in IAS 17 in conjunction with IFRIC 4. On the contrary, the full service agreements are purely service relationships. Over and above this, further issues were identified during the contract analysis that do not constitute a lease relationship and thus needed to be corrected. Correspondingly, the figures for the reporting year were determined on the basis of the new findings. For the same reason, €32 million was deducted from the figure for the previous year. The adjusted presentation of the lease agreements in the notes does not have any effect on the balance sheet or income statement.

The following table shows the cumulative minimum lease payments arising from non-cancellable operating leases to be expected in future financial years:

	(€ millions)	
	2018	2017
up to 1 year	55	61 ¹
from 1 year to 5 years	131	109
from 5 years and over	65	29
Total	251	199

¹ The effect mentioned above concerning the classification of lease agreements ultimately leads to a €34 million reduction in the cumulative minimum lease payments anticipated for the previous year to €61 million.

HVB Group has concluded sublease agreements for real estate at customary market terms, some of which include rent adjustment clauses and extension options. Payments of €7 million (previous year: €9 million) received from subleases were recognised as income in the income statement during the reporting period.

The aggregate future minimum lease payments arising from non-cancellable subleases expected to be received in the subsequent financial years amount to €19 million (previous year: €20 million).

Finance leases

The finance leases entered into by HVB Group as lessee relate to real estate (land and buildings). The lease agreements generally contain an option to purchase and price adjustment clauses.

The following table shows the reconciliation from the aggregate future minimum lease payments at the reporting date to their present value. This gives rise to the amounts payable to customers from lease operations (finance leases):

	(€ millions)	
	2018	2017
Future minimum lease payments	187	201
– Finance charge (interest included in minimum lease payments)	(14)	(19)
= Present value of future minimum lease payments	173	182

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)

	FUTURE MINIMUM LEASE PAYMENT		PRESENT VALUE OF FUTURE MINIMUM LEASE PAYMENTS	
	2018	2017	2018	2017
up to 1 year	13	13	13	13
from 1 year to 5 years	55	55	50	50
from 5 years and over	119	133	110	119
Total	187	201	173	182

The aggregate future minimum lease payments arising from non-cancellable subleases that are expected to be received in the subsequent financial years amount to €26 million (previous year: €30 million).

89 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 an active market. 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 €180 million (31 December 2017: €622 million) have been transferred between Level 1 and Level 2. At the same time, financial assets or liabilities of €2,253 million (31 December 2017: €1,679 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	—	76
	Transfer from Level 2	41	—
Financial assets at FVTPL			
	Transfer from Level 1	—	100
	Transfer from Level 2	1,928	—
Financial assets at FVTOCI			
	Transfer from Level 1	—	—
	Transfer from Level 2	280	—
Financial liabilities held for trading			
	Transfer from Level 1	—	4
	Transfer from Level 2	4	—
Financial liabilities at FVTPL			
	Transfer from Level 1	—	—
	Transfer from Level 2	—	—

The balance sheet items shown in the table were adjusted in accordance with the new balance sheet structure. The transfers disclosed relate to the comparison between the opening balance sheet as at 1 January 2018 and the balance sheet as at 31 December 2018.

Other Information (CONTINUED)

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 the 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 are determined for these non-observable parameters and applied for valuation purposes, when the annual financial statements are prepared, reflecting the prevailing market conditions. 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 valuations for 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%–199%
Equities	Market approach	Price	0%–100%
Asset-backed securities (ABS)	DCF method	Credit spread curves	7bps–1,190bps
		Residual value	20%–100%
		Default rate	0%–8%
		Prepayment rate	0%–30%
Commodity/equity derivatives	Option price model	Commodity price volatility/Equity volatility	1%–107%
		Correlation between commodity/equities	(98)%–98%
	DCF method	Dividend yields	0%–16.5%
Interest rate derivatives	DCF method	Swap interest rate	(40)bps–1000bps
		Inflation swap interest rate	0bps–230bps
	Option price model	Inflation volatility	1%–10%
		Interest rate volatility	1%–100%
		Correlation between interest rates	0%–100%
Credit derivatives	Hazard rate model	Credit spread curves	0%–28%
		Residual value	0%–54%
Currency derivatives	DCF method	Yield curves	(60)%–30%
	Option price model	FX volatility	1%–40%

The impact of changing possible appropriate alternative parameter values on the fair value (after adjustments) of the financial instruments classified as Level 3 is shown in the sensitivity analysis presented below. For portfolios at fair value through profit or loss, the positive change applying appropriate potential alternatives would be €91 million at 31 December 2018 (31 December 2017: €103 million), and the negative change €34 million (31 December 2017: minus €45 million).

The following table shows the significant sensitivity effects, broken down by the individual classes of financial instrument for the various product types:

(€ millions)

	2018		2017	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
Fixed-income securities and other debt instruments	1	(1)	1	(1)
Equities	1	(1)	—	—
Asset-backed securities	1	—	—	—
Commodity/equity derivatives	69	(17)	72	(21)
Interest rate derivatives	4	(2)	4	(1)
Credit derivatives	15	(13)	26	(22)
Currency derivatives	—	—	—	—
Total	91	(34)	103	(45)

For fixed-income securities and other debt instruments and 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 interest rates and 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)

	2018	2017
Balance at 1/1	15	9
New transactions during the period	11	12
Write-downs	4	3
Expired transactions	—	—
Retroactive change in observability	4	3
Exchange rate changes	—	—
Balance at 31/12	18	15

Other Information (CONTINUED)

The following table shows the assignment of the financial assets and financial liabilities shown in the balance sheet 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)	
	2018	2017	2018	2017	2018	2017
Financial assets recognised						
in the balance sheet at fair value						
Financial assets held for trading	18,614	24,928	48,382	49,464	1,961	1,101
thereof: derivatives	2,244	1,709	38,759	40,993	1,260	709
Financial assets at FVTPL (FVO)	n/a	6,541	n/a	14,902	n/a	13
Financial assets at FVTPL	7,003	n/a	8,805	n/a	875	n/a
Financial assets at FVTOCI	6,994	n/a	376	n/a	0	n/a
Available-for-sale financial assets ¹	n/a	5,582	n/a	1,065	n/a	22
Hedging derivatives	—	—	276	390	—	—
Financial liabilities recognised						
in the balance sheet at fair value						
Financial liabilities held for trading	8,707	7,510	38,148	46,985	1,250	1,722
thereof: derivatives	2,234	1,987	34,050	37,292	940	745
Financial liabilities at FVTPL	—	n/a	4,949	n/a	203	n/a
Hedging derivatives	1	—	597	469	—	—

¹ As at 31 December 2017, available-for-sale financial assets include financial instruments of €147 million valued at historical cost that are not included in these totals.

The following tables show the development of the financial assets and financial liabilities that are assigned to Level 3 as part of the fair value hierarchy:

(€ millions)

	FINANCIAL ASSETS HELD FOR TRADING	FINANCIAL ASSETS AT FVTPL (FVO)	FINANCIAL ASSETS AT FVTPL	FINANCIAL ASSETS AT FVTOCI	AVAILABLE-FOR-SALE FINANCIAL ASSETS	HEDGING DERIVATIVES
Balance at 1/1/2018	1,101	n/a	714	—	n/a	—
Additions						
Acquisitions	1,260	n/a	62	—	n/a	—
Realised gains ¹	115	n/a	58	—	n/a	—
Transfer from other levels	6	n/a	7	—	n/a	—
Other additions ²	30	n/a	205	—	n/a	—
Reductions						
Sale	(458)	n/a	(38)	—	n/a	—
Repayment	—	n/a	—	—	n/a	—
Realised losses ¹	(14)	n/a	(24)	—	n/a	—
Transfer to other levels	(64)	n/a	(2)	—	n/a	—
Other reductions	(15)	n/a	(107)	—	n/a	—
Balance at 31/12/2018	1,961	n/a	875	—	n/a	—

¹ In the income statement and shareholders' equity.

² Also including changes in the group of companies included in consolidation.

(€ millions)

	FINANCIAL ASSETS HELD FOR TRADING	FINANCIAL ASSETS AT FVTPL (FV0)	AVAILABLE-FOR-SALE FINANCIAL ASSETS	HEDGING DERIVATIVES
Balance at 1/1/2017	1,036	14	6	—
Additions				
Acquisitions	494	—	28	—
Realised gains ¹	1	—	—	—
Transfer from other levels	268	—	—	—
Other additions ²	7	1	21	—
Reductions				
Sale	(532)	(2)	—	—
Repayment	—	—	(29)	—
Realised losses ¹	(40)	—	(1)	—
Transfer to other levels	(110)	—	—	—
Other reductions	(23)	—	(3)	—
Balance at 31/12/2017	1,101	13	22	—

1 In the income statement and shareholders' equity.

2 Also including changes in the group of companies included in consolidation.

The additions from purchases mainly arise from the acquisition of individual illiquid corporate bonds and asset-backed securities. The majority of the other transfers to and from other levels relate to securities and results from an increase or decrease in the actual trading of the securities concerned and an associated change in the bid-offer spreads.

The following table shows the development of the financial liabilities that are assigned to Level 3 as part of the fair value hierarchy:

(€ millions)

	FINANCIAL LIABILITIES HELD FOR TRADING		FINANCIAL LIABILITIES AT FVTPL		HEDGING DERIVATIVES	
	2018	2017	2018	2017	2018	2017
Balance at 1/1	1,722	1,331	—	n/a	—	—
Reclassification of financial liabilities held for						
trading to financial liabilities at FVTPL	(551)	n/a	551	n/a	—	—
Balance at 1/1 (after reclassification)	1,171	1,331	551	n/a	—	—
Additions						
Sale	700	405	—	n/a	—	—
Issues	149	457	106	n/a	—	—
Realised losses ¹	128	58	6	n/a	—	—
Transfer from other levels	16	462	1	n/a	—	—
Other additions ²	6	1	10	n/a	—	—
Reductions						
Buy-back	(555)	(698)	(16)	n/a	—	—
Repayment	(5)	(42)	(210)	n/a	—	—
Realised gains ¹	(174)	(46)	(20)	n/a	—	—
Transfer to other levels	(159)	(198)	(218)	n/a	—	—
Other reductions	(27)	(8)	(7)	n/a	—	—
Balance at 31/12	1,250	1,722	203	n/a	—	—

1 In the income statement and shareholders' equity.

2 Also including changes in the group of companies included in consolidation.

The 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.

Other Information (CONTINUED)

90 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 values of certain financial instruments stated with their nominal values are roughly equivalent to their carrying amounts. These include the cash and cash balances as well as receivables and liabilities without a defined maturity or fixed interest rate. Such instruments are transferred at regular intervals at the amount repayable (such as the repayment of a deposit repayable on demand at the nominal amount), meaning that listed prices for identical and similar instruments are available on inactive markets. These instruments are allocated to Level 2 accordingly.

The fair value calculation for other loans and receivables for which the fair value is not roughly equivalent to the carrying amount 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.

Since the parameters used to determine the real-world probability of default (PD) and loss given default (LGD) are not immaterial when determining the fair value, and these are determined on the basis of internal procedures meaning they cannot be observed on the market, the other loans and receivables are allocated to Level 3.

Investments in joint ventures and associated companies are valued 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 exchange-traded securities and derivatives 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.

Please refer to the Note “Fair value hierarchy” for a description of the methods used to determine the fair value levels for non-listed 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 individual company valuation methods.

(€ billions)

ASSETS	CARRYING AMOUNT		FAIR VALUE	
	2018	2017	2018	2017
Cash and cash balances	20.0	36.4	20.0	36.4
Financial assets held for trading	69.0	75.5	69.0	75.5
Financial assets at FVTPL (FVO)	n/a	21.5	n/a	21.5
Financial assets at FVTPL	16.7	n/a	16.7	n/a
Financial assets at FVTOCI	7.4	n/a	7.4	n/a
Available-for-sale financial assets	n/a		n/a	
thereof measured:				
at cost	n/a	0.1	n/a	0.1
at fair value	n/a	6.7	n/a	6.7
Held-to-maturity investments	n/a	—	n/a	—
Loans and receivables with banks (at cost)	33.6	30.3	33.8	30.5
Loans and receivables with customers (at cost)	133.7	121.2	136.7	123.5
thereof: finance leases	1.8	1.7	1.8	1.7
Hedging derivatives	0.3	0.4	0.3	0.4
Total	280.7	292.1	283.9	294.6

Other Information (CONTINUED)

(€ billions)

ASSETS	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)	
	2018	2017	2018	2017	2018	2017
Financial assets not carried at fair value in the balance sheet						
Cash and cash balances	—	—	20.0	36.4	—	—
Held-to-maturity investments	n/a	—	n/a	—	n/a	—
Loans and receivables with banks (at cost)	0.5	0.5	26.9	25.5	6.4	4.5
Loans and receivables with customers (at cost)	4.3	1.1	18.5	17.2	113.9	105.2
thereof: finance leases	—	—	—	—	1.8	1.7

(€ billions)

LIABILITIES	CARRYING AMOUNT		FAIR VALUE	
	2018	2017	2018	2017
Deposits from banks	62.9	67.4	62.8	67.2
Deposits from customers	121.0	124.3	121.2	124.5
Debt securities in issue	24.4	25.6	26.3	27.6
Financial liabilities held for trading	48.1	56.2	48.1	56.2
Financial liabilities at FVTPL	5.2	n/a	5.2	n/a
Hedging derivatives	0.6	0.5	0.6	0.5
Total	262.2	274.0	264.2	276.0

(€ billions)

LIABILITIES	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)	
	2018	2017	2018	2017	2018	2017
Financial liabilities not carried at fair value in the balance sheet						
Deposits from banks	0.1	—	43.0	47.8	19.7	19.4
Deposits from customers	0.1	—	86.0	99.8	35.1	24.7
Debt securities in issue	5.9	5.9	5.9	5.9	14.5	15.8

The difference in HVB Group between the fair values and carrying amounts totals €3.2 billion (31 December 2017: €2.5 billion) for assets and €2.0 billion (31 December 2017: €2.0 billion) for liabilities. The balance of these amounts is €1.2 billion (31 December 2017: €0.5 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.

91 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 agreement 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 agreement

(€ millions)

	FINANCIAL ASSETS (GROSS)	FINANCIAL LIABILITIES NETTED IN THE BALANCE SHEET (GROSS)	RECOGNISED FINANCIAL ASSETS (NET)	AMOUNTS NOT RECOGNISED			NET AMOUNT 31/12
				EFFECTS OF MASTER NETTING ARRANGEMENTS	FINANCIAL INSTRUMENTS AS COLLATERAL	CASH COLLATERAL	
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
Derivatives ¹	60,630	(16,829)	43,801	(25,845)	(599)	(8,269)	9,088
Reverse repos ²	24,626	(4,866)	19,760	—	(19,532)	—	228
Loans and receivables ³	87,805	(1,035)	86,770	—	—	—	86,770
Total at 31/12/2017	173,061	(22,730)	150,331	(25,845)	(20,131)	(8,269)	96,086

1 Derivatives are included in "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 €2,665 million (previous year: €4,211 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)".

Financial liabilities that are netted in the balance sheet or subject to a legally enforceable master netting arrangement or similar agreement

(€ millions)

	FINANCIAL LIABILITIES (GROSS)	FINANCIAL ASSETS NETTED IN THE BALANCE SHEET (GROSS)	RECOGNISED LIABILITIES (NET)	AMOUNTS NOT RECOGNISED			NET AMOUNT 31/12
				EFFECTS OF MASTER NETTING ARRANGEMENTS	FINANCIAL INSTRUMENTS AS COLLATERAL	CASH COLLATERAL	
Derivatives ¹	55,953	(18,131)	37,822	(24,834)	(492)	(8,713)	3,783
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
Derivatives ¹	56,395	(15,902)	40,493	(25,845)	(503)	(8,660)	5,485
Repos ²	29,858	(4,866)	24,992	—	(24,803)	—	189
Liabilities ³	103,440	(1,962)	101,478	—	—	—	101,478
Total at 31/12/2017	189,693	(22,730)	166,963	(25,845)	(25,306)	(8,660)	107,152

1 Derivatives are included in the balance-sheet item "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 €1,401 million (previous year: €2,746 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".

Other Information (CONTINUED)

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 agreement, 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.

92 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 €49,405 million (previous year: €47,124 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)

	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 (FVO)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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
Available-for-sale financial assets	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Held-to-maturity investments	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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
thereof: finance leases	23	37	142	479	1,178	123	—
Hedging derivatives	—	404	808	3,632	3,817	1,509	—

(€ millions)

	2017						
	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	382	2,399	1,793	1,996	5,304	5,021	16,612
Derivatives on financial assets held for trading	43,411	—	—	—	—	—	—
Financial assets at FVTPL (FVO)	—	710	1,732	5,386	10,460	3,441	—
Financial assets at FVTPL	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Financial assets at FVTOCI	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Available-for-sale financial assets	66	1,189	29	885	3,507	2,255	102
Held-to-maturity investments	—	—	—	—	2	30	—
Loans and receivables with banks (at cost)	9,796	5,006	4,949	8,366	2,959	143	700
Loans and receivables with customers (at cost)	11,200	8,664	5,946	13,530	43,417	52,067	262
thereof: finance leases	24	58	163	660	1,732	283	100
Hedging derivatives	—	201	402	1,807	3,369	1,505	—

Breakdown of non-derivative and derivative financial liabilities by maturity bucket

(€ 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	—	—	—	—	—	—

Other Information (CONTINUED)

(€ millions)

	2017						UNDATED
	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	
Deposits from banks	12,253	17,997	6,371	5,798	20,030	5,571	21
Deposits from customers	76,232	12,758	18,681	10,206	5,208	1,705	—
Debt securities in issue	1,055	1,798	1,498	2,846	9,627	13,135	—
Financial liabilities held for trading	132	2,375	694	1,153	4,079	4,601	3,581
Financial liabilities at FVTPL	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Derivatives on financial liabilities held for trading	40,024	—	—	—	—	—	—
Hedging derivatives	—	192	384	1,729	2,750	689	—
Credit commitments and financial guarantees	68,403	—	—	—	—	—	—

93 Regulatory disclosure requirements (Disclosure Report)

HVB has been classified as a significant subsidiary of UniCredit 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 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 31 December should appear soon after the publication of the Annual Report. The reports during the year should be published soon after the regulatory COREP report is submitted 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 – InstitutsVergV) takes the form of a separate report for HVB. This is prepared once a year 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.

94 Key capital ratios (based on IFRS)

HVB Group manages its economic and supervisory capital as part of its 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 used 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 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 represents the capital ratio determined in accordance with Part Two CRR to the total eligible amount for default risk, market risk and operational risk multiplied by 12.5 (corresponds to the risk-weighted asset equivalent of these risk positions). Under Article 92 CRR, 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%.

The eligible own funds underlying the calculation of the total capital ratio in accordance with CRR consists of Tier 1 and Tier 2 capital. 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)	
	2018	2017
Tier 1 – Total core capital for solvency purposes	16,454	16,639
Shares of common stock	2,407	2,407
Additional paid-in capital, retained earnings, minority interest, own shares	16,370	15,910
Hybrid capital instruments (silent partnership certificates) without prorated interest	—	—
Other	(1,599)	(816)
Capital deductions	(724)	(862)
Tier 2 – Total supplementary capital for solvency purposes	530	698
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	356	420
Value adjustment excess for A-IRB positions	174	278
Other	—	—
Capital deductions	—	—
Total equity funds	16,984	17,337

¹ Group of consolidated companies and principles of consolidation in accordance with banking supervisory regulations.

The own funds of HVB Group in accordance with Part Two CRR amounted to €16,984 million at the reporting date (previous year: €17,337 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.

The own funds are determined on the basis of IFRS figures determined in accordance with CRR/CRD IV 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	17,751	—	—	17,751
Reconciliation to the equity funds compliant with the Capital Requirements Regulation				
Cumulative shares of preferred stock	—	—	—	—
Ineligible profit components	(520)	—	—	(520)
Ineligible minority interests under banking supervisory regulations	(3)	—	—	(3)
Diverging consolidation perimeters	(50)	—	—	(50)
Deduction of intangible assets	(157)	—	—	(157)
Hybrid capital recognised under banking supervisory regulations	—	—	—	—
Eligible portion of subordinated liabilities	—	—	356	356
Value adjustment excess (+) or shortfall (-) for A-IRB positions	—	—	174	174
Adjustments to CET1 due to prudential filters	(269)	—	—	(269)
Deductible deferred tax assets	(207)	—	—	(207)
Capital deductions which can alternatively be subject to a 1,250% risk weight	(3)	—	—	(3)
Transitional adjustments	—	—	—	—
Other effects	(88)	—	—	(88)
Equity funds compliant with the Capital Requirements Regulation (CRR)	16,454	—	530	16,984

(€ millions)

	2018 BASEL III	2017 BASEL III
Risk-weighted assets from		
on-balance-sheet counterparty risk positions	44,785	41,151
off-balance-sheet counterparty risk positions	13,294	12,135
other counterparty risk positions ¹	1,287	695
derivative counterparty risk positions	4,237	4,939
other risk exposure amounts ²	529	n/a
Total credit risk-weighted assets	64,132	58,920
Risk-weighted asset equivalent for market risk positions	9,214	11,068
Risk-weighted asset equivalent for operational risk	9,246	8,723
Total risk-weighted assets	82,592	78,711

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 %)

	2018 BASEL III	2017 BASEL III
Tier 1 capital ratio		
[Tier 1 capital/(credit risk-weighted assets + 12.5x market risk positions + 12.5x operational risk)]	19.9	21.1
CET1 capital ratio		
[Common Equity Tier 1 capital/(credit risk-weighted assets + 12.5x market risk positions + 12.5x operational risk)]	19.9	21.1
Total capital ratio		
[own funds/(credit risk-weighted assets + 12.5x market risk positions + 12.5x operational risk)]	20.6	22.0

95 Securities sale and repurchase and securities lending transactions by balance sheet item

(€ millions)

	2018		2017	
	CARRYING AMOUNT	OF WHICH: TRANSFERRED AS COLLATERAL	CARRYING AMOUNT	OF WHICH: TRANSFERRED AS COLLATERAL
Financial assets held for trading	68,957	2,114	n/a	n/a
Financial assets at FVTPL	16,683	760	n/a	n/a
Financial assets at FVTOCI	7,370	1,931	n/a	n/a
Loans and receivables with banks (at cost)	33,648	1,132	n/a	n/a
Loans and receivables with customers (at cost)	133,706	50	n/a	n/a
Total	260,364	5,987	n/a	n/a

The table contains the disclosure required for the first time under IFRS 9 of assets per balance sheet item that have been transferred to third parties but are not required to be derecognised. The previous-year figures are therefore not disclosed.

96 Contingent liabilities and other commitments

(€ millions)

	2018	2017
Contingent liabilities ¹	26,204	21,099
Guarantees and indemnities	26,204	21,099
Other commitments	49,438	47,161
Irrevocable credit commitments	49,405	47,124
Other commitments ²	33	37
Total	75,642	68,260

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 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.

Other Information (CONTINUED)

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 €11,421 million (previous year: €10,293 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.

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 €64 million at the reporting date (previous year: €48 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 €22 million at the reporting date (cumulative amount in the previous year: €15 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 up. 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 €63 million at year-end 2018 after €112 million at year-end 2017.

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 €29 million at the reporting date (previous year: €33 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 shares in 57 partnerships (previous year: 76).

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.

Contingent liabilities payable to related parties

(€ millions)

	2018	2017
Non-consolidated affiliated companies	1,526	1,229
of which:		
UniCredit S.p.A.	745	486
Sister companies	781	743
Subsidiaries	—	—
Joint ventures	46	23
Associated companies	—	—
Other participating interests	132	126
Total	1,704	1,378

97 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 by the extent to which HVB's shareholding decreases in the future with regard to such commitments of the company that did not arise until after HVB's shareholding decreased. Where HVB is no longer a shareholder in the company listed above, our commitment arising from the above Statement of Responsibility ends on the date on which our holding ceased with regard to such liabilities of the company that did not arise until 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)

98 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.

	2018	2017
Number of unconsolidated ABS vehicles (investor positions only)	244	292

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.

	2018	2017
Number of unconsolidated repackaging vehicles	2	2
Aggregate total assets of unconsolidated repackaging vehicles (€ millions)	22	22
Nominal value of the securities issued by unconsolidated repackaging vehicles (€ millions)	22	22

Funding vehicles for customers

Customers use these vehicles as a source of funding. These funding vehicles buy current receivables or leasing 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.

	2018	2017
Number of unconsolidated funding vehicles for customers	33	37
Aggregate total assets of unconsolidated funding vehicles for customers (€ millions)	5,922	6,322
Nominal value of the securities issued by unconsolidated funding vehicles for customers (€ millions)	5,922	6,322

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.

	2018	2017
Number of unconsolidated investment funds classified as structured entities	733	1,214
thereof: managed by HVB Group	45	26
Aggregate net asset value (including minority interests) of the investment funds classified as structured entities (€ millions)	556,171	846,200
thereof: managed by HVB Group	1,765	1,030

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 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.

	2018	2017
Number of other structured entities	20	26
Aggregate total assets (€ millions)	1,829	2,176

Other Information (CONTINUED)

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)

	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 fair value through profit or loss (FVO)	n/a	n/a	n/a	n/a	n/a
Financial assets at FVTPL	33	—	—	32	2
Financial assets at FVTOCI	—	—	—	—	—
Available-for-sale financial instruments	n/a	n/a	n/a	n/a	n/a
Held-to-maturity investments	n/a	n/a	n/a	n/a	n/a
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

(€ millions)

	2017				
	ABS VEHICLES (INVESTOR POSITIONS)	REPACKAGING VEHICLES	FUNDING VEHICLES FOR CUSTOMERS	SOME INVESTMENT FUNDS	OTHER STRUCTURED ENTITIES
Assets	7,047	2	6,183	3,961	203
Financial assets held for trading	457	2	—	2,794	10
Financial assets at fair value through profit or loss (FVO)	12	—	—	—	—
Financial assets at FVTPL	n/a	n/a	n/a	n/a	n/a
Financial assets at FVTOCI	n/a	n/a	n/a	n/a	n/a
Available-for-sale financial instruments	6	—	41	85	—
Held-to-maturity investments	23	—	—	—	—
Loans and receivables with banks (at cost)	—	—	—	—	—
Loans and receivables with customers (at cost)	6,549	—	6,142	1,082	193
Hedging derivatives	—	—	—	—	—
Others assets	—	—	—	—	—
Liabilities	9	—	41	2,992	72
Deposits from banks	—	—	—	—	—
Deposits from customers	—	—	40	2,497	54
Debt securities in issue	—	—	—	6	—
Financial liabilities held for trading	9	—	—	489	—
Financial liabilities at FVTPL	n/a	n/a	n/a	n/a	n/a
Hedging derivatives	—	—	—	—	—
Other liabilities	—	—	—	—	—
Provisions	—	—	1	—	18
Off-balance-sheet positions	38	—	1,311	93	100
Irrevocable credit commitments and other commitments	38	—	1,311	86	54
Guarantees	—	—	—	7	46
Maximum exposure to loss	7,085	2	7,494	4,054	303

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 €11 million (previous year: €10 million) from charges and management fees was generated during the reporting period on investment funds managed by the Bank, of which €7 million (previous year: €5 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 €4,312 million (previous year: €5,664 million) were outstanding at 31 December 2018. The total assets of the multi-seller conduit Arabella Finance DAC at the reporting date amounted to €4,317 million (previous year: €5,670 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 €1,698 million (previous year: €3,175 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.

99 Trust business

(€ millions)

	2018	2017
Trust assets	4,416	2,788
Loans and receivables with banks	—	—
Loans and receivables with customers	4	137
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	4,412	2,650
Remaining trust assets	—	1
Trust liabilities	4,416	2,788
Deposits from banks	4	137
Deposits from customers	4,412	2,650
Debt certificates including bonds	—	—
Other liabilities	—	1

100 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 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 security 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 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)

101 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, security 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 €37.3 billion (previous year: €41.6 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)

	2018	2017
Financial assets held for trading	10,300	17,832
Financial assets at FVTPL (FVO)	n/a	7,818
Financial assets at FVTPL	6,241	n/a
Financial assets at FVTOCI	4,936	n/a
Available-for-sale financial assets	n/a	3,000
Held-to-maturity investments	n/a	—
Loans and receivables with banks (at cost)	977	—
Loans and receivables with customers (at cost)	10,971	11,154
Property, plant and equipment	—	—
Non-recognised received securities pledged on:		
Pledged securities from non-capitalised securities lending transactions	9,266	9,167
Received collateral pledged	15,127	13,084
Total	57,818	62,055

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)

	2018	2017
Deposits from banks	38,416	36,025
Deposits from customers	6,337	8,880
Debt securities in issue	—	—
Financial liabilities held for trading	5,039	9,242
Financial liabilities at FVTPL	—	n/a
Contingent liabilities	—	—
Obligations to return non-expensed, borrowed securities	8,026	7,908
Total	57,818	62,055

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)

	2018	2017
Aggregate carrying amount of assets pledged as security	57,818	62,055
of which: may be pledged/sold on	33,694	32,325

102 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 €27.6 billion (previous year: €27.2 billion).

HVB Group has actually pledged or sold on €15.1 billion (previous year: €13.1 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.

103 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 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 €546 million for these services in the reporting year (previous-year period: €532 million). This was offset by income of €32 million (previous-year period: €23 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 €114 million for these services in the reporting year (previous-year period: €116 million).

Transactions involving related parties are always 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.

Emoluments paid to members of the Management Board and Supervisory Board

(€ thousands)

	2018						TOTAL
	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	
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

Other Information (CONTINUED)

(€ thousands)

	2017						TOTAL	
	SHORT-TERM COMPONENTS		LONG-TERM INCENTIVES			POST-EMPLOYMENT BENEFITS		TERMINATION BENEFITS
	FIXED SALARY	SHORT-TERM PERFORMANCE-RELATED CASH REMUNERATION	LONG-TERM PERFORMANCE-RELATED CASH REMUNERATION	SHARE-BASED REMUNERATION				
Members of the Management								
Board of UniCredit Bank AG	4,802	506	1,342	1,164	1,479	—	9,293	
Members of the Supervisory								
Board of UniCredit Bank AG for								
Supervisory Board activities	790	—	—	—	—	—	790	
Members of the Supervisory								
Board of UniCredit Bank AG for								
activities as employee								
representatives	386	31	—	—	30	—	447	
Former members of the								
Management Board of UniCredit								
Bank AG and their surviving								
dependants	159	58	342	383	1,347	—	2,289	

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. Seven members of the Management Board took part in the employer-financed, fund-linked pension scheme for executives (known as AgfA) in 2018. The Bank will provide/has provided 35% of the fixed salary contributions (reporting period: €978 thousand, previous-year period: €1,237 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 €3 thousand were recognised in the reporting year (previous-year period: €24 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 €137,561 thousand (previous-year period: €140,119 thousand).

The compensation paid to retired members of the Management Board and their surviving dependants amounted to €8,740 thousand in the reporting period after the transfer of a large part of the pension commitments to HVB Trust Pensionsfonds AG (previous-year period: €1,347 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	2018	2017
Number of shares granted	1,445	248,064
Number of shares committed after capital measures in 2017	—	49,495
Fair value per share on grant date (€)	17.088	14.030

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)

	2018			2017		
	LOANS AND RECEIVABLES	CONTINGENT LIABILITIES ASSUMED	LIABILITIES	LOANS AND RECEIVABLES	CONTINGENT LIABILITIES ASSUMED	LIABILITIES
Members of the Management Board of UniCredit Bank AG	2,235	10	3,166	2,401	10	8,156
Members of the Supervisory Board of UniCredit Bank AG	—	—	4,804	299	—	4,296
Members of the Executive Management Committee ¹	—	—	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 0.491% and 4.14% falling due in the period from 2019 to 2037. An overdraft facility at an interest rate of 10.63% was granted to a member of the Supervisory Board.

All banking transactions involving the group of people listed were conducted at customary market terms with the usual collateral.

104 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:

	2018	2017
Fee for	12	11
Auditing of the financial statements	10	8
Other auditing services	2	3
Tax consulting services	—	—
Other services	—	—

Other Information (CONTINUED)

105 Employees

Average number of people employed by us

	2018	2017
Employees (excluding trainees)	13,652	15,265
Full-time	9,213	10,774
Part-time	4,439	4,491
Trainees	328	352

The staff's length of service was as follows:

(in %)

	WOMEN	MEN	2018	2017
	(EXCLUDING TRAINEES)		TOTAL	TOTAL
Staff's length of service				
31 years or more	15.5	14.9	15.2	14.2
from 21 years to less than 31 years	35.5	25.1	30.6	31.0
from 11 years to less than 21 years	27.1	26.4	26.8	26.5
less than 11 years	21.9	33.6	27.4	28.3

106 Offices

Offices, broken down by region

	1/1/2018	ADDITIONS		REDUCTIONS		CHANGE IN CONSOLIDATED GROUP	31/12/2018
		NEW OPENINGS		CLOSURES	CONSOLIDATIONS		
Germany							
Baden-Wuerttemberg	15	—	—	—	—	—	15
Bavaria	322	1	1	1	1	(34)	287
Berlin	9	—	—	—	1	—	8
Brandenburg	7	—	—	—	—	—	7
Bremen	4	—	—	—	—	—	4
Hamburg	16	—	—	—	—	—	16
Hesse	11	—	—	—	—	—	11
Lower Saxony	17	—	1	—	—	(4)	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	488	1	2	2	2	(38)	447
Other regions							
Africa	1	—	—	—	—	—	1
Americas	11	—	—	—	—	(2)	9
Asia	7	—	—	—	—	(1)	6
Europe	46	1	—	—	—	(7)	40
Subtotal	65	1	—	—	—	(10)	56
Total	553	2	2	2	2	(48)	503

Other Information (CONTINUED)

107 List of holdings

The separate list of holdings drawn up in compliance with Section 313 (2) HGB, contains all joint ventures, and affiliated and associated companies 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.

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %		CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY			
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	35 4,327
	Acis Immobilien- und Projektentwicklungs GmbH & Co. Parkkolonnaden KG ³	Grünwald	100.0	100.0	EUR	34 (12)
	Acis Immobilien- und Projektentwicklungs GmbH & Co. Stuttgart Kronprinzstraße KG ³	Grünwald	100.0	100.0	EUR	42 318
	AGROB Immobilien AG (share of voting rights: 75.0%) ^{4,7}	Ismaning	52.7	52.7	EUR	26,720 2,399
	Argentaurus Immobilien-Vermietungs- und Verwaltungs GmbH ³	Munich	100.0	100.0	EUR	793 ²
	Atlanterra Immobilienverwaltungs GmbH	Munich	90.0	90.0	EUR	(36,362) 950
	A&T-Projektentwicklungs GmbH & Co. Potsdamer Platz Berlin KG ³	Munich	100.0	100.0	EUR	(37,240) 0
	Bertram Projekt Unodecima Technikzentrum GmbH & Co. KG	Munich	94.0	94.0	EUR	(2,178) 114
	BIL Leasing-Fonds GmbH & Co VELUM KG (share of voting rights: 66.7%, of which 33.3% held indirectly)	Grünwald	100.0		EUR	(2) 0
	BIL Leasing-Fonds Verwaltungs-GmbH	Grünwald	100.0	100.0	EUR	2,243 1,731
	Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Alpha Management KG ³	Munich	100.0	100.0	EUR	(22,880) 0
	Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Beta Management KG ³	Munich	100.0	100.0	EUR	(53,477) 0
	Delpha Immobilien- und Projektentwicklungs GmbH & Co. Großkugel Bauabschnitt Gamma Management KG ³	Munich	100.0	100.0	EUR	(59,493) 0
	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 1,341
	HAWA Grundstücks GmbH & Co. oHG Hotelverwaltung ³	Munich	100.0	100.0	EUR	276 779
	HAWA Grundstücks GmbH & Co. oHG Immobilienverwaltung ³	Munich	100.0	100.0	EUR	54 455
	H.F.S. Immobilienfonds GmbH	Ebersberg	100.0	100.0	EUR	26 ²
	H.F.S. Leasingfonds Deutschland 1 GmbH & Co. KG (Immobilienleasing) ³	Munich	99.4	99.4	EUR	22,519 2,763
	H.F.S. Leasingfonds GmbH	Ebersberg	100.0	100.0	EUR	2 (34)
	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	2 0
	HVB Capital LLC III	Wilmington	100.0		USD	1,107 90
	HVB Capital Partners AG ³	Munich	100.0		EUR	12,671 ^{1.3}
	HVB Funding Trust II	Wilmington	100.0		GBP	2 0
	HVB Gesellschaft für Gebäude mbH & Co. KG ³	Munich	100.0		EUR	871,401 63,567
	HVB Hong Kong Limited	Hong Kong	100.0		USD	2,273 (2,329)
	HVB Immobilien AG ³	Munich	100.0		EUR	86,644 ^{1.4}
	HVB Projekt GmbH ³	Munich	100.0	94.0	EUR	72,151 ²

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %			EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY		
HVB Secur GmbH ³	Munich	100.0		EUR	126	^{1.5}
HVB Tecta GmbH ³	Munich	100.0	94.0	EUR	1,751	²
HVB Verwa 4 GmbH ³	Munich	100.0		EUR	10,132	^{1.6}
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	(29,022)
Hypo-Bank Verwaltungszentrum GmbH & Co. KG						
Objekt Arabellastraße ³	Munich	100.0	100.0	EUR	26	(3,706)
Interra Gesellschaft für Immobilienverwaltung mbH ³	Munich	100.0	93.9	EUR	51	²
Life Management Erste GmbH	Munich	100.0	100.0	EUR	24	²
MERKURHOF Grundstücksgesellschaft						
mit beschränkter Haftung ³	Munich	100.0		EUR	16,692	^{1.7}
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
Ocean Breeze Asset GmbH & Co. KG	Bremen	100.0	100.0	EUR	9	44
Ocean Breeze Energy GmbH & Co. KG ³	Bremen	100.0	100.0	EUR	(12,480)	28,092
Ocean Breeze GmbH	Bremen	100.0	100.0	EUR	30	26
Omnia Grundstücks-GmbH & Co. Objekt Haidenauplatz KG ³	Munich	100.0	94.0	EUR	26	(92)
Omnia Grundstücks-GmbH & Co. Objekt Perlach KG ³	Munich	100.0	100.0	EUR	3,233	(781)
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)	0
Othmarschen Park Hamburg GmbH & Co. Gewerbepark KG ³	Munich	100.0	100.0	EUR	(44,083)	0
Perikles 20092 Vermögensverwaltung GmbH	Bremen	100.0	100.0	EUR	37	25
Portia Grundstücks-Verwaltungsgesellschaft mbH & Co.						
Objekt KG ³	Munich	100.0	100.0	EUR	500,014	36,120
Rolin Grundstücksplanungs- und						
-verwaltungsgesellschaft mbH	Munich	100.0	100.0	EUR	60	13
Salvatorplatz-Grundstücksgesellschaft						
mbH & Co. oHG Saarland ³	Munich	100.0	100.0	EUR	1,534	874
Salvatorplatz-Grundstücksgesellschaft						
mbH & Co. OHG Verwaltungszentrum ³	Munich	100.0	100.0	EUR	2,301	13,306
Selfoss Beteiligungsgesellschaft mbH ³	Grünwald	100.0	100.0	EUR	25	²
Simon Verwaltungs-Aktiengesellschaft i.L.	Munich	<100.0		EUR	2,994	(27)
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	(30,973)	950
Spree Galerie Hotelbetriebsgesellschaft mbH ³	Munich	100.0	100.0	EUR	249	²
Structured Invest Société Anonyme	Luxembourg	100.0		EUR	7,283	221
T & P Frankfurt Development B.V.	Amsterdam	100.0	100.0	EUR	(7,273)	(9)
T & P Vastgoed Stuttgart B.V.	Amsterdam	87.5	87.5	EUR	(15,496)	(2)
TERRENO Grundstücksverwaltung GmbH & Co.						
Entwicklungs- und Finanzierungsvermittlungs-KG ³	Munich	75.0	75.0	EUR	(268,579)	0
TIVOLI Grundstücks-Aktiengesellschaft	Munich	99.7	99.7	EUR	12,959	5,443
Transterra Gesellschaft für Immobilienverwaltung mbH ³	Munich	100.0	93.9	EUR	26	²
TRICASA Grundbesitz Gesellschaft						
mbH & Co. 1. Vermietungs KG ³	Munich	100.0	100.0	EUR	11,174	848
TRICASA Grundbesitzgesellschaft						
des bürgerlichen Rechts Nr. 1	Munich	100.0	100.0	EUR	23,637	36
UniCredit Beteiligungs GmbH	Munich	100.0		EUR	1,175	^{1.8}
UniCredit Capital Markets LLC	New York	100.0	100.0	USD	136,233	9,200
UniCredit Direct Services GmbH ³	Munich	100.0		EUR	933	^{1.9}

Other Information (CONTINUED)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %			CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY				
UniCredit Leasing Aviation GmbH	Hamburg	100.0	100.0		EUR	27,489	796
UniCredit Leasing GmbH ⁷	Hamburg	100.0			EUR	452,026	1.10
UniCredit U.S. Finance LLC	Wilmington	100.0			USD	115,645	213
Vermietungsgesellschaft mbH & Co.							
Objekt MOC KG ³	Munich	89.3	89.3		EUR	(96,693)	1,821
Verwaltungsgesellschaft Katharinenhof mbH ³	Munich	100.0			EUR	708	1.11
V.M.G. Vermietungsgesellschaft mbH	Munich	100.0	100.0		EUR	26	2
Wealth Management Capital Holding GmbH	Munich	100.0			EUR	20,539	1.12
WealthCap Entity Service GmbH	Munich	100.0	100.0		EUR	564	(6)
WealthCap Equity GmbH	Munich	100.0	100.0		EUR	(6,663)	(7,133)
WealthCap Equity Management GmbH	Munich	100.0	100.0		EUR	1,394	1,369
WealthCap Fonds GmbH	Munich	100.0	100.0		EUR	2,243	1,731
WealthCap Immobilien 1 GmbH & Co. KG	Munich	100.0	100.0		EUR	(156)	215
WealthCap Immobilien 2 GmbH & Co. KG	Munich	100.0	100.0		EUR	1,159	1,015
WealthCap Immobilienfonds Deutschland 36							
Komplementär GmbH	Grünwald	100.0	100.0		EUR	(285)	25
WealthCap Immobilienfonds Deutschland 38							
Komplementär GmbH	Grünwald	100.0	100.0		EUR	(77)	(35)
WealthCap Initiatoren GmbH	Munich	100.0	100.0		EUR	3,736	2,158
WealthCap Investment Services GmbH	Munich	100.0	90.0		EUR	5,101	2
WealthCap Investments, Inc.	Wilmington	100.0	100.0		USD	1,864	15
WealthCap Investorenbetreuung GmbH	Munich	100.0	100.0		EUR	155	2
WealthCap Kapitalverwaltungsgesellschaft mbH	Munich	100.0	100.0		EUR	10,000	2
WealthCap Leasing GmbH	Grünwald	100.0	100.0		EUR	(91)	54
WealthCap Los Gatos 131 Albright Way L.P.	Wilmington	100.0	100.0		USD	2,918	4,584
WealthCap Management Services GmbH	Grünwald	100.0	100.0		EUR	7,254	6,032
WealthCap Objekt-Vorrat 20 GmbH & Co. KG	Munich	100.0	100.0		EUR	353	9,243
WealthCap Objekt-Vorrat 21 GmbH & Co. KG	Munich	100.0	100.0		EUR	(143)	(73)
WealthCap PEIA Komplementär GmbH	Grünwald	100.0	100.0		EUR	28	(29)
WealthCap PEIA Management GmbH	Munich	100.0	94.0		EUR	2,882	1,627
WealthCap Portland Park Square, L.P.	Wilmington	100.0	100.0		USD	(940)	(187)
WealthCap Real Estate Management GmbH	Munich	100.0	100.0		EUR	108	2
WealthCap Vorrats-2 GmbH	Grünwald	100.0	100.0		EUR	26	0
1.1.2 Non-consolidated subsidiaries⁵							
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	Ebersberg	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	(16,872)	0
ANWA Gesellschaft für Anlagenverwaltung mbH	Munich	95.0	93.9				
Apir Verwaltungsgesellschaft mbH & Co.							
Immobilien- und Vermietungs KG	Munich	100.0	100.0		EUR	(33,657)	0
Arena Stadion Beteiligungsverwaltungs-GmbH	Munich	100.0					
ARRONDA Immobilienverwaltungs GmbH	Munich	100.0	100.0		EUR	(40,601)	975
A&T-Projektentwicklungs-Verwaltungs GmbH	Munich	100.0	100.0				
Aufbau Dresden GmbH	Munich	100.0	100.0		EUR	(23,944)	0
Bayerische Wohnungsgesellschaft für Handel und Industrie, Gesellschaft mit beschränkter Haftung	Munich	100.0	100.0		EUR	294	2
B.I. International Limited	George Town	100.0	100.0		EUR	(254)	531
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				
BV Grundstücksentwicklungs-GmbH	Munich	100.0	100.0		EUR	511	2
CUMTERRA Gesellschaft für Immobilienverwaltung mbH	Munich	100.0	100.0		EUR	26	2

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %		CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY			
Erste Onshore Windkraft Beteiligungsgesellschaft mbH & Co.						
Windpark Grefrath KG (share of voting rights: 68.3%)	Oldenburg	68.5	68.5			
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			
GCCS Golfanlagen Errichtungs- und Verwaltungs GmbH	Munich	100.0	100.0	EUR	26	²
GIMMO Immobilien-Vermietungs- und Verwaltungs GmbH	Munich	100.0	100.0	EUR	26	²
Golf- und Country Club Seddiner See Immobilien GmbH	Munich	100.0	100.0	EUR	(15,507)	0
Großkugel Immobilien- und Projektentwicklungs GmbH	Munich	100.0	100.0	EUR	(3,354)	²
H.F.S. Immobilienfonds Deutschland 1 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 3 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 4 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 6 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 7 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 8 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 9 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 10 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 11 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 12 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 15 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 16 Komplementär GmbH	Grünwald	100.0	100.0			
H.F.S. Immobilienfonds Deutschland 18 Komplementär GmbH	Grünwald	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 Beteiligungs B.V.	The Hague	100.0	100.0			
H.F.S. Immobilienfonds Europa 3 Komplementär GmbH	Grünwald	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	Grünwald	100.0	100.0			
H.F.S. Leasingfonds Deutschland 7 Komplementär GmbH	Grünwald	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			
H.F.S. Zweitmarktfonds Deutschland 3 GmbH & Co. KG	Munich	100.0	100.0			
H.F.S. Zweitmarktfonds Deutschland 4 GmbH & Co. KG	Munich	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 Investments (UK) Limited	George Town	100.0				
HVB London Investments (AVON) Limited	London	100.0				
HVB Services South Africa (Proprietary) Limited	Johannesburg	100.0				
HVBFF Internationale 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 & Investition GmbH & Co Erste KG	Munich	100.0	100.0			
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			

Other Information (CONTINUED)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %			CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY				
Life Britannia Management GmbH	Grünwald	100.0	100.0				
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)	0	
Quinterra Gesellschaft für Immobilienverwaltung mbH	Munich	100.0	100.0	EUR	26	²	
Redstone Mortgages Limited	London	100.0		GBP	973	26,659	
RHOTERRA Gesellschaft für Immobilienverwaltung mbH	Munich	100.0	93.9	EUR	26	²	
Roncasa Immobilien-Verwaltungs GmbH	Munich	100.0	100.0	EUR	(36,170)	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)	0	
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					
UniCredit CAIB Securities UK Ltd.	London	100.0					
VCI Volta Center Immobilienverwaltungs GmbH	Munich	100.0	100.0	EUR	(21,097)	950	
VereinWest Overseas Finance (Jersey) Limited	St. Helier	100.0					
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	Grünwald	100.0	100.0				
WealthCap Europa Immobilien Siebte Objekte							
Österreich Komplementär GmbH	Munich	100.0	100.0				
WealthCap Europa Immobilien Verwaltungs GmbH	Munich	100.0	100.0				
WealthCap Immobilien Deutschland 39 Komplementär GmbH	Grünwald	100.0	100.0				
Wealthcap Immobilien Deutschland 42 GmbH & Co. KG	Munich	100.0	100.0				
WealthCap Immobilienfonds Deutschland 36 GmbH & Co. KG	Munich	100.0	100.0				
WealthCap Immobilienfonds							
Deutschland 37 Komplementär GmbH	Grünwald	100.0	100.0				
WealthCap Immobilien Nordamerika 16 Komplementär GmbH	Grünwald	100.0	100.0				
WealthCap Immobilien Nordamerika 17 Komplementär GmbH	Grünwald	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	Grünwald	100.0	100.0				
WealthCap Immobilien 41 Komplementär GmbH	Grünwald	100.0	100.0				
Wealthcap Immobilien 42 Komplementär GmbH	Grünwald	100.0	100.0				
WealthCap Los Gatos 121 Albright Way GP, Inc.	Wilmington	100.0	100.0				

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %		CURRENCY	EQUITY CAPITAL	NET PROFIT
		TOTAL	OF WHICH HELD INDIRECTLY		in thousands of currency units	in thousands of currency units
WealthCap Los Gatos 131 Albright Way GP, Inc.	Wilmington	100.0	100.0	USD	(3,161)	(1,123)
WealthCap Management, Inc.	Wilmington	100.0	100.0			
WealthCap Mountain View GP, Inc.	Georgia	100.0	100.0			
Wealthcap Objekt Dresden GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt Nürnberg GmbH & Co. KG	Munich	100.0	100.0			
WealthCap Objekt-Vorrat 13 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Objekt-Vorrat 17 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Objekt-Vorrat 20 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Objekt-Vorrat 21 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Objekt-Vorrat 24 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 25 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 25 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Objekt-Vorrat 26 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Objekt-Vorrat 26 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Portfolio 3 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Portfolio 4 GmbH & Co. KG	Grünwald	100.0	100.0			
Wealthcap Portfolio 4 Komplementär GmbH	Grünwald	100.0	100.0			
Wealthcap Portfolio 5 GmbH & Co. KG	Grünwald	100.0	100.0			
Wealthcap Portfolio 5 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Portland Park Square GP Inc.	Atlanta	100.0	100.0	USD	(1,456)	(1,464)
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 3 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Spezial 4 Komplementär GmbH	Munich	100.0	100.0			
WealthCap Spezial 5 Komplementär GmbH	Grünwald	100.0	100.0			
WealthCap Spezial-AIF 1 Komplementär GmbH	Munich	100.0	100.0			
Wealthcap Spezial Büro 6 GmbH & Co. geschlossene Investment KG	Munich	100.0	100.0			
Wealthcap Spezial Büro 6 Komplementär GmbH	Grünwald	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	Grünwald	100.0	100.0			
WealthCap Stiftungstreuhand GmbH	Munich	100.0	100.0			
WealthCap USA Immobilien Verwaltungs GmbH	Munich	100.0	100.0			
WealthCap Vorrats-1 GmbH	Grünwald	100.0	100.0			
Wealthcap Wohnen Spezial-AIF 1 GmbH & Co. geschlossene Investment KG	Munich	100.0	100.0			
WealthCap Wohnen 1 GmbH & Co. KG	Munich	100.0	100.0			
Wealthcap Wohnen 1a GmbH & Co. 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	Grünwald	100.0	100.0			
Weicker S.à r.l.	Luxembourg-Findel	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.	Luxembourg	0	EUR	31
Elektra Purchase No. 32 S.A. – Compartment 2	Luxembourg	0	EUR	<1
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. 48 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. 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)	Pullach	6.1	EUR	68,272
H.F.S. Leasingfonds Deutschland 7				
GmbH & Co. KG (held indirectly)	Munich	<0.1	EUR	56,605
HVB Funding Trust	Wilmington	0	USD	0
HVB Funding Trust III	Wilmington	0	USD	0
MOC Verwaltungs GmbH & Co.				
Immobilien KG (held indirectly) ^{4, 6}	Munich	23.0	EUR	5,113
Ocean Breeze Finance S.A. – Compartment 1	Luxembourg	0	EUR	0
Rosenkavalier 2008 GmbH	Frankfurt am Main	0	EUR	25
Rosenkavalier 2015 UG	Frankfurt am Main	0	EUR	8

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %		CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY			
2 Joint ventures						
Minor joint ventures⁵						
Heizkraftwerk Cottbus Verwaltungs GmbH i.L.	Cottbus	33.3		EUR	354	245
Heizkraftwerke-Pool Verwaltungs-GmbH	Munich	33.3		EUR	119	863
WealthCap Portfolio Finanzierungs- GmbH & Co. KG (share of voting rights: 50.0%)	Grünwald	—		EUR	71,686	2,233
3 Associated companies						
3.1 Associated companies valued at equity						
Adler Funding LLC ⁴	Dover	32.8		USD	(16,128)	(29,160)
Comtrade Group B.V. ^{4,7}	Rotterdam	21.1	21.1	EUR	53,673	6,613
Nautilus Tankers Limited ⁴	Valletta	45.0	45.0	USD	36,333	4,390
paydirekt Beteiligungsgesellschaft privater Banken mbH	Berlin	24.0		EUR	598	(5,517)
SwanCap Partners GmbH (share of voting rights: 49.0%) ⁴	Munich	75.3		EUR	7,147	2,727
3.2 Minor associated companies⁵						
MOC Verwaltungs GmbH	Munich	23.0	23.0			
4 Further Holdings according to Section 271 (1) HGB⁵						
4.1 Banks and financial institutions						
AKA Ausfuhrkredit-Gesellschaft mbH	Frankfurt am Main	15.4		EUR	238,732	11,080
BBB Bürgschaftsbank zu Berlin-Brandenburg GmbH	Berlin	4.3		EUR	11,526	278
BGG Bayerische Garantiegesellschaft mbH für mittelständische Beteiligungen	Munich	10.5		EUR	51,389	2,653
Bürgschaftsbank Brandenburg GmbH	Potsdam	7.8		EUR	29,088	1,486
Bürgschaftsbank Mecklenburg-Vorpommern GmbH	Schwerin	9.1		EUR	16,562	212
Bürgschaftsbank Nordrhein-Westfalen GmbH – Kreditgarantiegemeinschaft –	Düsseldorf	0.6		EUR	35,440	1,282
Bürgschaftsbank Rheinland-Pfalz GmbH	Mainz	1.4		EUR	16,605	79
Bürgschaftsbank Saarland Gesellschaft mit beschränkter Haftung, Kreditgarantiegemeinschaft für den Handel, Handwerk und Gewerbe	Saarbrücken	1.3		EUR	4,313	19
Bürgschaftsbank Sachsen-Anhalt GmbH	Magdeburg	8.9		EUR	15,612	454
Bürgschaftsbank Sachsen GmbH (share voting rights: 5.4%)	Dresden	4.7		EUR	42,015	1,645
Bürgschaftsbank Schleswig-Holstein GmbH	Kiel	5.4		EUR	40,182	971
Bürgschaftsbank Thüringen GmbH	Erfurt	8.7		EUR	25,946	642
Bürgschaftsgemeinschaft Hamburg GmbH	Hamburg	10.5		EUR	25,243	744
MCB Bank Limited	Lahore	>0.0		PKR	136,493,057	14,648,799
Niedersächsische Bürgschaftsbank GmbH	Hanover	3.0		EUR	26,397	1,934
Saarländische Investitionskreditbank AG	Saarbrücken	3.3		EUR	65,474	1,009
4.2 Other companies						
Acton GmbH & Co. Heureka II KG	Munich	8.9		EUR	72,257	(1,016)
Amstar Liquidating Trust (share voting rights: 0.0%)	New York	>0.0	>0.0			
Babcock & Brown Limited	Sydney	3.2				
Bavaria Servicos de Representacao Comercial Ltda.	Sao Paulo	>0.0	>0.0	BRL	6,500	868
BayBG Bayerische Beteiligungsgesellschaft mbH ⁸	Munich	22.5		EUR	232,843	6,129
Bayerischer BankenFonds GbR ⁹	Munich	25.6				
BGN GmbH & Co. KG	Wiesbaden	6.0	6.0			

Other Information (CONTINUED)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %			EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY		
BIL Leasing-Fonds GmbH & Co. Altstadtssanierung Freiberg KG (share voting rights: 0.3%)	Grünwald	—	—	EUR	459	886
BIL Leasing-Fonds GmbH & Co HONOR KG i.L. (share voting rights: 0.1%)	Grünwald	—	—			
Bil Leasing-Fonds GmbH & Co Objekt Verwaltungssitz Bankenverband KG (share voting rights: 0.2%)	Grünwald	—	—	EUR	824	1,184
BIL Leasing GmbH & Co Objekte Freiberg KG	Grünwald	6.0	6.0			
BIL Leasing GmbH & Co Objekt Verwaltungsgebäude Halle KG (share voting rights: 0.1%)	Grünwald	—	—			
BioM Aktiengesellschaft Munich Bio Tech Development	Planegg	8.5		EUR	2,158	88
Blue Capital Equity I GmbH & Co. KG i.L.	Munich	>0.0	>0.0	EUR	903	(428)
Blue Capital Equity II GmbH & Co. KG i.L.	Munich	>0.0	>0.0	EUR	1,652	(160)
Blue Capital Equity III GmbH & Co. KG (share voting rights: >0.0%)	Munich	0.8	0.8	EUR	5,686	(38)
Blue Capital Equity IV GmbH & Co. KG	Munich	>0.0	>0.0	EUR	9,438	612
Blue Capital Equity IX GmbH & Co. KG (share voting rights: 0.6%)	Munich	0.7	0.7	EUR	4,258	605
Blue Capital Equity V GmbH & Co. KG (share voting rights: >0.0%)	Munich	0.1	0.1	USD	894	(176)
Blue Capital Equity VI GmbH & Co. KG	Munich	>0.0	>0.0	USD	19,225	(459)
Blue Capital Equity VII GmbH & Co. KG	Munich	>0.0	>0.0	USD	9,211	307
Blue Capital Equity VIII GmbH & Co. KG (share voting rights: 0.0%)	Munich	0.7	0.7	EUR	9,464	826
Blue Capital Europa Immobilien GmbH & Co. Fünfte Objekte Österreich KG	Munich	0.1	0.1	EUR	15,005	952
Blue Capital Europa Immobilien GmbH & Co. Siebte Objekte Österreich KG	Munich	0.1	0.1	EUR	22,819	137
Blue Capital Metro Amerika Fund, L.P.	Wilmington	0.1	0.1	USD	163,290	5,792
Blue Capital Metropolitan Amerika GmbH & Co. KG	Munich	0.1	0.1	USD	120,035	7,380
Boston Capital Partners V, L.L.C.	Wilmington	10.0	10.0			
Boston Capital Ventures V, L.P. (share voting rights: 0.0%)	Wilmington	20.0		USD	12,818	(383)
BTG Beteiligungsgesellschaft Hamburg mbH	Hamburg	13.6		EUR	4,322	163
BV Capital GmbH & Co. Beteiligungs KG Nr. 1	Hamburg	16.8	16.8	EUR	2,094	237
Carlyle Partners V, L.P. (share voting rights: 0.0%)	Wilmington	>0.0	>0.0	USD	3,461,150	1,654,964
Carlyle U.S. Equity Opportunity Fund, L.P. (share voting rights: 0.0%)	Wilmington	0.9	0.9	USD	771,373	56,867
Charme II (share voting rights: 0.0%)	Milan	7.7		EUR	4,864	(387)
CHARME INVESTMENTS S.C.A. (share voting rights: 12.1%)	Luxembourg	13.4		EUR	22,677	(93)
China International Packaging Leasing Co., Ltd.	Beijing	17.5		CNY	(101,056)	553
China Investment Incorporations (BVI) Ltd.	Tortola	10.8	10.8	USD	9,135	(42,850)
CLS Group Holdings AG	Zurich	1.2		GBP	389,130	15,752
CMC-Hertz Partners, L.P. (share voting rights: 0.0%)	Wilmington	7.1	7.1			
CME Group Inc.	Wilmington	>0.0		USD	22,411,800	4,063,400
Earlybird GmbH & Co. Beteiligungskommanditgesellschaft III i.L.	Munich	9.7	9.7	USD	7,589	205
Easdaq NV	Leuven	>0.0		EUR	1,609	(257)
East Capital Financials Fund AB (share voting rights: 0.0%)	Stockholm	0.2		EUR	18,362	(6,963)
EDD AG (share voting rights: 3.1%)	Düsseldorf	3.0		EUR	27,792	(3,009)
Einkaufsgalerie Roter Turm Beteiligungs GmbH & Co. KG	Munich	>0.0	>0.0	EUR	5,447	253
Einkaufsgalerie Roter Turm Chemnitz GmbH & Co. KG	Munich	>0.0	>0.0	EUR	51,564	3,776
EURO Kartensysteme GmbH	Frankfurt am Main	6.0		EUR	11,835	199
Film & Entertainment VIP Medienfonds 4 GmbH & Co. KG	Grünwald	9.9	9.9	EUR	23,679	(1,246)
H.F.S. Immobilienfonds Bahnhofspassagen Potsdam GmbH & Co. KG	Munich	6.0	6.0	EUR	23,663	2,578
H.F.S. Immobilienfonds "Das Schloss" Berlin-Steglitz GmbH & Co. KG	Munich	6.0	6.0	EUR	17,913	(732)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %		CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY			
H.F.S. Immobilienfonds Deutschland 4 GmbH & Co. KG	Munich	0.2	0.2	EUR	(618)	1,869
H.F.S. Immobilienfonds Deutschland 6 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	13,412	(207)
H.F.S. Immobilienfonds Deutschland 8 GmbH & Co. KG	Munich	0.1	0.1	EUR	11,403	(114)
H.F.S. Immobilienfonds Deutschland 9 GmbH & Co. KG	Munich	0.1	0.1	EUR	10,243	7,461
H.F.S. Immobilienfonds Deutschland 10 GmbH & Co. KG	Munich	1.4	1.4	EUR	120,942	5,541
H.F.S. Immobilienfonds Deutschland 12 GmbH & Co. KG	Munich	3.9	3.9	EUR	82,107	23,836
H.F.S. Immobilienfonds Deutschland 15 GmbH & Co. KG	Munich	0.1	0.1	EUR	18,040	2,702
H.F.S. Immobilienfonds Deutschland 16 GmbH & Co. KG	Munich	0.1	0.1	EUR	51,057	56,456
H.F.S. Immobilienfonds GmbH & Co. Europa 3 KG	Munich	0.1	0.1	EUR	10,547	(2,325)
H.F.S. Immobilienfonds Köln GmbH & Co. KG	Munich	>0.0	>0.0	EUR	6,603	48,072
H.F.S. Immobilienfonds Köln Supplier-Park GmbH & Co. KG	Munich	>0.0	>0.0	EUR	23,192	1,960
H.F.S. Immobilienfonds Schweinfurt GmbH & Co. KG	Munich	>0.0	>0.0	EUR	1,450	1,938
H.F.S. Zweitmarktfonds Deutschland 1 GmbH & Co. KG	Ebersberg	0.1	0.1	EUR	16,522	6,474
H.F.S. Zweitmarktfonds Deutschland 2 GmbH & Co. KG	Ebersberg	>0.0	>0.0	EUR	83,283	15,359
HVBFF Life Britannia GmbH & Co Erste KG	Grünwald	>0.0	>0.0	EUR	15,783	842
HVB Trust Pensionsfonds AG (share voting rights: 0.0%) ⁹	Munich	100.0				
IGEPA Gewerbestadt GmbH & Co Vermietungs KG	Fürstfeldbruck	2.0	2.0	EUR	(6,962)	11,408
Immobilienfonds Objekte Apolda, Kiel, Bergen und Sigmaringen GmbH & Co. KG	Oberhaching	0.1	0.1			
Immobilienfonds Objekt Rathenow GmbH & Co. KG	Oberhaching	0.2	0.2	EUR	1,903	935
Industriepalast in Leipzig Verwaltungs-GmbH & Co. KG i.L. (share voting rights: 6.3%)	Berlin	6.2				
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	7.8			
JBG/BC Investor, L.P.	Chevy Chase	0.5	0.5	USD	78,860	7,558
Kepler Cheuvreux S.A. (share voting rights: 4.6%)	Paris	10.3		EUR	79,092	15,907
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 voting rights: 1.0%)	Uxbridge	—	—	GBP	12,988	1,615
Life Britannia Second LP (share voting rights: 1.0%)	Uxbridge	—	—	GBP	17,379	2,217
Life GmbH & Co Erste KG	Munich	>0.0	>0.0	USD	110,569	6,310
Life GmbH & Co. Zweite KG (share voting rights: 0.1%)	Grünwald	>0.0	>0.0	EUR	63,077	(4,436)
Lion Capital Fund I, L.P. (share voting rights: 0.0%)	London	0.9		EUR	2,429	(410)
Martin Schmäzle Grundstücksgesellschaft Objekt Wolfsburg GmbH & Co. KG	Munich	>0.0	>0.0	EUR	15,711	921
MBG Mittelständische Beteiligungsgesellschaft Baden-Württemberg GmbH	Stuttgart	5.0		EUR	72,488	5,540
MBG Mittelständische Beteiligungsgesellschaft Rheinland-Pfalz mbH (share voting rights: 11.1%)	Mainz	9.8		EUR	14,882	1,334

Other Information (CONTINUED)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %			EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY	CURRENCY		
MBG Mittelständische Beteiligungsgesellschaft						
Schleswig-Holstein mbH	Kiel	3.6		EUR	39,021	2,978
MFP Munich Film Partners GmbH & Co. AZL Productions KG	Grünwald	0.1		EUR	0.2	7,525
MFP Munich Film Partners GmbH & Co. MI 2 Productions KG i.L.	Grünwald	0.1				
Mittelständische Beteiligungsgesellschaft						
Berlin-Brandenburg GmbH	Potsdam	11.6		EUR	20,061	1,783
Mittelständische Beteiligungsgesellschaft						
Mecklenburg-Vorpommern mbH	Schwerin	15.4		EUR	14,429	288
Mittelständische Beteiligungsgesellschaft						
Niedersachsen (MBG) mbH	Hanover	8.2		EUR	13,638	507
Mittelständische Beteiligungsgesellschaft						
Sachsen-Anhalt mit beschränkter Haftung	Magdeburg	12.7		EUR	23,304	434
Mittelständische Beteiligungsgesellschaft Sachsen mbH	Dresden	11.8		EUR	46,694	1,965
Mittelständische Beteiligungsgesellschaft Thüringen mbH	Erfurt	13.4		EUR	24,944	1,214
Motion Picture Production GmbH & Co. Erste KG						
(share voting rights: 0.1%)	Grünwald	>0.0	>0.0	EUR	(28,035)	1,460
Mühoga Münchner Hochgaragen Gesellschaft						
mit beschränkter Haftung ⁸	Munich	25.0	25.0	EUR	4,429	2,237
PICIC Insurance Ltd.	Karachi	>0.0		PKR	(4,020)	(42,231)
PRINCIPIA FUND (share 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 voting rights: 0.0%)	Luxembourg	38.3	38.3			
Rocket Internet Capital Partners (Euro) SCS						
(share voting rights: 0.0%)	Luxembourg	4.4		EUR	139,611	17,726
Roomstore Inc.	Richmond	7.7	7.7			
Saarländische Kapitalbeteiligungsgesellschaft						
mit beschränkter Haftung (share voting rights: 8.8%)	Saarbrücken	8.7		EUR	7,402	(72)
Social Venture Fund GmbH & Co. KG						
(share voting rights: 0.0%)	Munich	9.6		EUR	3,468	12
Social Venture Fund II GmbH & Co. KG						
(share voting rights: 0.0%)	Munich	4.5		EUR	13,101	(847)
Stahl Group S.A.	Luxembourg	0.4	0.4	EUR	651,494	914,893
SwanCap FLP II SCSp (share voting rights: 37.5%) ¹⁰	Senningerberg	—				
SwanCap FLP SCS (share voting rights: 37.5%) ¹⁰	Senningerberg	—		EUR	849	435
SwanCap TB II SCSp (share voting rights: 0.0%) ¹¹	Senningerberg	>0.0				
SwanCap Blocker GmbH & Co. KG ¹¹	Munich	—				
S.W.I.F.T. (Co-operative 'Society for Worldwide						
Interbank Financial Telecommunication')	Brussels	0.3		EUR	469,330	45,119
Texas Energy Future Holdings L.P. (share voting rights: 0.0%)	Fort Worth	1.5	1.5			
True Sale International GmbH	Frankfurt am Main	7.7		EUR	4,928	119
UniCredit Services						
Società Consortile per Azioni	Milan	>0.0		EUR	357,036	8,469
VISA Inc. (share voting rights: 0.0%)	Wilmington	>0.0		USD	34,006,000	10,301,000
WealthCap Aircraft 1 GmbH & Co. KG	Munich	>0.0	>0.0	USD	22,342	(118)
WealthCap Aircraft 25 GmbH & Co. KG	Grünwald	>0.0	>0.0	USD	38,578	(502)
WealthCap Aircraft 26 GmbH & Co. KG	Grünwald	>0.0	>0.0	USD	50,585	(81)
WealthCap Fondsportfolio Private Equity 21 GmbH & Co.						
geschlossene Investment KG	Grünwald	>0.0	>0.0			
WealthCap Fondsportfolio Private Equity 22 GmbH & Co.						
geschlossene Investment KG	Grünwald	0.2	0.2			
WealthCap Immobilien Deutschland 38 GmbH & Co.						
geschlossene Investment KG	Munich	>0.0	>0.0	EUR	101,188	15,422

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %		CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY			
WealthCap Immobilien Deutschland 39 GmbH & Co. geschlossene Investment KG	Munich	>0.0	>0.0	EUR	135,498	(7,937)
WealthCap Immobilien Deutschland 40 GmbH & Co. geschlossene Investment KG	Munich	>0.0	>0.0			
WealthCap Immobilien Deutschland 41 GmbH & Co. geschlossene Investment KG	Munich	>0.0	>0.0			
WealthCap Immobilienfonds Deutschland 30 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	45,929	5,664
WealthCap Immobilienfonds Deutschland 31 GmbH & Co. KG (share voting rights: 0.1%)	Munich	>0.0	>0.0	EUR	38,156	5,814
WealthCap Immobilienfonds Deutschland 32 GmbH & Co. KG (share voting rights: 0.1%)	Munich	>0.0	>0.0	EUR	51,242	3,516
WealthCap Immobilienfonds Deutschland 33 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	59,179	2,566
WealthCap Immobilienfonds Deutschland 34 GmbH & Co. KG (share voting rights: 0.1%)	Munich	>0.0	>0.0	EUR	40,195	2,535
WealthCap Immobilienfonds Deutschland 35 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	126,476	7,502
WealthCap Immobilienfonds Deutschland 37 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	63,676	2,443
WealthCap Immobilienfonds Donauwörth 1 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	20,213	1,604
WealthCap Immobilienfonds Donauwörth 2 GmbH & Co. KG	Munich	>0.0	>0.0	EUR	5,067	563
WealthCap Immobilien Nordamerika 16 GmbH & Co. geschlossene Investment KG	Munich	>0.0	>0.0	EUR	45,462	4,440
WealthCap Immobilien Nordamerika 17 GmbH & Co. geschlossene Investment KG	Munich	>0.0	>0.0	EUR	36,777	(3,054)
WealthCap Infrastructure Fund I GmbH & Co. KG	Munich	>0.0	>0.0	EUR	4,908	(88)
WealthCap Infrastruktur Amerika GmbH & Co. KG (share voting rights: 0.1%)	Grünwald	>0.0	>0.0	EUR	4,427	1,517
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 (share voting rights: 0.3%)	Grünwald	>0.0	>0.0	USD	874	999
WealthCap LebensWert 2. GmbH & Co. KG (share voting rights: 0.1%)	Grünwald	>0.0	>0.0	EUR	5,936	1,291
WealthCap Life Britannia 2. GmbH & Co KG	Munich	>0.0	>0.0	EUR	12,787	(1,173)
WealthCap Life USA 4. GmbH & Co. KG	Grünwald	>0.0	>0.0	USD	59,073	3,064
WealthCap Los Gatos 121 Albright Way L.P.	Wilmington	>0.0	>0.0	USD	64,590	3,523
WealthCap Mountain View I L.P. (share voting rights: 0.1%)	Georgia	—	—	USD	43,701	5,725
WealthCap Objekt Berg-am-Laim GmbH & Co. KG	Munich	5.2	5.2	EUR	121,259	8,173
Wealthcap Objekt Berg-am-Laim II GmbH & Co. KG	Munich	10.1	10.1			
WealthCap Objekt Bogenhausen GmbH & Co. KG	Munich	>0.0	>0.0	EUR	132,593	2,566
WealthCap Objekt Essen GmbH & Co. KG	Munich	5.2	5.2	EUR	28,370	960
WealthCap Objekt Frankfurt GmbH & Co. KG	Munich	5.2	5.2	EUR	46,985	2,353
WealthCap Objekt Hackerbrücke GmbH & Co. KG	Munich	5.2	5.2	EUR	33,358	1,857
WealthCap Objekt Hamburg GmbH & Co. KG	Munich	10.1	10.1			
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	538
WealthCap Objekt Riem GmbH & Co. KG	Munich	5.2	5.2	EUR	30,556	1,597
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	58,272	2,068
WealthCap Objekt Stuttgart Ia GmbH & Co. KG	Munich	>0.0	>0.0	EUR	18,051	(167)

Other Information (CONTINUED)

NAME	REGISTERED OFFICE	SHARE OF CAPITAL IN %			CURRENCY	EQUITY CAPITAL in thousands of currency units	NET PROFIT in thousands of currency units
		TOTAL	OF WHICH HELD INDIRECTLY				
WealthCap Objekt Stuttgart Ib GmbH & Co. KG	Munich	>0.0	>0.0		EUR	20,484	809
WealthCap Objekt Stuttgart II GmbH & Co. KG	Munich	5.2	5.2		EUR	24,939	1,022
WealthCap Objekt Theresienhöhe GmbH & Co. KG	Munich	5.2	5.2		EUR	66,084	2,646
WealthCap Objekte Südwest GmbH & Co. KG	Munich	5.1	5.1		EUR	(1,180)	(385)
WealthCap Photovoltaik 1 GmbH & Co. KG							
(share voting rights: 0.1%)	Grünwald	>0.0	>0.0		EUR	27,210	2,749
WealthCap Portfolio 3 GmbH & Co. geschlossene Investment KG	Grünwald	>0.0	>0.0		EUR	9,864	(2,835)
WealthCap Private Equity 10 GmbH & Co. KG	Munich	>0.0	>0.0		EUR	10,020	3,543
WealthCap Private Equity 11 GmbH & Co. KG	Munich	>0.0	>0.0		EUR	3,751	1,687
WealthCap Private Equity 12 GmbH & Co. KG	Grünwald	>0.0	>0.0		EUR	57,655	3,015
WealthCap Private Equity 13 GmbH & Co. KG	Grünwald	>0.0	>0.0		EUR	48,423	9,703
WealthCap Private Equity 14 GmbH & Co. KG							
(share voting rights: 0.1%)	Grünwald	>0.0	>0.0		EUR	27,989	5,752
WealthCap Private Equity 15 GmbH & Co. KG							
(share voting rights: 0.1%)	Grünwald	>0.0	>0.0		USD	17,242	935
WealthCap Private Equity 16 GmbH & Co. KG							
(share voting rights: 0.3%)	Grünwald	>0.0	>0.0		USD	3,691	183
WealthCap Private Equity 17 GmbH & Co.							
geschlossene Investment KG	Grünwald	>0.0	>0.0		EUR	14,878	2,228
WealthCap Private Equity 18 GmbH & Co.							
geschlossene Investment KG	Grünwald	>0.0	>0.0		EUR	10,729	1,596
WealthCap Private Equity 19 GmbH & Co.							
geschlossene Investment KG	Grünwald	>0.0	>0.0		EUR	18,992	(2,549)
WealthCap Private Equity 20 GmbH & Co.							
geschlossene Investment KG	Grünwald	>0.0	>0.0		EUR	5,173	(614)
WealthCap SachWerte Portfolio 1 GmbH & Co. KG	Grünwald	>0.0	>0.0		EUR	32,946	3,115
WealthCap SachWerte Portfolio 2 GmbH & Co.							
geschlossene Investment KG	Grünwald	>0.0	>0.0		EUR	88,674	(833)
WealthCap Spezial-AIF 1 GmbH & Co.							
geschlossene Investment KG	Munich	>0.0	>0.0		EUR	169,805	23,317
WealthCap Spezial-AIF 2 GmbH & Co.							
geschlossene Investment KG	Munich	5.2	5.2		EUR	76,615	16,290
WealthCap Spezial-AIF 3 GmbH & Co.							
geschlossene Investment KG	Munich	>0.0	>0.0		EUR	257,916	29,752
WealthCap Spezial-AIF 4 GmbH & Co.							
geschlossene Investment KG	Munich	>0.0	>0.0		EUR	151,895	(76)
WealthCap Spezial-AIF 5 GmbH & Co.							
geschlossene Investment KG	Munich	10.5	10.5		EUR	165,733	1,382
Wealthcap Spezial Portfolio Immobilien 1 SA SICAV-SIF	Luxembourg	0.3	0.3				
Wealthcap Spezial Portfolio Immobilien 1 SCS SICAV-SIF	Luxembourg	50.0	50.0				
Wealthcap Spezial Portfolio Private Equity 1 SA SICAV-SIF	Luxembourg	0.1	0.1				
Wealthcap Spezial Portfolio Private Equity 1 SCS SICAV-SIF	Luxembourg	>0.0	>0.0				
WealthCap US Life Dritte GmbH & Co. KG							
(share voting rights: 0.0%)	Grünwald	0.1	0.1		USD	10,808	(16,138)
WealthCap Zweitmarkt 3 BASIS GmbH & Co. KG	Grünwald	>0.0	>0.0		EUR	30,943	1,505
WealthCap Zweitmarkt 3 PLUS GmbH & Co. KG	Grünwald	>0.0	>0.0		EUR	9,390	313
WealthCap ZweitmarktWerte Immobilien 4 GmbH & Co. KG	Munich	>0.0	>0.0		EUR	8,496	433
WH – Erste Grundstücks GmbH & Co. KG	Munich	6.0			EUR	101,807	19,311
Wohnungsbaugesellschaft der Stadt							
Röthenbach a.d.Pegnitz mit beschränkter Haftung	Röthenbach a.d.Pegnitz	5.2			EUR	3,349	118

Exchange rates for 1 euro at the reporting date

Currency abbreviation according to the International Organisation for Standardisation (ISO) code.

Brazil	1 EUR =	4.4440	BRL
China	1 EUR =	7.8751	CNY
UK	1 EUR =	0.89453	GBP
Pakistan	1 EUR =	159.54	PKR
USA	1 EUR =	1.1450	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	(1,354)
1.2 HJS 12 Beteiligungsgesellschaft mbH, Munich	(6,103)
thereof relating to 2018	2
1.3 HVB Capital Partners AG, Munich	(63)
1.4 HVB Immobilien AG, Munich	50,814
thereof relating to 2018	39,914
1.5 HVB Secur GmbH, Munich	92
1.6 HVB Verwa 4 GmbH, Munich	(86)
1.7 MERKURHOF Grundstücksgesellschaft mit beschränkter Haftung, Munich	1,572
1.8 UniCredit Beteiligungs GmbH, Munich	(9)
1.9 UniCredit Direct Services GmbH, Munich	1,482
1.10 UniCredit Leasing GmbH, Hamburg	62,341
1.11 Verwaltungsgesellschaft Katharinenhof mbH, Munich	263
1.12 Wealth Management Capital Holding GmbH, Munich	21,732

2 Profit and loss transfer to shareholders and partners.

3 The exemption under Section 264b German Commercial Code and under Section 264 (3) German Commercial Code applies to the company.

4 Figures from the 2017 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 German Commercial Code.

6 Equity capital amounts to €18,000 and the net profit €29,000.

7 Pursuant to Section 340a (4) No. 2 German Commercial Code, 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)

108 Supervisory Board

Gianni Franco Papa	Chairman
Florian Schwarz Dr Wolfgang Sprissler	Deputy Chairmen
Paolo Cornetta Beate Dura-Kempf Francesco Giordano Klaus Grünewald until 30 June 2018 Prof Dr Annette G. Köhler Dr Marita Kraemer Klaus-Peter Prinz Oliver Skrobot Christian Staack Gregor Völkl since 1 July 2018	Members

Sandra Betocchi Drwenski

Markus Beumer
since 1 December 2018

Peter Buschbeck
until 28 February 2018

Dr Emanuele Buttà
since 1 March 2018

Ljiljana Čortan
since 1 January 2018

Dr Michael Diederich

Jan Kupfer
since 1 March 2018

Robert Schindler
until 7 November 2018

Guglielmo Zadra

109 Management Board

Chief Operating Officer (COO)

**Commercial Banking –
Unternehmer Bank**

**Commercial Banking –
Private Clients Bank**

**Commercial Banking –
Private Clients Bank**

Chief Risk Officer (CRO)

**Board Spokesman
(since 1 January 2018)
Human Capital/Labour
and Social Affairs
(since 1 January 2018)
Corporate & Investment Banking
(interim until 28 February 2018)**

Corporate & Investment Banking

**Commercial Banking –
Unternehmer Bank**

Chief Financial Officer (CFO)

Munich, 12 March 2019

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 2019

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 2018, 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 2018 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 2018. In accordance with the German legal requirements, we have not audited the content of the statement on business management pursuant to § 289f (4) German Commercial Code (HGB) (gender quota disclosures) included in section "Corporate structure" of the group management report.

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

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 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 2018 and of its financial performance for the financial year from 1 January to 31 December 2018, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of the above-mentioned statement on business management pursuant to § 289f (4) German Commercial Code (HGB) (gender quota disclosures).

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 2018. 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. Valuation of significant legal risks from potential breach of financial sanctions

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 accounting, the valuation of loans to customers regularly requires the use of estimates. In the 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 various stages, based on the comparison of the current default risk with the default risk on initial recognition of the financial instrument. This allocation leads to the recognition of the expected one-year credit loss or the expected lifetime credit loss of the financial instrument as a loan loss provision. The loan loss provision 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 models that affect the expected credit loss are; the probability of default, the exposure at default and the loss given default. The risk provisioning in stage 3, in accordance with IFRS 9, is based on assumptions relating to various scenarios for determining the expected cash flows from the defaulted loans or from the estimated probability of occurrence of the respective scenarios. Both the models and the valuation parameters used to measure risk provisioning have a significant impact on the level of loan loss provision. Since the determination of loan loss provision is subject to considerable uncertainty and margin of discretion and the underlying methodology for the calculation has changed compared to the previous year, due to the first-time application of IFRS 9, this was a key audit matter in our audit. The disclosures regarding the loan loss provisions are enclosed in sections 16 and 47 of the notes to the consolidated financial statements.

b) As part of the audit of the consolidated financial statements, we have initially audited the design, implementation 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 organisation, 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. On a sample basis, we have audited the credit-worthiness of borrowers, the estimated collateral values and the liquidation periods for credit collaterals based on empirical values of comparable collaterals in the past. In addition, we have evaluated the reasonableness of the probabilities of the scenarios used for the loans of our sample. 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 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. For the audit of the valuation of loans and contingent liabilities, as well as other financial commitments related to the credit business, our focus was on the significantly impaired loans, since there are significant 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 of the loans based on group-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. During our audit, we utilised internal validation reports and third-party audit reports. Furthermore, we have audited the stage allocation, as well as the expected credit losses for a sample of financial instruments measured at amortised cost.

c) We challenged significant assumptions and estimates made by the legal representatives. Overall, the risk provisions are within acceptable ranges.

Auditor's Report (CONTINUED)

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 5 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. We have used valuation specialists from our Risk Advisory division for our audit. 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 processes including the corresponding controls. 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 audited the Bank's assumptions, procedures and models with regard to the use of valuation techniques used in the industry and a correct and comprehensible valuation. In addition, we have conducted our own independent valuation of selected financial instruments and compared our results with the valuation performed by the Bank. 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. The scope of financial instruments measured at fair value has not increased significantly as a result of the introduction of IFRS 9.

3. IT controls related to financial reporting

- a) As part of 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. In the area of individual data processing, the Bank is in the process of further improving controls.

4. Valuation of significant legal risks from potential breach of financial sanctions

- a) Provisions for legal risks are disclosed under the balance sheet item "provisions" in the consolidated financial statements, of which a part relates to a potential breach of financial sanctions. This issue has been identified as a key audit matter, as the recognition and measurement of these quantitatively material legal risks are based, to a large extent, on estimates and assumptions made by the legal representatives. The disclosures made by the legal representatives regarding the provisions in relation to the legal risks are enclosed in section 48 of the notes to the consolidated financial statements and in section 4 Operational Risk in the risk report of the group management report.
- b) As there is an increased risk of misstatements in accounting estimates and the fact that the valuation choices made by the legal representatives have a significant effect on the assets, liabilities, financial position and financial performance, we have audited the operational and organizational structure with regards to the recording and valuation of legal risks. In addition, we have assessed the appropriateness of the amounts stated by comparing with the calculations and assessments provided by the Company's attorneys and requested confirmation letters from them. With the support of a financial sanctions specialist, we have critically considered the underlying assumptions of the legal representatives.
- c) The provision created by the legal representatives for the legal risks from a potential breach of financial sanctions reflects the discussions with the US authorities.

Other Information

The executive directors are responsible for the other information. The other information comprises:

- the statement on business management included in section "Corporate structure" of the group management report pursuant to § 289f (4) German Commercial Code (HGB) (gender quota disclosures),
- the executive directors' confirmation relating to 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
- 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 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 IFRSs 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.

Auditor's Report (CONTINUED)

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 skepticism throughout the audit. We also

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our 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 IFRSs as adopted by the EU and 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 11 January 2018. We were engaged by the supervisory board on 24 July 2018. 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
- Support services in connection with external audits
- Audit of a net asset value calculation
- Audits pursuant to § 36 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
- Professional report
- Review of an assignment of findings to process areas

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Martin Kopatschek.

Munich, March 12, 2019

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

(Prof Dr Carl-Friedrich Leuschner)
Wirtschaftsprüfer
German Public Auditor

(Martin Kopatschek)
Wirtschaftsprüfer
German Public Auditor

The translation of the Independent Auditor's Report is for convenience only; the German version prevails.

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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
Gianni Franco Papa General Manager of UniCredit S.p.A., Vienna Chairman		UniCredit Bank Austria AG, Vienna, (Chairman since 10 December 2018), Amundi S.A., Paris, since 14 February 2018
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 GmbH (formerly Dr. R. Pfleger Chemische Fabrik Gesellschaft mit beschränkter Haftung), Bamberg (Deputy Chairman)
Paolo Cornetta Head of Group Human Capital of UniCredit S.p.A., Milan		ES Shared Service Center S.p.A, Cernusco sul Naviglio/Milan, until 19 December 2018, UniCredit Bank Austria AG, Vienna, until 11 April 2018
Beate Dura-Kempf Employee of UniCredit Bank AG, Litzendorf		
Francesco Giordano Co-Chief Operating Officer of UniCredit S.p.A., Milan		UniCredit Services S.C.p.A. (formerly UniCredit Business Integrated Solutions S.C.p.A.), Milan, YAPI ve KREDİ BANKASI A.Ş., Istanbul, since 20 March 2018
Klaus Grünewald until 30 June 2018 Former state district secretary (Landesfachbereichs- sekretär), Division 1 – Financial Services, Bavarian state district of Vereinte Dienstleistungs- gewerkschaft ver.di, Gröbenzell		

¹ As at 31 December 2018.

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
<p>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</p>	<p>DMG MORI AKTIENGESELLSCHAFT, Bielefeld, Villeroy & Boch Aktiengesellschaft, Mettlach, since 23 March 2018</p>	<p>DKSH Holding AG, Zürich, since 22 March 2018</p>
<p>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</p>	<p>Allianz Deutschland AG, Munich, since 2 March 2018</p>	<p>EULER HERMES GROUP S.A., Paris, until 20 June 2018, Allianz France S.A., Paris</p>
<p>Klaus-Peter Prinz Employee of UniCredit Bank AG, Luxembourg Branch, Trier</p>		
<p>Oliver Skrbot Employee of UniCredit Bank AG, Buttenwiesen</p>		
<p>Christian Staack Employee of UniCredit Bank AG, Hamburg</p>		
<p>Gregor Völkl since 1 July 2018</p> <p>District secretary (Bezirksfachbereichssekretär) of Vereinte Dienstleistungsgewerkschaft ver.di, Division 1 – Financial Services Munich district, Munich</p>		

¹ As at 31 December 2018.

List of Executives and Outside Directorships (Continued)

Supervisory Board committees^{1,2}

Audit Committee

Dr Wolfgang Sprissler, Chairman
Francesco Giordano
Prof Dr Annette G. Köhler
Oliver Skrbot (since 1 January 2018)

Nomination Committee

Gianni Franco Papa, Chairman
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
Christian Staack (since 1 January 2018)

Trustees¹

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 2018.

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. (formerly UniCredit Business Integrated Solutions S.C.p.A.), Milan
Markus Beumer born 1964 since 1 December 2018 Commercial Banking – Unternehmer Bank	DAW SE, Ober-Ramstadt	UniCredit Leasing GmbH, Hamburg (Chairman since 10 December 2018) ² , since 4 December 2018, UniCredit Leasing Finance GmbH, Hamburg (Chairman since 10 December 2018) ² , since 4 December 2018
Peter Buschbeck born 1961 until 28 February 2018 Commercial Banking – Private Clients Bank	WealthCap Kapitalverwaltungsgesellschaft mbH, Munich (Deputy Chairman) ² , until 31 March 2018, Wüstenrot & Württembergische AG, Stuttgart	Wealth Management Capital Holding GmbH, Munich (Deputy Chairman) ² , until 31 March 2018
Dr Emanuele Buttà born 1966 since 1 March 2018 Commercial Banking – Private Clients Bank	WealthCap Kapitalverwaltungsgesellschaft mbH, Munich (Deputy Chairman since 11 April 2018) ² , since 1 April 2018	Wealth Management Capital Holding GmbH, Munich (Deputy Chairman since 11 April 2018) ² , since 1 April 2018
Ljiljana Čortan born 1971 since 1 January 2018 Chief Risk Officer (CRO)	HVB Immobilien AG, Munich ² , since 1 January 2018, WealthCap Kapitalverwaltungsgesellschaft mbH, Munich ² , since 1 January 2018	AO UniCredit Bank, Moscow, until 9 April 2018, Wealth Management Capital Holding GmbH, Munich ² , since 1 January 2018
Dr Michael Diederich born 1965 Board Spokesman Human Capital/Labour & Social Affairs Corporate & Investment Banking (interim) until 28 February 2018	Bayerische Börse Aktiengesellschaft, Munich (Deputy Chairman), until 30 June 2018	PORR AG, Vienna, until 29 May 2018, ESMT European School of Management and Technology GmbH, Berlin, FC Bayern München AG, Munich, since 17 December 2018
Jan Kupfer born 1964 since 1 March 2018 Corporate & Investment Banking	Bayerische Börse Aktiengesellschaft, Munich, since 1 July 2018	
Robert Schindler born 1964 until 7 November 2018 Commercial Banking – Unternehmer Bank		UniCredit Leasing GmbH, Hamburg (Chairman) ² , until 30 November 2018, UniCredit Leasing Finance GmbH, Hamburg (Chairman) ² , until 30 November 2018
Guglielmo Zadra born 1972 Chief Financial Officer (CFO)		

¹ As at 31 December 2018.

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 and particularly on the implementation of the business and risk strategies including the ICT strategy as well as the Project Transform 2019 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 six meetings in the 2018 financial year, two of which were extraordinary meetings. In addition, key strategies for HVB Group were discussed in-depth at a separate strategy workshop. At these meetings, the Supervisory Board addressed the following subjects in particular:

The first meeting of the year on **16 February 2018** focused on the topic of “Strategies of the HVB Group”. In a **strategy workshop** held in advance on **14 February 2018**, particularly the HVB Group business strategy (embedded in the UniCredit group strategy) including digitalisation initiatives, 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 with the Management Board and considered in-depth. The status of implementation of the Project Transform 2019 in the CEO, CFO, CRO and COO business units was also dealt with in this connection. At the meeting on 16 February 2018, the Supervisory Board thus discussed the strategies above including the Project Transform 2019 and the budget for the year 2018 including the Multi-Year Plan 2018 – 2020 with the Management Board. Based on the integrated risk report of HVB Group and the status report on large loan exposures for Q4/2017, 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 also considered the variable remuneration in 2017 for members of the Management Board and employees of HVB Group, target attainment and the 2017 bonus for members of the Management Board, the remuneration packages and the targets of the Management Board in 2018, the structure of the 2018 Group Incentive System at HVB and the implementation for the Management Board, the process of determining Risk Takers in 2018 at HVB Group and taking account of the recommendations of the Remuneration Control Committee, adopted resolutions on these issues accordingly. Furthermore, the Supervisory Board approved the regular reappointment of Dr Michael Diederich as a member of the Management Board with effect from 1 January 2019, the termination of the term of office of Mr Peter Buschbeck with effect from the end of 28 February 2018 and the appointment of Mr Jan Kupfer and Dr Emanuele Buttà as new members of the Management Board of the Bank with effect from 1 March 2018.

At the meeting held on **15 March 2018** devoted to the annual financial statements, the Supervisory Board discussed the annual and consolidated financial statements for 2017 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 Report of the Supervisory Board and addressed the topic of the monitoring of compliance with regulatory provisions by the Management Board.

Outside a meeting on **14 May 2018**, the Supervisory Board adopted the proposed resolutions for the Bank’s Annual Shareholders’ Meeting on 11 June 2018.

Based on the recommendation of the Audit Committee, the Supervisory Board approved the granting of the audit engagement for the audit of the 2018 financial statements (including the specification of audit focus areas and the remuneration) to Deloitte on **22 May 2018** outside a meeting, which by way of exception had already been appointed the independent auditor and the auditor of the 2018 consolidated financial statements on 11 January 2018 by the Extraordinary Shareholders’ Meeting, (the resolutions of the Supervisory Board required to prepare for the appointment were already adopted in December 2017).

At an extraordinary meeting held on **11 June 2018** in the course of an information call, full information was provided on the current situation in Italy and Turkey and its possible effects on UniCredit and HVB Group.

At the meeting on **27 July 2018**, the Management Board explained the performance of the Bank and the results for the first half of 2018 (Half-yearly Financial Report) on the basis of detailed documents. The Management Board also presented an interim report on the status of implementation of the MYP 2018 – 2020 including the performance of HVB Group (updates of Transform 2019, financial investments and digitalisation). The potential impact of BREXIT on HVB was discussed with the Management Board. In addition, the Supervisory Board dealt

with the Management Board’s report on human resources work in 2017, the structure of the 2018 Group Compensation Policy for all employees of HVB Group, the implementation of this policy also for the Management Board and the structure of the Termination Payments Group Policy for all employees of HVB Group. Moreover, the Supervisory Board considered the review of the structure of the remuneration systems in 2018 for employees based on the Management Board’s remuneration report and the appropriateness of the remuneration in 2017 for the heads of the Risk Controlling function, the Compliance function and Risk Takers. Resolutions were adopted accordingly.

At an extraordinary meeting of the Supervisory Board held on **10 September 2018** Mr Markus Beumer was appointed a member of the Management Board of HVB with effect from 1 December 2018. Furthermore, the Supervisory Board discussed and approved the termination of the term of office of Mr Robert Schindler and the related modalities at this meeting and outside a meeting on 5 November 2018. Mr Robert Schindler resigned from the Management Board with effect from the end of 7 November 2018.

At the meeting on **8 November 2018**, the Management Board provided an overview of the performance and the results for the first nine months of 2018 (discussion of the figures at 30 September 2018) on the basis of detailed documents. The Management Board also submitted a report on the performance of Commercial Banking and provided an update on the status of digitalisation at HVB. Moreover, the Supervisory Board addressed internal governance topics, particularly the implementation of EBA Guidelines on internal governance and adopted resolutions in this context. In connection with human resources topics, the Supervisory Board discussed the EBA/ESMA Guidelines on the suitability of members of the management body and key function holders. In addition to discussing the succession planning for the Management Board and the Supervisory Board, 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 preliminary discussion at the meeting of the Nomination Committee on 23 October 2018, these results were then discussed by the Supervisory Board as a whole and measures and recommendations for improvement were examined.

Report of the Supervisory Board (CONTINUED)

At the **meetings held in 2018** and based on written information on findings management, the Supervisory Board dealt at regular intervals with the internal audit results and reports (Compliance and Internal Audit) and external audit results and reports (German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht – BaFin) and ECB) and those of the independent auditor and monitored the appropriate implementation of audit findings. The remediation of the documented findings in compliance with the timetables are subject to close scrutiny and progress monitoring by both the Management Board and the Supervisory Board.

Legal disputes as well as internal and external investigations

The Supervisory Board solicited information and deliberated on important legal disputes and proceedings at every meeting last year. External legal advisers were called in to provide advice to the Supervisory Board on individual issues who reported to the plenary sessions of the Supervisory Board at regular intervals. An ad-hoc committee still existing was dissolved in July 2018 by a resolution of the Supervisory Board as this no longer required any preparatory discussion or resolution recommendations. 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. In this context the Management Board also provided information on the cum/cum trades issue on a regular basis. In addition, the Supervisory Board obtained information on a regular basis in the reporting year about the status and further development of the investigations being conducted by US authorities in connection with past transactions pertaining to certain Iranian individuals and/or legal entities. The Supervisory Board also obtained reports on further investigations conducted in this context by HVB.

When required, meetings were also held 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. In the 2018 financial year, no conflicts of interests were disclosed by Supervisory Board members, nor is the Supervisory Board aware of any such conflicts of interests.

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 the same members sitting on the different committees in some cases. The chairmen 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 chairmen 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 three 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). These consisted above all in assisting the Supervisory Board in the preparation of the re-appointment and new appointment of Management Board members and succession planning on the Management Board and the Supervisory Board. The Nomination Committee also reviewed the Management Board's principles for selecting and appointing individuals to senior management level, including key function holders, and supported the Supervisory Board in making corresponding recommendations to the Management Board. In this context, the Nomination Committee discussed 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. The Nomination Committee consented to Management Board members accepting offices within the meaning of Section 25c (2) KWG and to personal loans pursuant to Section 15 KWG following an appropriate review.

Remuneration Control Committee

The Remuneration Control Committee met three times in the past year, once at an extraordinary meeting, 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) of 25 July 2017. In the 2018 financial year, the Remuneration Control Committee discussed the appropriateness of the remuneration systems for the employees in the 2017 financial year on the basis of the Remuneration Control Report 2017 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 2018 annual plan of the Remuneration Officer. Furthermore, it discussed the appropriateness of the total amount of variable remuneration for the Management Board and employees ("bonus-pool") for the 2017 financial year, discussed the evaluation of Management Board members' performance and the determination of the respective variable remuneration for the 2017 financial year and the goals set for the individual Management Board members in the 2018 financial year and gave appropriate recommendations to the Supervisory Board. In this context, it also discussed the reasonableness of the content of the 2018 Group Compensation Policy for all employees of HVB Group and the 2018 Group Incentive System at HVB and recommended to the Supervisory Board that this system is implemented for members of the Management Board. In addition, the appropriateness of the content of the Termination Payments Group Policy for all employees of HVB Group was discussed. The Remuneration Control Committee also assisted the Supervisory Board in reviewing the appropriateness and customary level of the remuneration packages for Management Board members in 2018 based on a benchmark analysis carried out by an external consultant. It also supported the Supervisory Board in monitoring the process of determining the Risk Takers in 2018 of HVB Group pursuant to Section 15 (3) InstitutsVergV. Moreover, it supported the Supervisory Board in monitoring the appropriateness of remuneration in 2017 for the heads of the Risk Control function, the Compliance function, the Risk Takers and the appropriateness of the structure of the 2018 remuneration systems for employees based on the 2018 Remuneration Report of the Management Board. The Remuneration Control Committee monitored the proper involvement of the internal control functions and all other

Report of the Supervisory Board (CONTINUED)

relevant areas in the structuring of the remuneration systems. The Management Board informed the committee of the key reforms to BaFin's new Interpretation Guide of 15 February 2018 for the InstitutsVergV of 25 July 2017. Moreover, the committee discussed the employment contracts of Management Board members in order to make recommendations to the Supervisory Board in connection with the new appointments and discussed the contractual arrangements as well as the remuneration of Management Board members 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 remuneration systems.

Risk Committee

The Risk Committee met five times in the past year and also held a joint meeting with the Remuneration Control 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 Bank's current and future overall risk appetite and risk strategy and helped the Supervisory Board to monitor the implementation of that strategy. 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 also solicited further reports on the topic of risk and strategy on a regular basis. 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. Moreover, the status of implementation of the Project Transform 2019 in the CRO business unit was reported in the Risk Committee. Following an appropriate review, the Risk Committee granted its consent to loans to bodies of a company pursuant to Section 15 KWG.

The committee discussed an analysis of the Bank's legal risks with head of Legal. 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 regularly discussed the findings of the Internal Audit, the measures taken and the status of remediation of findings of the supervisory authorities and the independent auditor. In two 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. In a joint meeting with the Remuneration Control Committee, the Risk Committee used the Remuneration Control Report 2017 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. (formerly UniCredit Business Integrated Solutions S.C.p.A.).

Audit Committee

The Audit Committee held five meetings in the reporting year. 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 2017 annual and consolidated financial statements and the report on relations with affiliated companies, prepared draft resolutions for the Supervisory Board and discussed the 2018 Half-yearly Financial Report and the figures at 31 March and 30 September 2018. The Audit Committee was also 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 also reported on the assessment and 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 also provided with the annual plan of the Internal Audit and the Compliance function. The committee 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 auditor's report on the annual audit of the securities account business according to Section 36 of the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG) (in future Section 89 WpHG), the Bank's outsourcing arrangements, the report of the Data Protection Officer, the annual report of the Legal department including existing legal risks and the adequacy of staffing levels of the CFO, CRO and COO business units, particularly against the background of the Project Transform 2019. The Audit Committee requested quarterly reports on the liquidity situation. In the reporting year, the Audit Committee received an update on the status of the IFRS 9 project on a regular basis. 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. 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 briefed on the latest status of the current audit of the annual financial statements by the independent auditor.

Report of the Supervisory Board (CONTINUED)

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 particularly to new Supervisory Board members and written information was provided. 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 the future of the automotive sector and the implications for UniCredit/HVB as well as the effects of the new IFRS 9 rules on the balance sheet of HVB Group. In addition, Supervisory Board members received information from the Bank on the new guidelines of the European supervisory authorities EBA and ESMA on the assessment of the suitability of members of the management body and key function holders as well as EBA's new guidelines on internal governance.

Annual financial statements for 2018

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 2018 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 2018 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 2018 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

Dr Michael Diederich has been the new Board Spokesman of HVB’s Management Board since 1 January 2018. With effect from the end of 28 February 2018, Mr Peter Buschbeck resigned from the Management Board. With effect from 1 March 2018, the Supervisory Board appointed Mr Jan Kupfer and Dr Emanuele Buttà regular members of the Management Board. Mr Robert Schindler resigned from the Management Board with effect from the end of 7 November 2018. Mr Markus Beumer was appointed an ordinary member of the Management Board by the Supervisory Board with effect from 1 December 2018.

In the reporting year, Mr Klaus Grünewald went into retirement and resigned from the Supervisory Board with effect from the end of 30 June 2018 by resigning from office as an employee representative on the Supervisory Board. Mr Gregor Völkl succeeded him with effect from 1 July 2018 for the residual period of his term of office as a substitute member who was already appointed in 2015 in compliance with the German Act on the Co-determination of Employees in a Cross-border Merger (Gesetz über die Mitbestimmung der Arbeitnehmer bei einer grenzüberschreitenden Verschmelzung – MgVG). The term of office of all the Supervisory Board members, including the new substitute member, ends as scheduled at the end of the Annual Shareholders’ Meeting resolving on the formal discharge of the Supervisory Board for the 2019 financial year.

The Supervisory Board thanks Klaus Grünewald for his long-term, committed and valuable service on this board as an employee representative and also for his commitment and his 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 2018 financial year.

Munich, 22 March 2019

The Supervisory Board



Gianni Franco Papa
Chairman

Additional Information

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Summary of Annual Financial Data

(€ millions)

OPERATING PERFORMANCE	2018	2017	2016	2015	2014
Net interest	2,484	2,541	2,518	2,728	2,643
Dividends and other income from equity investments	25	11	57	69	92
Net fees and commissions	1,014	1,103	1,066	1,035	1,082
Net trading income	693	928	903	525	483
Net gains/(losses) on financial assets and liabilities at fair value	(110)	n/a	n/a	n/a	n/a
Net gains/(losses) on derecognition of financial instruments measured at cost	52	n/a	n/a	n/a	n/a
Net other expenses/income	524	399	354	318	302
OPERATING INCOME	4,682	4,982	4,898	4,675	4,602
Payroll costs	(1,468)	(1,600)	(1,668)	(1,821)	(1,782)
Other administrative expenses	(1,405)	(1,443)	(1,536)	(1,560)	(1,532)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(206)	(227)	(257)	(198)	(245)
Operating costs	(3,079)	(3,270)	(3,461)	(3,579)	(3,559)
OPERATING PROFIT	1,603	1,712	1,437	1,096	1,043
Net write-downs of loans and provisions for guarantees and commitments IAS 39	n/a	(195)	(341)	(113)	(151)
Credit impairment losses IFRS 9	(16)	n/a	n/a	n/a	n/a
NET OPERATING PROFIT^{1,2}	1,587	1,517	1,096	983	892
Provisions for risks and charges	(919)	(25)	(193)	(194)	25
Restructuring costs	(14)	(7)	(645)	(112)	18
Net income from investments	n/a	112	39	99	148
Net gains/losses on disposals on investments	26	n/a	n/a	n/a	n/a
PROFIT BEFORE TAX AND IMPAIRMENT ON GOODWILL	680	n/a	n/a	n/a	n/a
Impairment on goodwill	(288)	—	—	—	—
PROFIT BEFORE TAX	392	1,597	297	776	1,083
Income tax for the period	(154)	(261)	(140)	(26)	(298)
PROFIT AFTER TAX	238	1,336	157	750	785
CONSOLIDATED PROFIT FROM CONTINUING OPERATIONS	238	1,336	157	750	785
Profit before tax from discontinued operations ³	—	—	—	—	185
Income tax from discontinued operations ³	—	—	—	—	(12)
PROFIT AFTER TAX FROM DISCONTINUED OPERATIONS³	—	—	—	—	173
CONSOLIDATED PROFIT OF FULL HVB GROUP	238	1,336	157	750	958
attributable to the shareholder of UniCredit Bank AG	236	1,332	153	743	947
attributable to minorities	2	4	4	7	11
Cost-income ratio in % (based on total revenues)	65.8	65.6	70.7	76.6	77.3
Earnings per share from continuing operations (€)	—	—	—	—	0.96
Earnings per share of full HVB Group (€)	0.29	1.66	0.19	0.93	1.18

	2018	2017	2016	2015	2014
Balance sheet figures (€ billions)					
Total assets	286.7	299.1	302.1	298.7	300.3
Shareholders' equity	17.8	18.9	20.4	20.8	20.6
Key capital ratios⁴					
	Compliant with Basel III	Compliant with Basel III	Compliant with Basel III	Compliant with Basel III	Compliant with Basel II
Core capital (€ billions)	16.5	16.6	16.6	19.6	19.0
Risk-weighted assets (€ billions)					
(including equivalents for market risk and operational risk)	82.6	78.7	81.6	78.1	85.7
Core capital ratio (%)					
(calculated based on risk-weighted assets including equivalents for market risk and operational risk)	19.9	21.1	20.4	25.1	22.1
Employees ⁵	12,252	13,405	14,748	16,310	17,980
Branch offices	503	553	579	581	796

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 Contains the contribution to profits of DAB Bank AG and its direktanlage.at AG subsidiary.

4 In accordance with approved financial statements.

5 In full-time equivalents.

Contact

Contacts

Should you have any questions about the annual report or our half-yearly financial report, please contact Media Relations by calling +49 (0)89 378-25801, faxing +49 (0)89 378-3325263

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Half-yearly Financial Report (English/German)

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UniCredit S.p.A. Profile

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Ethics and respect: Do the right thing!

UniCredit's Board and Senior Management consider that the way in which results are achieved is as important as the actual results. Therefore, the following Group Principles¹ should guide all employees' decisions and behaviors irrespective of seniority, responsibility and geographical area: **“Ethics and respect: Do the right thing!”**

Group Principles are designed to help all UniCredit employees, to guide their decision-making and their behaviours towards all stakeholders in their day to day activities.

In particular, such Principles require:

- compliance with the highest ethics standards – beyond banking regulation and beyond the law – in relationships with clients, colleagues, environment, shareholders and any other *stakeholders*;
- fostering a respectful, harmonious and productive workplace;

to best protect the Bank, its reputation and to be an employer and a counterparty of choice.

Group Principles underpin a set of core guidelines that further clarify expectations about the way to work as **One Team, One UniCredit** and support employees in the fulfillment of UniCredit *Five Fundamentals*. The spirit of each of these principles is extremely important and it will be the subject of more detailed policies that will be developed or updated in the coming months.

Group principles in day to day activities

- **Ethics as a guiding principle of fairness and respect towards all stakeholders in order to achieve sustainable results.**

UniCredit colleagues, irrespective of seniority, responsibility and geographical area, are expected to do the right thing in their daily activities and to be fair towards all stakeholders to gain and retain their trust.

- **“Ethics and respect” is a guiding principle which applies to all Group policies.**

The “Ethics and respect” principle is based on a long term view of the Group business activities and relationships with stakeholders as well as a comprehensive view of the internal and external working environment. Business policies require care to ensure that responsible sales approach work in harmony with balanced, fair and respectful customer interactions, enabling the achievement of sustainable business success and long-term targets. Targets and other business results are not considered achieved if they are not met in compliance with the Group Principles, related policies and the requirements that flow from them.

- **“Ethics and respect” is a guiding principle for interactions amongst all Group employees.**
 UniCredit colleagues are expected to contribute in their daily activities toward creating and maintaining a work environment that is as respectful and harmonious as possible, eliminating intimidating, hostile, degrading, humiliating or offensive behaviors and words. UniCredit must contribute to assuring the respect for the rights, value and dignity of people and the environment. All forms of harassment, bullying and sexual misconduct are unacceptable.
- **“Ethics and respect” is a guiding principle for the promotion of diversity and work life balance which are considered valuable assets.**
 UniCredit colleagues are expected to assure a workplace where all kinds of diversity (e. g. age, race, nationality, political opinions, religion, gender, sexual orientation) are not only respected, but also proactively promoted as well as to contribute to an environment in which respect for, and attention to, colleagues’ needs, health, work-life balance and well being are deemed essential to achieving sustainable results.
- **“Ethics and respect” is a guiding principle underpinning the reinforcement of a “Speak-up culture” and anti-retaliation protection.**
 UniCredit is firmly committed to promoting an environment in which colleagues and third parties feel comfortable engaging in open and honest communication. UniCredit encourages colleagues and third parties to speak up and raise promptly good-faith concerns without fear of retaliation relating to any situation that may involve unethical or illegal conduct or inappropriate interactions with others.

1. Which substitute the former group values.

Highlights

UniCredit is a simple successful pan-European Commercial Bank, with a fully plugged in CIB, delivering a unique Western, Central and Eastern European network to our extensive client franchise: 26 million clients.

UniCredit offers both local and international expertise providing its clients with unparalleled access to leading banks in its 14 core markets as well as in other 18 countries worldwide.

UniCredit European banking network includes Italy, Germany, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Romania, Russia, Serbia, Slovakia, Slovenia and Turkey.

Financial Highlights¹

Operating income
€ 19,723 m

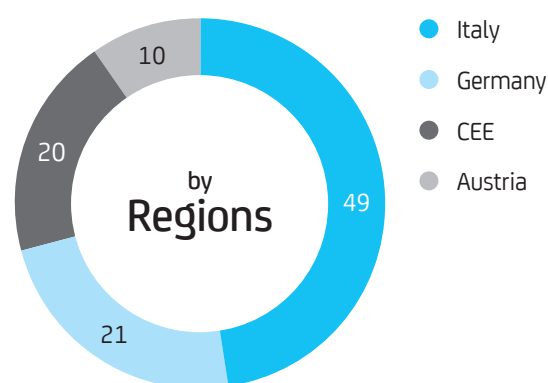
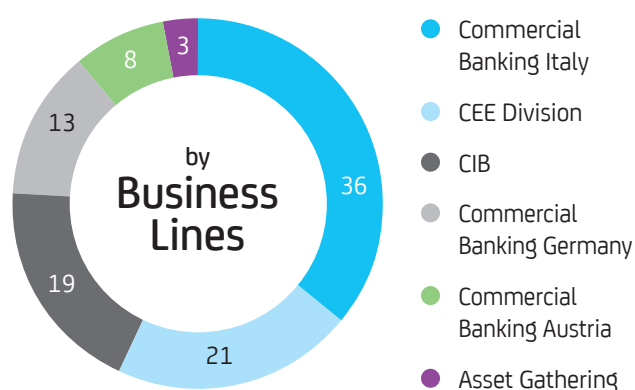
Net profit (loss)
€ 3,892 m

Shareholders' equity
€ 55,841 m

Total assets
€ 831,469 m

Common Equity Tier 1 ratio*
12.07%

Revenues¹ (%)



1. Data as at December 31, 2018.

* Fully loaded CET1 ratio.

A pan-European winner

European banks must continue to focus on their clients, supporting European companies aiming for international growth. Achieving both reach and scale is important, to provide customers with efficient products at the best possible price.

UniCredit is a successful pan-European banking group. We deliver the best products and services to our 26 million clients in 14 core markets, responding to their concrete needs. Our geographically diversified reach provides all our shareholders, clients and colleagues with greater security. And our “One Bank, One UniCredit” strategic approach combines central guidance with local implementation, to keep making our Group a pan-European winner.



Achievements 2018



Top Employers Institute: Top employer Europe 2018

Awarded thanks to local certification achieved in Bulgaria, Croatia, Germany, Italy and Russia



- The Banker: Bank of the Year in Italy 2018
- The Banker: Bank of the Year in Bosnia 2018



Euromoney: Trade Finance Survey 2019

#1 across 28 categories

Global Best Service Provider for: “All Services”, “Advisory”, “Financing/payments”, “Overall Execution” and “Products”



Digital Partnerships

Key transaction partnerships

- Apple Pay
- Samsung Pay
- Alipay
- Google Pay

Digital innovation for customers

- Alexa in Austria, to bank through Amazon’s voice assistant
- U-days in Italy, to promote knowledge of digital payments and payment apps:
Apple Pay, Samsung Pay, Alipay, Google Pay

Business Growth

Our positive overall financial performance proves our good progress in **strengthening the Group through strategic business initiatives and a focus on digitalisation and process simplification, leveraging on best practices across the Group**. This is already driving significant growth. As the banking industry continues to evolve, we will maintain our focus on changing customer needs, ensuring the future sustainability of our business.

In UniCredit, building the bank of tomorrow means:

- Constant focus on customer satisfaction and consistent service quality
- Continued review of processes to improve the customer experience and optimise cost, with a strong focus on risk management
- Further revenues growth

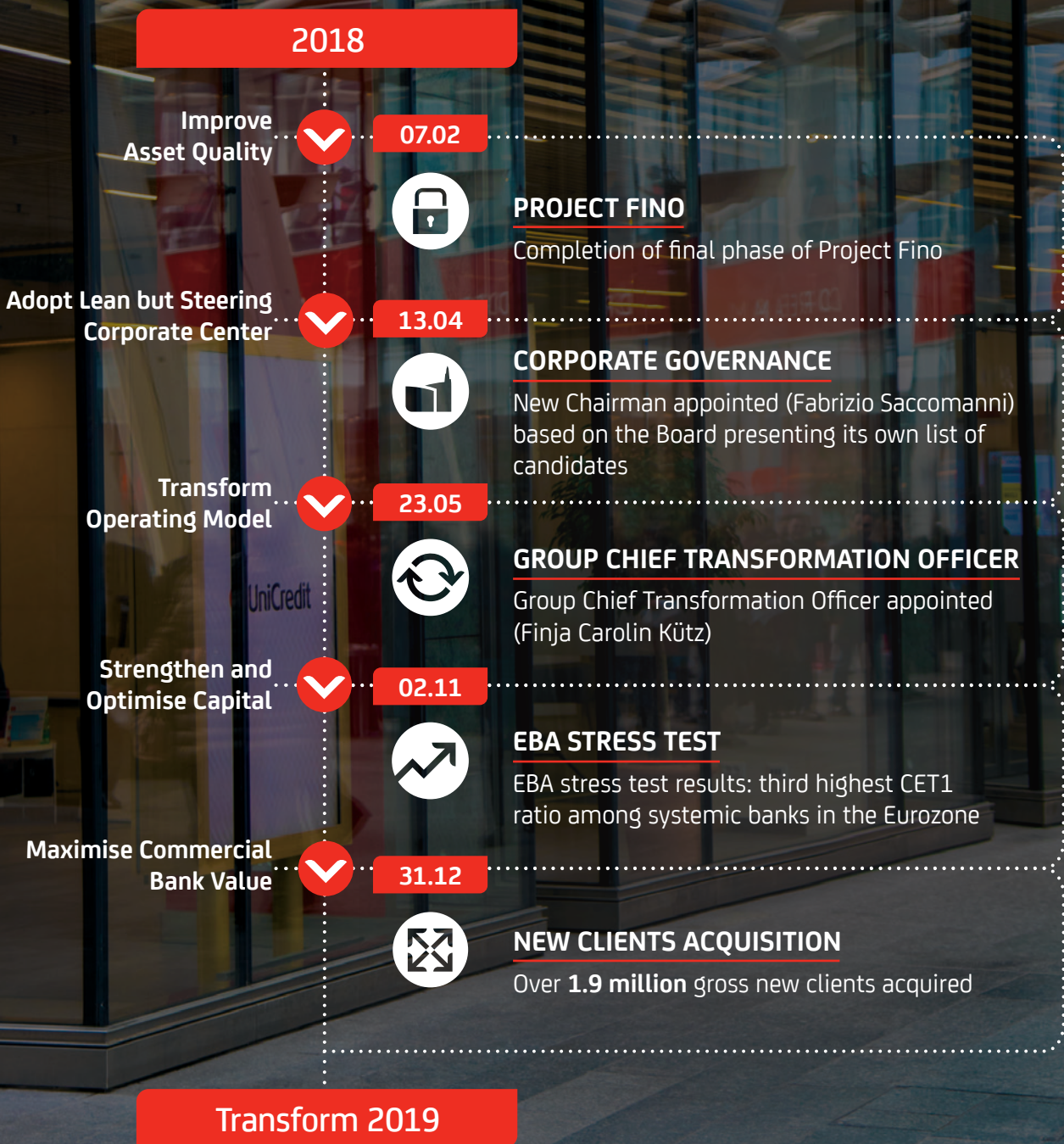
Key Performance Indicators

	FY 2017	FY 2018	FY 2019
Cost-Income Ratio	56.9%	54.2%	52-53%
Group Gross NPEs Ratio	10.33%	7.67%	7.5%
Revenues	19.9€bn	19.7€bn	19.8€bn

Transform 2019 Milestones

Through Transform 2019 – our strategic plan – we are building the bank of tomorrow.

Our strategy is clear and long-term: we are One Bank, One UniCredit – a simple, successful pan-European commercial bank with a fully plugged in CIB delivering a unique Western, Central and Eastern European network to our extensive client franchise. We are and we will remain a pan-European winner.



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.

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Banking that matters.

 **HypoVereinsbank**

Member of  **UniCredit**