Consolidated financial statements

Notes

A General disclosures

B Disclosure of interests in other entities

C Disclosures relating to the income statement and the statement of comprehensive income

Income statement
for the period January 1 to December 31, 2020

€ million	(Note)	2020	2019
Net interest income	(34)	2,797	2,738
Interest income		5,111	6,272
Interest income calculated using the effective interest method		5,087	5,725[1]
Interest income not calculated using the effective interest method		24	547
Current income and expense		82	83
Interest expense		-2,396	-3,617[1]
Net fee and commission income	(35)	2,121	1,975
Fee and commission income		4,267	4,044
Fee and commission expenses		-2,146	-2,069
Gains and losses on trading activities	(36)	552	472
Gains and losses on investments	(37)	166	182
Other gains and losses on valuation of financial instruments	(38)	-22	255
Gains and losses from the derecognition of financial assets measured at amortized cost	(39)	-2	15
Premiums earned	(40)	18,741	17,249
Gains and losses on investments held by insurance companies and other insurance company gains and losses	(41)	2,047	6,157
of which interest income calculated using the effective interest method		1,474	1,561
Insurance benefit payments	(42)	-17,499	-19,394[1]
Insurance business operating expenses	(43)	-2,922	-2,823
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business	(44)	-20	-15
Loss allowances	(45)	-678	-329
Administrative expenses	(46)	-4,036	-4,074
Other net operating income	(47)	210	250
Profit before taxes		1,455	2,658
Income taxes	(48)	-475	-778[1]
Net profit		**980**	**1,880**
Attributable to:			
Shareholders of DZ BANK		872	1,700[1]
Non-controlling interests		108	180

1 Amount restated (see note 2).

APPROPRIATION OF PROFITS

€ million	2020	2019
Net profit	980	1,880
Non-controlling interests	-108	-180
Appropriation to retained earnings	-293	-1,376
Unappropriated earnings	**579**	**324**

Statement of comprehensive income for the period January 1 to December 31, 2020

€ million	(Note)	2020	2019
Net profit		980	1,880
Other comprehensive income		521	1,422
Items that may be reclassified to the income statement		**748**	**1,170**
Gains and losses on debt instruments measured at fair value through other comprehensive income	(49)	1,143	1,700[1]
Exchange differences on currency translation of foreign operations	(49)	-32	-1
Gains and losses on hedges of net investments in foreign operations	(49)	3	3
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	(49)	-6	1
Income taxes	(50)	-360	-533[1]
Items that will not be reclassified to the income statement		**-227**	**252**
Gains and losses on equity instruments for which the fair value OCI option has been exercised		-97	476[1]
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk		-60	-96
Gains and losses arising from remeasurement of defined benefit plans		-119	-175
Income taxes	(50)	49	47[1]
Total comprehensive income		**1,501**	**3,302**
Attributable to:			
Shareholders of DZ BANK		1,346	2,978
Non-controlling interests		155	324

1 Amount restated (see note 2).

Balance sheet as at December 31, 2020

ASSETS

€ million	(Note)	Dec. 31, 2020	Dec. 31, 2019
Cash and cash equivalents	(14, 51)	68,354	52,545
Loans and advances to banks	(15, 52)	103,020	97,544
Loans and advances to customers	(15, 53)	190,294	186,224
Hedging instruments (positive fair values)	(16, 54)	161	211[1]
Financial assets held for trading	(17, 55)	42,846	44,771[1]
Investments	(18, 56)	60,232	56,927
Investments held by insurance companies	(57, 62)	121,668	113,549
Property, plant and equipment, investment property, and right-of-use assets	(19, 58, 62)	1,744	1,632
Income tax assets	(20, 59)	879	1,018
Other assets	(21, 60, 62)	5,516	5,444
Loss allowances	(22, 61)	-2,320	-2,277
Non-current assets and disposal groups classified as held for sale	(23, 63)	199	516
Fair value changes of the hedged items in portfolio hedges of interest-rate risk		1,980	1,368[1]
Total assets		**594,573**	**559,472**

1 Amount restated (see note 2).

EQUITY AND LIABILITIES

€ million	(Note)	Dec. 31, 2020	Dec. 31, 2019
Deposits from banks	(24, 64)	177,852	141,121
Deposits from customers	(24, 65)	133,925	131,516
Debt certificates issued including bonds	(25, 66)	70,500	85,123
Hedging instruments (negative fair values)	(16, 67)	2,638	2,018[1]
Financial liabilities held for trading	(17, 68)	50,404	51,050[1]
Provisions	(26, 69)	4,003	3,843[1]
Insurance liabilities	(11, 70)	111,213	104,346
Income tax liabilities	(20, 59)	1,229	1,069
Other liabilities	(21, 71)	10,243	9,165[1]
Subordinated capital	(27, 72)	3,090	2,187
Liabilities included in disposal groups classified as held for sale	(23, 63)	2	1
Fair value changes of the hedged items in portfolio hedges of interest-rate risk		315	237[1]
Equity	(73)	29,159	27,796
Shareholders' equity		26,066	24,787
Subscribed capital		4,926	4,926
Capital reserve		5,551	5,551
Retained earnings		10,553	10,055[1]
Reserve from other comprehensive income		2,212	1,686[1]
Additional equity components		2,245	2,245
Unappropriated earnings		579	324
Non-controlling interests		3,093	3,009
Total equity and liabilities		**594,573**	**559,472**

1 Amount restated (see note 2).

Statement of changes in equity

€ million	Subscribed capital	Capital reserve	Equity earned by the group	Reserve from other comprehensive income	Additional equity components	**Shareholders' equity**	Non-controlling interests	**Total equity**
Equity as at Jan. 1, 2019	4,926	5,551	8,854	599	845	20,775	2,737	23,512
Restatements according to IAS 8	-	-	1	-1	-	-	-	-
Equity restated as at Jan. 1, 2019	4,926	5,551	8,855	598	845	20,775	2,737	23,512
Net profit	-	-	1,700[1]	-	-	1,700	180	1,880
Other comprehensive income/loss	-	-	-114	1,392[1]	-	1,278	144	1,422
Total comprehensive income	**-**	**-**	**1,586**	**1,392**	**-**	**2,978**	**324**	**3,302**
Capital increase/capital repaid	-	-	-	-	1,400	1,400	9	1,409
Changes in scope of consolidation	-	-	3	-7	-	-4	-	-4
Acquisition/disposal of non-controlling interests	-	-	-7	1	-	-6	-7	-13
Reclassifications within equity	-	-	298	-298	-	-	-	-
Dividends paid	-	-	-322	-	-	-322	-54	-376
Distribution of dividend on additional equity components	-	-	-34	-	-	-34	-	-34
Equity as at Dec. 31, 2019	4,926	5,551	10,379	1,686	2,245	24,787	3,009	27,796
Net profit	-	-	872	-	-	872	108	980
Other comprehensive income/loss	-	-	-95	569	-	474	47	521
Total comprehensive income	**-**	**-**	**777**	**569**	**-**	**1,346**	**155**	**1,501**
Capital increase/capital repaid	-	-	-	-	-	-	-22	-22
Changes in scope of consolidation	-	-	-	-	-	-	5	5
Acquisition/disposal of non-controlling interests	-	-	3	-1	-	2	-12	-10
Reclassifications within equity	-	-	42	-42	-	-	-	-
Dividends paid	-	-	-	-	-	-	-42	-42
Distribution of dividend on additional equity components	-	-	-69	-	-	-69	-	-69
Equity as at Dec. 31, 2020	**4,926**	**5,551**	**11,132**	**2,212**	**2,245**	**26,066**	**3,093**	**29,159**

1 Amount restated (see note 2).

The composition of equity is explained in note 73.

Statement of cash flows

€ million	2020	2019
Net profit	**980**	1,880[1]
Non-cash items included in net profit and reconciliation to cash flows from operating activities		
Depreciation, amortization, impairment losses, reversals of impairment losses on assets, and other non-cash changes in financial assets and liabilities	879	-3,977
Non-cash changes in provisions	730	812[1]
Changes in insurance liabilities	6,612	10,815
Other non-cash income and expenses	837	1,531
Gains and losses on the disposal of assets and liabilities	-419	-619
Other adjustments (net)	-2,686	-2,564
Subtotal	6,933	7,878
Cash changes in assets and liabilities arising from operating activities		
Loans and advances to banks	-5,389	-5,883
Loans and advances to customers	-4,637	-6,505
Other assets from operating activities	1,341	238
Hedging instruments (positive and negative fair values)	-1,342	-1,892[1]
Financial assets and financial liabilities held for trading	1,763	73[1]
Deposits from banks	36,739	-734
Deposits from customers	2,617	-1,043
Debt certificates issued including bonds	-14,732	20,809
Other liabilities from operating activities	717	1,136[1]
Interest, dividends, and operating lease payments received	5,864	6,714[1]
Interest paid	-2,578	-3,672[1]
Income taxes paid	-394	-469
Cash flows from operating activities	**26,902**	**16,650**
Proceeds from the sale of investments	10,483	9,464
Proceeds from the sale of investments held by insurance companies	21,454	19,419[1]
Proceeds from the sale of property, plant and equipment, and investment property (excluding assets subject to operating leases)	37	7
Proceeds from the sale of intangible non-current assets	3	2
Payments for the acquisition of investments	-13,188	-17,730
Payments for the acquisition of investments held by insurance companies	-30,044	-27,523
Payments for the acquisition of property, plant and equipment, and investment property (excluding assets subject to operating leases)	-88	-74
Payments for the acquisition of intangible non-current assets	-316	-154
Changes in scope of consolidation	-85	131
of which proceeds from the sale of investments in consolidated subsidiaries net of cash divested	-	128
of which payments for the acquisition of investments in consolidated subsidiaries net of cash acquired	-85	-
Cash flows from investing activities	**-11,744**	**-16,458**
Proceeds from capital increases by shareholders of DZ BANK	-	1,400
Proceeds from capital increases by non-controlling interests	-	9
Dividends paid to shareholders of DZ BANK	-	-322
Dividends paid to non-controlling interests	-42	-54
Distribution of dividend on additional equity components	-69	-34
Other payments to non-controlling interests	-22	-
Net change in cash and cash equivalents from other financing activities (including subordinated capital)	784	-491[1]
Cash flows from financing activities	**651**	**508**

1 Amount restated (see note 2).

€ million	2020	2019
Cash and cash equivalents as at January 1	52,545	51,845
Cash flows from operating activities	26,902	16,650[1]
Cash flows from investing activities	-11,744	-16,458[1]
Cash flows from financing activities	651	508[1]
Cash and cash equivalents as at December 31	**68,354**	**52,545**

1 Amount restated (see note 2).

The statement of cash flows shows the changes in cash and cash equivalents during the financial year. Cash and cash equivalents consist of cash on hand and balances with central banks. The cash and cash equivalents do not include any financial investments with maturities of more than 3 months at the date of acquisition. Changes in cash and cash equivalents are broken down into operating, investing, and financing activities.

Cash flows from operating activities comprise cash flows mainly arising in connection with the revenue-producing activities of the group and other activities that cannot be classified as investing or financing activities. Cash flows related to the acquisition and disposal of non-current assets are allocated to investing activities. Cash flows from financing activities include cash flows arising from transactions with equity owners and from other borrowing to finance business activities, in particular from subordinated capital.

Cash payments from lessees in repayment of lease liabilities, which are included in cash flows from financing activities, amounted to €99 million (2019: €111 million) (amount restated, see note 2)).

In 2020, there were no cash inflows as a result of the first-time consolidation of subsidiaries (2019: cash inflow of €3 million).

Notes

A General disclosures

>> 01 Basis of preparation

Pursuant to *Regulation (EC) 1606/2002 of the European Parliament and of the Council of July 19, 2002*, the consolidated financial statements of DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main, (DZ BANK) for the 2020 financial year have been prepared in accordance with the provisions of the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU).

The provisions specified in section 315e (1) of the German Commercial Code (HGB) for companies whose securities are admitted to trading on a regulated market in the EU have also been applied in the consolidated financial statements of DZ BANK. In addition, further standards adopted by Deutsches Rechnungslegungs Standards Committee e.V. [German Accounting Standards Committee] have generally been taken into account where such standards have been published in the German Federal Gazette by the Bundesministerium der Justiz und für Verbraucherschutz [Federal Ministry of Justice and Consumer Protection] pursuant to section 342 (2) HGB.

DZ BANK is entered in the commercial register at the Frankfurt am Main local court under the number HRB 45651.

The DZ BANK Group's financial year is the same as the calendar year. In the interest of clarity, some items on the income statement, the statement of comprehensive income, and the balance sheet have been aggregated and are explained by additional disclosures in the notes. Unless stated otherwise, all amounts are shown in millions of euros (€ million). All figures are rounded to the nearest whole number. This may result in very small discrepancies in the calculation of totals and percentages.

The consolidated financial statements of DZ BANK have been released for publication by the Board of Managing Directors following approval by the Supervisory Board on March 25, 2021.

>> 02 Accounting policies and estimates

Changes in accounting policies

The financial statements of the entities consolidated in the DZ BANK Group have been prepared using uniform accounting policies.

First-time application in 2020 of changes in IFRS
The following amendments to IFRS are applied for the first time in DZ BANK's consolidated financial statements for the 2020 financial year:

- *Amendments to References to the Conceptual Framework in IFRS Standards*,
- *Definition of a Business* (Amendments to IFRS 3),
- *Definition of Material* (Amendments to IAS 1 and IAS 8),
- *Interest Rate Benchmark Reform – Phase I* (Amendments to IFRS 9, IAS 39 and IFRS 7),
- *COVID-19-Related Rent Concessions* (Amendment to IFRS 16 Leases).

The changes contained in *Amendments to References to the Conceptual Framework in IFRS Standards* became necessary because the Conceptual Framework had been revised, which meant that quotations from, and references to, the Conceptual Framework included in numerous standards and other pronouncements issued by the IASB had to be updated. Besides these changes, some of which are simply editorial, the amendments also include, in particular, clarification as to which version of the Conceptual Framework needs to be applied in individual cases. Depending on the matter concerned, users must comply with the 2001, 2010, or 2018 version of the Conceptual Framework. Where necessary, the amendments include an initial application date, which has been set in all cases as annual periods beginning on or after January 1, 2020. The implementation of the amendments had no material impact on the consolidated financial statements.

The aim of *Definition of a Business* (Amendments to IFRS 3) is to establish a better distinction between the acquisition of a business and the acquisition of a group of assets. To satisfy the new definition of the term ‘business’, an acquisition must include inputs and a substantive process that together significantly contribute to the ability to create outputs. The amended definition must be applied to all acquisitions for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020. There was no material impact on the consolidated financial statements.

The objective of *Definition of Material* (Amendments to IAS 1 and IAS 8) is to tighten up the definition of the term ‘material’ without fundamentally altering the application of the principle of materiality. In particular, the amendments introduce the new notion of ‘obscuring information’ and place ‘obscuring’ on a par with omitting or misstating information. The amendments are to be applied prospectively to financial years beginning on January 1, 2020. There was no impact on the consolidated financial statements.

Interest-Rate Benchmark Reform – Phase I (Amendments to IFRS 9, IAS 39 and IFRS 7) provides for temporary exceptions in relation to the accounting treatment of hedges in the period before the initiated reform of key interest-rate benchmarks, such as Euribor, Libor, and EONIA (interbank offered rate (IBOR) reform). The scope of the exceptions covers those hedges directly affected by the IBOR reform. A hedge is only directly affected if the reform leads to uncertainties in relation to the interest rate designated as the hedged risk or in relation to the timing or amount of the cash flows from the hedged item or hedging instrument based on interest-rate benchmarks.

When, in accordance with IFRS 9 or IAS 39, an entity determines whether the cash flows arising from a forecast transaction in a cash flow hedge are highly probable, the exceptions specify that the entity must assume that the interest-rate benchmark on which the hedged cash flows are based is not altered as a result of the reform. Correspondingly, when assessing the need to reclassify the cash flow hedge reserve to profit or loss, an entity must assume that the hedged cash flows will still materialize at the end of the hedging relationship. If an entity hedges a component of interest-rate risk, the risk component concerned must be separately identifiable. The entity only needs to ensure that this requirement is satisfied once when the component is first designated as a hedged item. When assessing the economic relationship between the hedged item and the hedging instrument in accordance with the requirements of IFRS 9, an entity must also assume that the interest-rate benchmark on which the designated cash flows and/or the hedged risk in the hedged item are based, or the interest-rate benchmark on which the cash flows from the hedging instrument are based, is not altered as a result of the interest-rate benchmark reform.

Prospective assessments of hedge effectiveness in accordance with the requirements of IAS 39 must be based on an unchanged interest-rate benchmark. If the retrospective assessment of a hedge in accordance with IAS 39 determines ineffectiveness outside the range of 80 percent to 125 percent, hedge accounting is not discontinued.

The amendments require disclosures containing information on the extent to which the reform of interest-rate benchmarks have an impact on existing hedges. The application of the exceptions is mandatory until the uncertainty arising from the switch in interest-rate benchmarks is eliminated or, if earlier, the hedge is terminated. In addition, the exception regarding the reclassification of the cash flow hedge reserve no longer needs to be applied if the reserve has been reclassified in full to profit or loss. The rules are required to be applied for the first time to financial years beginning on or after January 1, 2020.

The DZ BANK Group only accounts for hedges of interest-rate risk (fair value hedges). In this accounting treatment, it applies the rules of IAS 39 to hedges using a portfolio approach. The hedging instruments reference interest rates of the Euribor and Libor group. Euribor is expected to be retained in its current form as an interest-rate benchmark for the foreseeable future. Libor is expected to be replaced with effect from January 1, 2022, although major USD Libor tenors (overnight, 1-month, 3-month, 6-month, and 12-month) are not likely to be replaced until June 2023. Further disclosures on the IBOR reform are presented in note 84.

COVID-19-Related Rent Concessions (Amendment to IFRS 16) gives lessees an option that enables them to simplify the accounting treatment of concessions, such as the deferral or reduction of rental payments, that are granted in connection with the COVID-19 pandemic. By exercising this option, lessees do not account for these rent concessions as lease modifications. This eliminates the need for preparers of financial statements to review all of their leases and rental agreements, carry out a legal assessment of the individual rent concessions in the context of the specific contractual arrangements and, if necessary, determine new discount rates.

Full retrospective application for reporting periods beginning on or after June 1, 2020 is envisaged. The DZ BANK Group is not making use of this relief.

Changes in IFRS endorsed by the EU but not yet adopted

The DZ BANK Group has decided against voluntary early adoption of the following amendments to IFRS:

– *Interest Rate Benchmark Reform – Phase 2* (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16),
– *Extension of the Temporary Exemption from Applying IFRS 9* (Amendments to IFRS 4 Insurance Contracts).

Interest Rate Benchmark Reform – Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16) follows on from the amendments in 2019 and apply if, because of the reform, a reporting entity replaces an interest-rate benchmark with an alternative, nearly risk-free interest rate. The amendments provide a practical expedient in the event of contract modifications or cash flow modifications that are required as a direct consequence of the IBOR reform and made on an economically equivalent basis. Under these circumstances, the modification required as a result of the IBOR reform has to be accounted for as a modification of a variable interest rate in accordance with IFRS 9.B5.4.5 and not recognized in the modification gain or loss. Instead, application of IFRS 9.B5.4.5 permits subsequent measurement on the basis of the updated effective interest rate and thus recognition of the effect of the economically equivalent modification over the remaining term. For all other modifications made at the same time but not as a direct consequence of the IBOR reform, the effect of derecognizing the modifications has to be analyzed. Derecognition is required in the event of substantial modifications. Where modifications are not substantial, the updated effective interest rate is used to recalculate the carrying amount of the financial instrument.

In addition, temporary relief is offered that enables the continuation of hedge accounting after transition to the new interest-rate benchmarks if the modifications are made solely as a result of the benchmark interest-rate reform. Relief is also offered where there are separately identifiable risk components. The amendments do not offer relief for hedge ineffectiveness caused by the IBOR reform, which has to be recognized in profit or loss in accordance with IFRS 9. Furthermore, the amendments contain minor changes to IFRS 16 and IFRS 4 and additional disclosure requirements in accordance with IFRS 7.

The amendments must be applied retrospectively to financial years beginning on or after January 1, 2021. A hedge has to be reinstated if it was discontinued solely due to changes required by the interest-rate benchmark reform and would not have been discontinued if the phase 2 amendments had been applied at that time. The DZ BANK Group has decided against early application of these amendments. No material impact on the consolidated financial statements is expected.

The objective of *Extension of the Temporary Exemption from Applying IFRS 9* (Amendments to IFRS 4 Insurance Contracts) is to address temporary accounting consequences that arise because of the different effective dates of IFRS 9 *Financial Instruments* and the forthcoming IFRS 17 *Insurance Contracts*.

According to the EU regulation specifying adoption for financial years beginning on or after January 1, 2021, entities that predominantly undertake insurance activities – including the insurance divisions of financial conglomerates – can opt to be exempt from IFRS 9 until January 1, 2023. The insurance companies in the DZ BANK Group are not exercising this option.

Changes in IFRS that have not been endorsed by the EU

The following new accounting standard issued by the IASB, the listed amendments to a number of accounting standards, and improvements to IFRS have not yet been endorsed by the EU:

- IFRS 17 *Insurance Contracts*,
- Amendments to IFRS 17 *Insurance Contracts*,
- Amendments to IAS 1 *Presentation of Financial Statements – Classification of Liabilities as Current or Non-current*,
- Amendments to IFRS 3 *Business Combinations*,
- Amendments to IAS 16 *Property, Plant and Equipment*,
- Amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*,
- Amendments to IAS 1 *Presentation of Financial Statements* and IFRS Practice Statement 2 – *Disclosure of Accounting Policies*,
- Amendments to IAS 8 *Accounting policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates*,
- *Annual Improvements to IFRSs 2018–2020 Cycle.*

IFRS 17 *Insurance Contracts* supersedes IFRS 4 *Insurance Contracts* and has the objective of ensuring consistent, principles-based accounting treatment of all insurance contracts. It includes principles for recognition, measurement, presentation, and disclosures in respect of insurance contracts and requires insurance liabilities to be measured using the latest amount equating to the fulfillment cash flows. In the general model, measurement is based on a ‘3 building blocks’ approach. Insurance contracts with a term of less than a year can be recognized using a simplified method, the premium allocation approach.

The amendments to IFRS 17 *Insurance Contracts* contain a number of individual changes with which the IASB wants to help entities implement the standard without significantly reducing the usefulness of disclosed information. As a result of the amendments, the date of mandatory initial application of IFRS 17 was postponed by two years to January 1, 2023. The group companies are currently examining the impact of IFRS 17 on DZ BANK's consolidated financial statements.

The objective of Amendments to IAS 1 *Presentation of Financial Statements* and IFRS Practice Statement 2 – *Disclosure of Accounting Policies* is to clarify that the classification of liabilities as current or non-current should be based on the entity's rights that are in existence at the end of the reporting period. The amendments must be applied retrospectively to financial years beginning on or after January 1, 2023. No material impact on DZ BANK's consolidated financial statements is expected.

The amendments to IFRS 3 *Business Combinations* update the references therein to the revised IFRS Conceptual Framework. The amendments also specify that when assumed liabilities and contingent liabilities within the scope of IAS 37 or IFRIC 21 are recognized, the definitions in these standards should be used rather than the different definitions in the revised Conceptual Framework. The rules on contingent assets are also clarified.

The amendments to IAS 16 *Property, Plant and Equipment* clarify that proceeds from selling items produced using an asset during a test run are recognized directly in profit or loss.

The amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* relate to costs that an entity should include as the cost of fulfilling a contract when assessing whether a contract is onerous. When determining the cost of fulfilling a contract, the entity must include all costs that relate directly to the contract.

As a result of the *Annual Improvements to IFRSs 2018–2020 Cycle*, the '10 percent test' for present value, which has to be carried out according to IFRS 9 as part of the derecognition assessment for financial liabilities, will only be able to include those fees paid or received between the entity and the lender.

The amendments to IFRS 3, IAS 16, and IAS 37 and the *Annual Improvements to IFRSs 2018–2020 Cycle* must be applied for the first time to financial years beginning on January 1, 2022. No material impact on DZ BANK's consolidated financial statements is expected.

The amendments to IAS 1 *Presentation of Financial Statements* and IFRS Practice Statement 2 – *Disclosure of Accounting Policies* require entities to disclose their material accounting policies. The amendments to IAS 1 must be applied for the first time to financial years beginning on or after January 1, 2023; early adoption is permitted. No material impact on DZ BANK's consolidated financial statements is expected.

The objective of Amendments to IAS 8 *Accounting policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates* is to provide clarification in order to help entities to distinguish between changes to accounting policies and changes to accounting estimates. The amendments to IAS 8 must be applied for the first time to financial years beginning on or after January 1, 2023; early adoption is permitted. The DZ BANK Group will take the clarification into consideration when assessing accounting matters after the date of initial application.

The initial application dates for the issued amendments to IFRS are subject to the proviso that the amendments must first be incorporated into EU law.

Changes in presentation

In accordance with the provisions of IAS 8.41 et seq., amounts relating to the recognition of portfolio hedges, which were previously netted in the income statement and on the balance sheet, are presented without being netted from the 2020 financial year onward. The adjusted amounts within the comparative figures are indicated by the footnote 'Amount restated'.

Income statement for the period January 1 to December 31, 2019

€ million	2019 before restatement	Amount of restatement	2019 after restatement
Net interest income	2,738	-	2,738
Interest income	6,281	-9	6,272
Interest income calculated using the effective interest method	5,734	-9	5,725
(…)			
Interest expense	-3,626	9	-3,617
(…)			
Profit before taxes	2,712	-	2,712
Income taxes	-839	-	-839
Net profit	**1,873**	**-**	**1,873**

Balance sheet as at December 31, 2019

ASSETS

€ million	Dec. 31, 2019 before restatement	Amount of restatement	Dec. 31, 2019 after restatement
(…)			
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	1,275	93	1,368
(…)			
Total assets	**559,379**	**93**	**559,472**

EQUITY AND LIABILITIES

€ million	Dec. 31, 2019 before restatement	Amount of restatement	Dec. 31, 2019 after restatement
(…)			
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	144	93	237
(…)			
Total equity and liabilities	**559,379**	**93**	**559,472**

The amounts did not need to be restated as at January 1, 2019 because the accounting rule did not apply.

For fully consolidated special funds of the personal insurance providers, deferred taxes on measurement differences in respect of equity instruments and debt instruments are recognized, not in profit or loss as was previously the case, but in other comprehensive income from the 2020 financial year onward, in accordance with the provisions of IAS 8.41 et seq. As a result, the amounts shown for insurance benefit payments and income taxes in the income statement have been restated. The amounts shown for retained earnings and the reserve from other comprehensive income on the balance sheet have also been restated. The adjusted amounts within the comparative figures are indicated by the footnote ‘Amount restated’.

Income statement for the period January 1 to December 31, 2019

€ million	2019 before restatement	Amount of restatement	2019 after restatement
(…)			
Insurance benefit payments	-19,340	-54	-19,394
(…)			
Profit before taxes	2,712	-54	2,658
Income taxes	-839	61	-778
Net profit	**1,873**	**7**	**1,880**

Balance sheet as at January 1, 2019

EQUITY AND LIABILITIES

€ million	Jan. 1, 2019 before restatement	Amount of restatement	Jan. 1, 2019 after restatement
(…)			
Equity	23,512	-	23,512
Shareholders' equity	20,775	-	20,775
(…)			
Retained earnings	8,530	1	8,531
Reserve from other comprehensive income	599	-1	598
(…)			
Total equity and liabilities	**518,733**	**-**	**518,733**

Balance sheet as at December 31, 2019

EQUITY AND LIABILITIES

€ million	Dec. 31, 2019 before restatement	Amount of restatement	Dec. 31, 2019 after restatement
(…)			
Equity	27,796	-	27,796
Shareholders' equity	24,787	-	24,787
(…)			
Retained earnings	10,047	8	10,055
Reserve from other comprehensive income	1,694	-8	1,686
(…)			
Total equity and liabilities	**559,379**	**-**	**559,379**

In accordance with the provisions of IAS 8.41 et seq., upfront payments for acquired financial instruments with a positive or negative fair value, which were previously recognized under financial assets held for trading and financial liabilities held for trading, are treated in a more nuanced way on the balance sheet from the 2020 financial year onward. The upfront payments attributable to hedging instruments will now be recognized as hedging instruments (positive fair values) and hedging instruments (negative fair values). The adjusted amounts within the comparative figures are indicated by the footnote 'Amount restated'.

Balance sheet as at December 31, 2019

ASSETS

€ million	Dec. 31, 2019 before restatement	Amount of restatement	Dec. 31, 2019 after restatement
(…)			
Hedging instruments (positive fair values)	201	10	211
Financial assets held for trading	44,781	-10	44,771
(…)			
Total assets	559,379	-	559,379

EQUITY AND LIABILITIES

€ million	Dec. 31, 2019 before restatement	Amount of restatement	Dec. 31, 2019 after restatement
(…)			
Hedging instruments (negative fair values)	1,306	712	2,018
Financial liabilities held for trading	51,762	-712	51,050
(…)			
Total equity and liabilities	559,379	-	559,379

In accordance with the provisions of IAS 8.41 et seq., various amounts relating to collateral are restated in the disclosures on maximum credit risk in note 81 (Collateral) and note 85 (Nature and extent of risks arising from financial instruments and insurance contracts) from the 2020 financial year onward. The adjusted amounts within the comparative figures are indicated by the footnote 'Amount restated'.

In accordance with the provisions of IAS 8.41 et seq., various amounts are restated within the maturity bands in note 86 (Maturity analysis) from the 2020 financial year onward. The adjusted amounts within the comparative figures are indicated by the footnote 'Amount restated'.

There are other minor presentation changes in the statement of cash flows and in notes 59 (Income tax assets and liabilities), 62 (Changes in non-current assets), 78 (Financial liabilities designated as at fair value through profit or loss), and 92 (Leases). There are also minor presentation changes in the information on BSH, TeamBank, DZ HYP, and VR Smart Finanz in note 99 (Share-based payment transactions) and related presentation changes in notes 69 (Provisions) and 71 (Other liabilities). The adjusted amounts within the comparative figures are indicated by the footnote 'Amount restated'.

Sources of estimation uncertainty

It is necessary to make assumptions and estimates in accordance with the relevant financial reporting standards in order to determine the carrying amounts of assets, liabilities, income, and expenses recognized in the consolidated financial statements. These assumptions and estimates are based on historical experience, planning, and expectations or forecasts regarding future events.

Assumptions and estimates are used primarily in determining the fair value of financial assets and financial liabilities and in identifying any impairment of financial assets. Estimates also have a material impact on determining the impairment of goodwill or intangible assets acquired as part of business combinations. Furthermore, assumptions and estimates affect the measurement of right-of-use assets, insurance liabilities, provisions for employee benefits, provisions for share-based payment transactions, provisions relating to building society operations, and other provisions as well as the recognition and measurement of income tax assets and income tax liabilities.

Fair values of financial assets and financial liabilities

If there are no prices available for certain financial instruments from active markets, the fair values of such financial assets and financial liabilities have to be determined on the basis of estimates, resulting in some uncertainty. Uncertainties associated with estimates arise primarily if fair values are determined using valuation techniques involving significant valuation parameters that are not observable in the market. This affects both financial instruments measured at fair value and financial instruments measured at amortized cost whose fair values are disclosed in the notes. The measurement parameter assumptions and measurement methods used to determine fair values are described in the financial instruments disclosures in notes 76 and 77.

Impairment of financial assets

When an impairment test (as described in note 5) is carried out for financial assets that constitute debt instruments or for loan commitments and financial guarantee contracts, it is necessary to determine estimated future cash flows from interest payments and the repayment of principal as well as from any recovery of collateral. This requires estimates and assumptions regarding the amount and timing of future cash flows, in turn giving rise to some uncertainty. The factors influencing impairment that are defined on a discretionary basis include economic conditions, the financial performance of the counterparty, and the value of the collateral held. When an impairment test for portfolios is carried out, parameters such as probability of default, which are calculated with the help of statistical models, are used in the estimates and assumptions.

Goodwill and intangible assets

The recognition of goodwill is largely based on estimated future income, synergies, and non-recognizable intangible assets generated by business combinations or acquired as part of business combinations. The recoverability of the carrying amount is verified by means of budget accounts that are largely based on estimates. Identifiable intangible assets acquired as part of business combinations are recognized on the basis of their future economic benefits. These benefits are assessed by management using reasonable, well-founded assumptions. The estimates applied in the case of business combinations are described in note 91.

Right-of-use assets

The measurement of right-of-use assets (as described in note 12) involves the use of assumptions and estimates, especially in relation to estimated future cash flows, term, and discount rate. Estimates also have a material impact on determining the impairment of right-of-use assets.

Insurance liabilities

The measurement of insurance liabilities involves the exercise of discretion, estimates, and assumptions, especially in relation to mortality, rates of return on investment, cancellations, and costs. Actuarial calculation methods, statistical estimates, blanket estimates, and measurements based on past experience are used. The basic approaches used in the measurement of insurance liabilities are described in the insurance business disclosures in note 11.

Provisions for employee benefits, provisions for share-based payment transactions, and other provisions

Uncertainty associated with estimates in connection with provisions for employee benefits arises primarily from the measurement of defined benefit obligations, on which actuarial assumptions have a material effect. Actuarial assumptions are based on a large number of long-term, forward-looking factors, such as salary increases, annuity trends, and average life expectancy.

In the case of provisions for share-based payment transactions, estimation uncertainty arises from the way in which fair value is determined. This fair value is based on assumptions regarding the payout amount, which in turn depends on the performance of the variables specified in the underlying agreements.

In order to measure provisions relating to building society operations, building society simulations (collective simulations) that forecast home savings customers' future behavior are used that are available for evaluation of the options. These options available to home savings customers include, for example, drawing down the home savings loan, waiving the loan after allocation, or continuing with the home savings contract. Uncertainty in connection with the measurement of the provisions may arise depending on the extent to which the assumptions about future customer behavior – taking account of various interest-rate scenarios and management measures – that were forecast using collective simulation actually materialize in the future. The main inputs for the collective simulations are presented in note 26.

Actual cash outflows in the future related to items for which other provisions have been recognized may differ from the forecast utilization of the provisions.

The basis for measurement and the assumptions and estimates underlying the calculation of provisions are described in note 26.

Income tax assets and liabilities

The deferred tax assets and liabilities described in note 59 are calculated on the basis of estimates of future taxable income in taxable entities. In particular, these estimates have an effect on any assessment of the extent to which it will be possible to make use of deferred tax assets in the future. In addition, the calculation of current tax assets and liabilities for the purposes of preparing financial statements involves estimates of details relevant to income tax.

The COVID-19 pandemic has not given rise to any further sources of estimation uncertainty with regard to the calculation of the carrying amounts of assets, liabilities, income, and expenses. The pandemic particularly affects the familiar assumptions and estimates used to calculate the fair values of investments, investments held by insurance companies, and financial liabilities held for trading. COVID-19 also impacts on the calculation of loss allowances and on the assumptions and estimates used in this calculation, which are described in note 45.

>> 03 Scope of consolidation

In addition to DZ BANK as the parent, the consolidated financial statements for the year ended December 31, 2020 include 26 subsidiaries (2019: 25) and 6 subgroups (2019: 6) comprising a total of 151 subsidiaries (2019: 159). An investee is included in the scope of consolidation as a subsidiary from the date on which DZ BANK obtains control over it. DZ BANK controls an investee when DZ BANK directly or indirectly has power over the investee, is therefore exposed to significant variable returns from its involvement with the investee, and has the ability to affect the variable returns from the investee through this power. In some cases, discretion is required to be exercised when deciding whether DZ BANK controls an investee. All the relevant facts and circumstances are considered when making this decision. This is particularly applicable to principal/agent relationships, which require an assessment of whether DZ BANK or other parties with decision-making rights are acting as principal or as an agent. With regard to principal/agent relationships, a considerable amount of discretion has to be exercised in order to assess the appropriateness of contractually agreed remuneration and of the level of the variable returns received.

The main change to the scope of consolidation in 2020 was the addition in the UMH subgroup of ZBI Partnerschafts-Holding GmbH, Erlangen, which had previously been accounted for using the equity method, and its 3 subsidiaries.

The consolidated financial statements include 6 joint arrangements in the form of joint ventures with at least one other entity outside the group (2019: 12) and 25 associates (2019: 29) over which DZ BANK has significant influence. These entities are accounted for using the equity method. There are currently no joint arrangements classified as joint operations. DZ BANK has joint control over an arrangement when there is a contractual agreement in place that requires decisions about the arrangement's relevant activities to be reached with the unanimous consent of all the parties sharing control. DZ BANK has a significant influence over an investee if it can participate in the financial and operating policy decisions of the investee without having control or joint control over it. This is assumed to be the case where between 20 and 50 percent of the voting shares are held.

The shareholdings of the DZ BANK Group are listed in full in note 105.

>> 04 Procedures of consolidation

Financial information in the consolidated financial statements contains data from the parent company, which incorporates data from its consolidated subsidiaries. The parent company and the consolidated subsidiaries are presented as a single economic entity.

The subsidiaries of the DZ BANK Group are the directly or indirectly controlled entities. An entity is deemed to be controlled by DZ BANK if the bank is exposed to variable returns from its relationship with the entity and can affect those returns through its power over the entity.

Unless otherwise contractually agreed, DZ BANK controls an entity if it holds more than half of the voting rights, either directly or indirectly. The assessment of whether control exists also takes account of potential voting rights, provided they are considered substantial.

DZ BANK also considers itself to have control over an entity in cases where it does not hold the majority of the voting rights but does have the ability to unilaterally direct the relevant activities of the entity concerned.

A review is carried out at least once every six months to decide which subsidiaries are to be consolidated.

When preparing the consolidated financial statements, uniform accounting policies are used for like transactions.

The consolidated subsidiaries prepared their financial statements on the basis of a financial year ended December 31, 2020. In 2019, one subsidiary had been included in the consolidated financial statements that had a different reporting date for its annual financial statements. With 20 (2019: 21) exceptions, the separate financial statements of the entities accounted for using the equity method are prepared to the same balance sheet date as that of the parent company. There is no resulting material impact in respect of the subsidiaries and associates concerned, and therefore no interim financial statements have been prepared.

Intragroup assets and liabilities, as well as intragroup income and expenses, are eliminated in full. Intragroup profits or losses resulting from transactions within the group are also eliminated in full.

When a subsidiary is consolidated, the carrying amount of the investment in the subsidiary is offset against the proportionate equity of the subsidiary. Any share of a subsidiary's equity not attributable to the parent company is reported under equity as non-controlling interests.

Goodwill resulting from offsetting the acquisition cost of a subsidiary against the equity remeasured at fair value on the acquisition date is recognized as goodwill when the acquisition method is applied. It is recognized under other assets. Goodwill is tested for impairment at least once a year. Any negative goodwill is recognized in profit or loss on the acquisition date.

If DZ BANK loses control over a subsidiary, the assets and liabilities of this former subsidiary, together with the carrying amount of any non-controlling interests in the former subsidiary, are derecognized when control is lost. The fair value of any consideration received is recognized at the same time. The gain or loss arising in connection with the loss of control is also recognized.

Investments in joint ventures and associates are accounted for using the equity method and reported on the balance sheet under investments or investments held by insurance companies.

Under the equity method, the DZ BANK Group's investments in associates and joint ventures are initially recognized at cost. Subsequently, the carrying amount is increased (or decreased) to recognize the group's share of the profit/loss or other changes to the net assets of the associate or joint venture after the acquisition.

If significant influence over an associate or joint venture is lost, the gain or loss arising from the disposal of the long-term equity investment accounted for under the equity method is recognized.

>> 05 Financial instruments

Categories of financial instruments

Financial assets measured at fair value through profit or loss (fair value PL)

Financial assets that are not measured at amortized cost or at fair value through other comprehensive income are classified as 'financial assets measured at fair value through profit or loss'. This category is broken down into the following subcategories:

Financial assets mandatorily measured at fair value through profit or loss

The subcategory 'financial assets mandatorily measured at fair value through profit or loss' covers financial assets that do not meet the IFRS 9 SPPI criterion or that were acquired for the purpose of selling them in the near term. To this end, these financial assets must be part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking, or must be derivatives, except for derivatives that are designated hedging instruments.

Contingent considerations in a business combination

This subcategory covers contingent considerations that the acquirer has classified as financial assets in the context of a business combination.

Financial assets designated as at fair value through profit or loss (fair value option)

Financial assets may be assigned to the subcategory 'financial assets designated as at fair value through profit or loss' by exercising the fair value option, provided that the application of this option eliminates or significantly reduces measurement or recognition inconsistencies (accounting mismatches). The fair value option is applied to eliminate or significantly reduce accounting mismatches that arise if non-derivative financial instruments and related derivatives used to hedge such instruments are measured differently. Derivatives are measured at fair value through profit or loss, whereas non-derivative financial instruments are measured at amortized cost or changes in fair value may be recognized in other comprehensive income. If no hedge accounting takes place, this gives rise to accounting mismatches that can be significantly reduced by applying the fair value option. The fair value option is used in the context of financial assets to prevent accounting mismatches that could arise in connection with loans and advances to banks and customers and bearer bonds.

Financial assets measured at fair value through other comprehensive income (fair value OCI)

This category is broken down into the following subcategories:

Financial assets mandatorily measured at fair value through other comprehensive income

A financial asset is assigned to this subcategory if it is held in accordance with a business model aimed both at collecting contractual cash flows and at selling financial assets. Moreover, the contractual terms of the financial asset must give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding (SPPI criterion).

Because of the SPPI criterion, these financial assets only comprise debt instruments. They are measured at fair value. Interest income, loss allowances, and currency translation effects must be recognized in profit or loss. Differences between the amortized cost and the fair value are recognized in other comprehensive income. The amounts recognized in other comprehensive income must be recycled to the income statement upon derecognition.

Financial assets designated as at fair value through other comprehensive income (fair value OCI option)

There is an irrevocable option to designate equity instruments as 'financial assets designated as at fair value through other comprehensive income' (fair value OCI option) upon initial recognition. Changes in fair value are recognized in other comprehensive income, except in the case of dividends that do not constitute repayment of capital. The cumulative other comprehensive income is not subsequently recycled to the income statement, e.g. due to derecognition of the instrument. After derecognition of these equity instruments, the cumulative other comprehensive income is reclassified to retained earnings. The fair value OCI option can generally only be exercised for equity instruments that are not held for trading and do not constitute contingent consideration recognized by the acquirer in a business combination pursuant to IFRS 3.

Financial assets measured at amortized cost (AC)

A financial asset is assigned to this category if it is held in accordance with a business model aimed at holding financial assets for the purpose of collecting contractual cash flows. The contractual terms of the financial asset must give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Because of the SPPI criterion, financial assets in this category only comprise debt instruments. They are measured at amortized cost using the effective interest method. Interest income, loss allowances, and currency translation effects must be recognized in profit or loss.

Financial liabilities measured at fair value through profit or loss (fair value PL)

Financial liabilities that are not measured at amortized cost are classified as 'financial liabilities measured at fair value through profit or loss'. This category is broken down into the following subcategories:

Financial liabilities mandatorily measured at fair value through profit or loss

The subcategory 'financial liabilities mandatorily measured at fair value through profit or loss' covers financial liabilities that are issued with the intention of repaying them in the near term. To this end, these financial liabilities must be part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking, or must be derivatives, except for derivatives that are designated hedging instruments.

Contingent considerations in a business combination

This subcategory covers contingent considerations that the acquirer has classified as financial liabilities in the context of a business combination.

Financial liabilities designated as at fair value through profit or loss (fair value option)

Financial liabilities may be assigned to the 'financial instruments designated as at fair value through profit or loss' subcategory by exercising the fair value option, provided that the application of this option eliminates or significantly reduces measurement or recognition inconsistencies (accounting mismatches), the financial liabilities are managed as a portfolio on a fair value basis, or they include one or more embedded derivatives required to be separated from the host contract. In the case of financial liabilities, the fair value option is exercised to eliminate or significantly reduce accounting mismatches for loan liabilities to banks and customers, issued registered or bearer Pfandbriefe, other bonds and commercial paper, and registered or bearer subordinated liabilities. Some of the promissory notes and bonds are structured financial instruments containing derivatives (in the form of caps, floors, collars, or call options) for which bifurcation is not required. The derivative components of these instruments are subject to economic hedging that does not meet the criteria for the application of hedge accounting.

The fair value option is also applied to structured financial liabilities containing embedded derivatives requiring bifurcation, provided that the embedded derivatives cannot be measured separately and the financial liabilities are not designated as held for trading. The issued financial instruments in this case are primarily guarantee certificates, discount certificates, profit-participation certificates, variable-rate bonds, inflation-linked notes, collateralized loan obligations, and credit-linked notes.

As regards financial liabilities designated as at fair value through profit or loss, any gains/losses resulting from a change in the fair value of a financial liability that is attributable to a change in the liability's credit risk must be recognized in other comprehensive income. The rest of the change in the fair value of this liability is recognized in profit or loss. The amounts recognized in other comprehensive income are reclassified to retained earnings on derecognition of the relevant financial liability.

Financial liabilities measured at amortized cost (AC)

For measurement subsequent to initial recognition, financial liabilities are generally categorized as 'financial liabilities measured at amortized cost', except in the following cases: financial liabilities measured at fair value through profit or loss, financial liabilities that arise when a transfer of a financial asset does not satisfy the condition for derecognition or accounting treatment is based on a continuing involvement, financial guarantee contracts, loan commitments with an interest rate below the market interest rate, and contingent consideration recognized by the acquirer in a business combination pursuant to IFRS 3.

In accordance with IAS 32, shares in partnerships are normally categorized as debt instruments. Given their subordinated status compared with the liabilities of the partnerships concerned, non-controlling interests in partnerships are reported as subordinated capital. Profit attributable to non-controlling interests is recognized under other liabilities, provided that the resulting liability is not of a subordinated nature. Non-controlling interests in partnerships are classified as 'share capital repayable on demand' and are assigned to the 'financial liabilities measured at amortized cost' category.

This category also includes liabilities under compensation payment obligations owed to non-controlling interests in consolidated subsidiaries. These liabilities arise if DZ BANK or some other entity controlled by DZ BANK has concluded a profit transfer agreement with a subsidiary in accordance with section 291 (1) of the German Stock Corporation Act (AktG) under which there are non-controlling interests. Liabilities under compensation payment obligations are recognized at the amount of the discounted obligation.

In addition, this category includes liabilities from capitalization transactions that are not designated as unit-linked insurance products. There is no significant transfer of insurance risk in these transactions and they do not therefore satisfy the criteria for an insurance contract under IFRS 4. As a consequence, such transactions need to be treated as financial instruments in accordance with IFRS 9.

Other financial instruments

Hedging instruments

The designation of derivative and non-derivative financial assets and liabilities as hedging instruments is governed by IFRS 9. The recognition and measurement of these hedging instruments is described in note 16.

Liabilities from financial guarantee contracts

Liabilities from financial guarantee contracts measured in accordance with IFRS 9 must be recognized as a liability at fair value by the issuer of the guarantee at the date of issue. The fair value is normally equivalent to the present value of the consideration received for issuing the financial guarantee contract. In any subsequent measurement, the obligation must be measured at the higher of the amount determined in accordance with the impairment model and the amount initially recognized less, where appropriate, the cumulative amount of income recognized in accordance with the principles of IFRS 15. In the presentation of financial guarantee contracts, the guarantee commission receivables due from the beneficiary to the DZ BANK Group as the issuer of the guarantee are offset against guarantee obligations (net method).

Finance lease receivables and lease liabilities

Finance lease receivables and lease liabilities fall within the scope of IFRS 16.

Financial assets and financial liabilities specific to insurance business

In addition to financial instruments that fall within the scope of IFRS 9, financial assets and financial liabilities arising from the insurance business are recognized and measured in accordance with the provisions of the HGB and other German accounting provisions applicable to insurance companies, as required by IFRS 4.25(c).

Deposits with ceding insurers are recognized at their nominal amounts. Receivables arising out of direct insurance operations and receivables arising out of reinsurance operations are recognized at their nominal amounts net of payments made. Impairment losses on receivables arising out of direct insurance operations and on receivables arising out of reinsurance operations are recognized directly in the carrying amounts. Assets related to unit-linked contracts are measured at fair value through profit or loss on the basis of the underlying investments.

Deposits received from reinsurers, payables arising out of direct insurance operations, and payables arising out of reinsurance operations are recognized at their nominal amounts.

Deposits with ceding insurers as well as assets related to unit-linked contracts are reported on the balance sheet under investments held by insurance companies. Deposits received from reinsurers, receivables and payables arising out of direct insurance operations, and receivables and payables arising out of reinsurance operations are recognized under other assets or other liabilities.

Initial recognition and derecognition of financial assets and financial liabilities

Derivatives are initially recognized and derecognized on the trade date. Regular way purchases and sales of non-derivative financial assets are generally recognized and derecognized using settlement date accounting. In the case of consolidated investment funds and the issue of certain securities, the financial instruments are also recognized on the trade date. Changes in fair value between the trade date and settlement date are recognized in accordance with the category of the financial instrument.

All financial instruments are generally measured at fair value on initial recognition. In the case of financial assets or financial liabilities not measured at fair value through profit or loss, transaction costs directly attributable to the acquisition of the financial asset or issue of the financial liability concerned are added or deducted on initial recognition.

Differences between transaction prices and fair values are recognized in profit or loss on initial recognition if the fair values correspond to the price quoted in an active market for an identical asset or identical liability or are based on a valuation technique that only uses data from observable markets. If the fair value is derived from transaction prices at the time of acquisition and this value is then used as a basis for any subsequent measurement, any changes in fair value are only recognized in profit or loss if they can be attributed to a change in observable market data. Any differences not recognized at the time of initial recognition are allocated over the maturity of the financial instruments concerned and recognized in profit or loss accordingly.

Financial assets are derecognized if the contractual rights to the cash flows from the financial assets have expired or these rights have been transferred to third parties, and substantially no risks or rewards of ownership in the financial assets remain. If the criteria for derecognizing financial assets are not satisfied, the transfer to third parties is recognized as a secured loan. Financial liabilities are derecognized when the contractual obligations have been settled, extinguished or have expired.

Gains and losses from the derecognition of financial assets measured at amortized cost are reported as a separate line item in the income statement.

Loss allowances for financial assets

Under IFRS 9, loss allowances are recognized for those financial assets that constitute debt instruments and for loan commitments and financial guarantee contracts. Equity instruments do not fall within the scope of the IFRS 9 impairment model. Loss allowances are recognized in respect of the following financial assets:

- Financial assets in the IFRS 9 category ‘financial assets measured at amortized cost’,
- Financial assets (only debt instruments) in the IFRS 9 category ‘financial assets measured at fair value through other comprehensive income’,
- Undrawn loan commitments where there is a current legal obligation to grant credit (irrevocable loan commitments), provided they are not measured at fair value through profit or loss,
- Financial guarantee contracts, provided they are not measured at fair value through profit or loss,
- Lease receivables, and
- Trade receivables and contract assets that fall within the scope of IFRS 15.

Upon initial recognition, all financial assets are assigned to stage 1 with the exception of financial assets that are purchased or originated credit-impaired assets (POCI assets). Loss allowances for assets in stage 1 must be recognized in an amount equal to the 12-month expected credit loss.

At each balance sheet date, assets are assigned to stage 2 if their credit risk has significantly increased since initial recognition but there is no objective evidence of impairment. For these assets, the loss allowances are measured at the amount of the lifetime expected credit losses.

Trade receivables and contract assets that fall within the scope of IFRS 15 are allocated directly to stage 2 (simplified approach).

To simplify matters, it can be assumed that the credit risk of a financial instrument has not increased significantly since initial recognition if the financial instrument has a low credit risk at the balance sheet date (low credit risk exemption). The DZ BANK Group does not exercise the low credit risk exemption for loans and, consequently, not for promissory notes either.

Financial assets deemed to be impaired on the basis of objective evidence are assigned to stage 3. For these assets, the loss allowances are measured at the amount of the lifetime expected credit losses.

Financial assets subject to the IFRS 9 impairment rules must be reviewed at every balance sheet date to ascertain whether one or more events have occurred with an adverse impact on the estimated future cash flows of these financial assets.

Financial assets that are purchased or originated credit-impaired assets (POCI assets) are initially recognized at their carrying amount less the lifetime expected credit losses and amortized using a risk-adjusted effective interest rate. At the balance sheet date, only the cumulative changes to the lifetime expected credit losses since initial recognition are recognized as a loss allowance. Stage allocation is not required for these assets. Please refer to note 85 for more detailed information on loss allowances for financial assets.

Embedded derivatives

An embedded derivative is a component of a hybrid contract that also includes a non-derivative financial instrument (host contract), with the effect that some of the cash flows of the combined financial instrument vary in a way similar to those of a standalone derivative. A derivative that is attached to a financial instrument but is contractually transferable independently of that instrument, or has a different counterparty, is not an embedded derivative, but a separate financial instrument.

If a hybrid contract contains a host contract that is a financial asset, the categorization rules for financial assets are applied to the entire hybrid contract.

If a hybrid contract contains a host contract that is a financial liability, an embedded derivative is separated from the host contract and accounted for separately if:

- the economic characteristics and risks of the derivative are not closely related to the economic characteristics and risks of the host contract,
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and
- the hybrid contract is not measured at fair value through profit or loss.

If the embedded derivative does not meet all of these conditions, it may not be separated from the host contract. When an embedded derivative is separated, the host contract is accounted for in accordance with the pertinent standards.

If a contract includes one or more embedded derivatives and the host contract is not a financial asset, the entire hybrid contract can be categorized as measured at fair value through profit or loss. This is not the case where embedded derivatives only have an insignificant impact on the contractually specified cash flows or, upon initial comparison with similar hybrid instruments, it is evident without – or with only minor – analysis that separation of the embedded derivative is not permitted.

Classes of financial instruments

For the purposes of the disclosures on the importance of financial instruments to financial position and financial performance, financial instruments falling within the scope of IFRS 7 are classified using the 7 classes of financial instruments described below.

Classes of financial assets

Financial assets measured at fair value

The class of financial assets measured at fair value comprises the following categories defined by IFRS 9:

- 'Financial assets measured at fair value through profit or loss' with the subcategories 'financial assets mandatorily measured at fair value through profit or loss', 'contingent considerations in a business combination', and 'financial assets designated as at fair value through profit or loss' (fair value option), and
- 'Financial assets measured at fair value through other comprehensive income' with the subcategories 'financial assets mandatorily measured at fair value through other comprehensive income' and 'financial assets designated as at fair value through other comprehensive income' (fair value OCI option).

In addition to the financial assets in the categories specified above, this class of financial assets measured at fair value includes derivatives used for hedging (positive fair values).

Financial assets measured at amortized cost

The 'financial assets measured at amortized cost' class includes, in particular, loans and advances to banks and customers measured at amortized cost and investments measured at amortized cost.

Finance leases

The 'finance leases' class comprises solely finance lease receivables.

Classes of financial liabilities

Financial liabilities measured at fair value

The 'financial liabilities measured at fair value' class comprises financial liabilities in the category 'financial liabilities measured at fair value through profit or loss' with the subcategories 'financial liabilities mandatorily measured at fair value through profit or loss', 'contingent considerations', 'financial liabilities designated as at fair value through profit or loss' (fair value option), and derivatives used for hedging (negative fair values).

Financial liabilities measured at amortized cost

The class known as 'financial liabilities measured at amortized cost' is identical to the category of financial liabilities of the same name.

Leases

The 'leases' class comprises solely lease liabilities.

Financial guarantee contracts and loan commitments

Provisions for financial guarantee contracts and provisions for loan commitments within the scope of IAS 37 are aggregated in the class 'financial guarantee contracts and loan commitments'.

>> 06 Hedge accounting

General information on hedge accounting

As an integral part of its risk management strategy, the DZ BANK Group hedges against risks arising in connection with financial instruments.

If the hedging of risk in connection with financial instruments gives rise to accounting mismatches between the hedged item and the hedging instrument used, the DZ BANK Group designates the hedging transaction as a hedge in accordance with the hedge accounting requirements of IFRS 9 in order to eliminate or reduce such mismatches. In exercise of the option available under IFRS 9.6.1.3, the DZ BANK Group continues to account for portfolio hedges in application of the rules under IAS 39.

Fair value hedges

A fair value hedge is intended to ensure that changes in the fair value of the hedged item are offset by countervailing changes in the fair value of the hedging instrument. Changes in the fair value of the hedged item attributable to the hedged risk and changes in the fair value of the hedging instrument are recognized in profit or loss. Where equity instruments are hedged whose changes in fair value are recognized in other comprehensive income, the changes in the fair value of the hedging instruments are also recognized in other comprehensive income. Risks may be hedged by designating hedges either on an individual or on a portfolio basis.

Hedged items categorized as ‘financial assets measured at amortized cost’ or ‘financial liabilities measured at amortized cost’ are measured in accordance with the general measurement principles for these financial instruments. The values are adjusted for the change in fair value attributable to the hedged risk. Hedged items categorized as ‘financial assets measured at fair value through other comprehensive income’ are measured at fair value, although only changes not attributable to the hedged changes in fair value are recognized in other comprehensive income. Interest income and interest expense arising from hedged items or hedging instruments are recognized under net interest income.

If the fair value is hedged against interest-rate risks on a portfolio basis, the cumulative changes in fair value attributable to the hedged risk are reported on the balance sheet under fair value changes of the hedged items in portfolio hedges of interest-rate risk, either under assets or liabilities depending on whether the portfolio comprises financial assets or financial liabilities.

In fully effective hedges, the changes in fair value (attributable to the hedged risk) recognized in profit or loss over the lifetime of the hedge completely cancel each other out. Any changes in fair value recognized in the carrying amount of the hedged items are amortized through profit or loss by the time the hedge has been terminated.

Cash flow hedges

The purpose of cash flow hedges is to ensure that changes in uncertain future cash flows from hedged items are offset by changes in cash flows from hedging instruments.

Hedging instruments are measured at fair value. Changes in fair value attributable to the effective portion of the hedge are recognized in other comprehensive income. Changes in fair value attributable to the ineffective portion of the hedge are recognized in profit or loss. Hedged items are recognized and measured in accordance with the general principles for the relevant measurement category. At the end of a hedging relationship, any changes in fair value recognized in other comprehensive income must be reclassified to profit or loss on the date on which the hedged items or transactions are also recognized in profit or loss.

Hedges of net investments in foreign operations

The purpose of hedges of net investments in foreign operations is to offset exchange differences resulting from net investments denominated in foreign currency.

Hedges of net investments in foreign operations are accounted for in the same way as cash flow hedges.

>> 07 Currency translation

All monetary assets and liabilities, together with unsettled spot transactions, are translated at the closing rate into the relevant functional currency of the entities in the DZ BANK Group. Cash in foreign currency is translated using the buying rate for cash on the balance sheet date. The translation of non-monetary assets and liabilities depends on the way in which these assets and liabilities are measured. If non-monetary assets are measured at amortized cost, they are translated using the historical exchange rate. Non-monetary assets measured at fair value are translated at the closing rate. Income, expenses, gains, and losses are translated on the date they are recognized either in profit or loss or in other comprehensive income.

If the functional currency of subsidiaries consolidated in the DZ BANK Group is different from the group’s reporting currency (euros), all assets and liabilities are translated at the closing rate. Equity is translated at the historical rate. Income and expenses are translated at the spot rate on the transaction date or, in a simplified procedure, at the average rate. The closing rate can also be used if there is no material impact compared with the use of average rates. Any differences arising from currency translation are reported in the currency translation reserve. In most cases, the functional currency of the entities included in the consolidated financial statements is the euro, i.e. the group reporting currency.

>> 08 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and reported as a net amount on the balance sheet if the group currently has a legally enforceable right to set off the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

The legal right of set-off cannot be contingent on a future event and must be exercisable in the normal course of business, in the event of default, and in the event of insolvency of the entity or any of the counterparties.

>> 09 Sale and repurchase agreements, securities lending

Sale and repurchase agreements (repos) are transactions in which the parties agree the sale and subsequent repurchase of securities at a fixed price and time. The risks and rewards of ownership of the sold securities remain in full with the original seller, provided that the buyer is under an obligation to sell back the securities. If the DZ BANK Group enters into repos as the original seller, the securities sold continue to be recognized on the balance sheet because the derecognition criteria in IFRS 9 are not satisfied. A liability corresponding to the amount of the purchase price received is recognized. If the group enters into reverse repos as a buyer, the securities purchased must not be recognized on the balance sheet. A receivable corresponding to the amount of the purchase price paid is recognized.

Securities lent as part of securities lending transactions remain on the balance sheet. Where collateral is received in this regard, and this collateral is in cash, a liability is recognized. Borrowed securities do not meet the recognition criteria set out in IFRS 9 and must therefore not be recognized on the balance sheet. Any cash collateral furnished in connection with borrowed securities is reported as a receivable.

Sale and repurchase agreements and securities lending transactions result in transfers in which the transferred assets remain on the balance sheet in their entirety. The DZ BANK Group is not involved in any transfers in which the transferred assets are recognized according to the extent of continuing involvement or transfers of financial assets with a continuing involvement that are fully derecognized.

>> 10 Collateral

Receivables are recognized for assets pledged as collateral in the form of cash deposits. Other assets pledged as collateral continue to be reported on the balance sheet unchanged. Where collateral is received, and this collateral is in cash, a liability for a corresponding amount is recognized. Other financial or non-financial assets received as collateral are not recognized on the balance sheet unless the assets are obtained in connection with the recovery of collateral or a purchase of real estate that was previously held as collateral.

>> 11 Insurance business

General information on the accounting treatment of insurance business

The DZ BANK Group's insurance business comprises insurance contracts, capitalization transactions, and service contracts. It also includes financial guarantee contracts with insured parties.

Insurance contracts govern the transfer of significant insurance risk from the insured party to the insurer and the payment of compensation if a future contingent event materializes and adversely impacts the insured party. Insurance contracts are recognized in accordance with the requirements of IFRS 4. Capitalization transactions comprise, in particular, fund-linked or index-linked life insurance contracts without policyholder participation, pension fund contracts based on defined benefit plans, and contracts to protect semi-retirement employment models. Capitalization transactions are classified as financial instruments within the scope of IFRS 9. Service contracts comprise, in particular, separable and transferable administrative components of insurance and capitalization contracts. Such service contracts are subject to the revenue recognition requirements specified in IFRS 15. Any financial guarantee contracts in connection with insurance business are recognized in accordance with the accounting requirements applicable to insurance contracts.

The insurance business of the DZ BANK Group is reported under specific insurance items on the income statement and balance sheet. Material components of the specific insurance items are described below.

Financial assets and financial liabilities

Financial assets and financial liabilities held or acquired as part of insurance business are accounted for in accordance with the accounting policies for financial instruments described in note 5. These financial assets and financial liabilities are reported under investments held by insurance companies, other assets held by insurance companies, and other liabilities of insurance companies. Any loss allowances related to financial assets reported under investments held by insurance companies or other assets held by insurance companies are recognized for the categories 'financial assets measured at amortized cost' and 'financial assets measured at fair value through other comprehensive income' and are applied as a deduction on the assets side of the balance sheet. Within the investments held by insurance companies and other assets held by insurance companies balance sheet items, carrying amounts are presented on a net basis. However, the loss allowances are shown separately (gross presentation) in the balance sheet disclosures.

Other liabilities of insurance companies include the benefit obligations under capitalization transactions for which no material insurance risk is assumed when the policy is concluded. They are reported under liabilities from capitalization transactions. The underlying financial instruments in these transactions are reported as part of assets related to unit-linked contracts under investments held by insurance companies.

Investment property

The investment property included in the investments held by insurance companies is measured at amortized cost in accordance with the cost model. In subsequent years, straight-line depreciation is applied over the asset's useful life on the basis of cost.

Any expenditure that increases value and extends the useful life of real estate or results in a significant improvement in the fabric of a building is capitalized. Maintenance and repair costs are expensed as incurred.

Recoverable amounts are determined for real estate so that this information can be used in impairment tests and provided in the disclosures required in the notes to the financial statements in accordance with the provisions of IFRS 13. For this purpose, standard valuation methods are generally used that are based on the requirements of the German Real Estate Valuation Guidelines (WertR 2006) and the German Building Code (BauGB). Accordingly, the current value of real estate is determined by using the sales comparison approach, income approach, or cost approach and taking into account the provisions of any relevant contracts.

Non-interest-bearing, low-interest, or forgivable loans are recognized in the same way as government grants. The amount of financial assistance or any government grant is deducted when the carrying amount of the asset is identified and is then recognized in profit or loss over the period covered by the assistance or grant by means of a reduced depreciation charge.

Insurance liabilities

Insurance companies are permitted to continue applying existing accounting policies to certain insurance-specific items during a transition period. Insurance liabilities are therefore recognized and measured in accordance with HGB and other German accounting provisions applicable to insurance companies. Insurance liabilities are shown before the deduction of the share of reinsurers, which is reported as an asset.

Provision for unearned premiums

The provision for unearned premiums represents premiums that have already been collected but that relate to future periods.

The provision for unearned premiums from direct non-life insurance operations is calculated from the gross premiums using the 360-day system. Calculation of non-transferable income components is based on the letter from the Bundesministerium der Finanzen (BMF) [German Federal Ministry of Finance] dated April 30, 1974.

Unearned premiums from life insurance are calculated taking into account the starting date and maturity date of each individual policy after deduction of non-transferable premium components. The letter from the BMF dated April 30, 1974 was followed.

The provision for unearned premiums in health insurance predominantly relates to international travel healthcare insurance business.

The proportion of the provision for unearned premiums relating to ceded insurance business is calculated as specified in the individual reinsurance contracts.

Benefit reserve

The purpose of the benefit reserve is to ensure that guaranteed entitlements to future insurance benefits can be satisfied on a permanent basis. Guaranteed entitlements for insured persons in respect of life insurance and casualty insurance with premium refund as well as the provision for increasing age in health insurance are reported under the benefit reserve.

The benefit reserve for life insurance and casualty insurance with premium refund is generally calculated in Germany on the basis of individual policies taking into account starting dates in accordance with approved business plans and the principles declared to the relevant regulatory authorities. The prospective method is used for life insurance (except for unit-linked insurance products and account management arrangements) and for casualty insurance (with the exception of premium-based policies that started prior to 1982). The retrospective method is used for other types of insurance. Negative benefit reserves on an individual policy basis are generally recognized with an amount of zero.

The assumptions used in calculations are determined in accordance with current recommendations issued by the Deutsche Aktuarvereinigung e.V., Cologne, (DAV) [German Actuarial Association] and the regulator and in accordance with other national statutory provisions and regulations. As a rule, calculation of the benefit reserve is based on interest rates of between 0.0 percent and 4.0 percent, as was the case in the previous year. These interest rates are generally determined by the legally prescribed maximum discount rates. The calculation assumptions apply from the date on which the policy is written until the policy expires.

For policies entered into before or in 2014, calculation of the benefit reserve is generally based on the Zillmer method. Following the introduction of the German Life Insurance Reform Act (LVRG), zillmerizing has not been applied to most new business entered into since 2015. In particular, zillmerizing is not applied to subsidized pension insurance policies under the German Personal Pension Plan Act (AVmG) or to pension insurance policies under reinsured pension plans.

The benefit reserve implicitly includes administrative expenses for contracts with ongoing payment of premiums. A provision for administrative costs has been recognized to cover premium-free years under insurance policies, fully paid-up insurance, and some legacy insurance commitments.

In health insurance, benefit reserves are computed prospectively on an individual policy basis using the technical parameters for calculating rates. Negative benefit reserves and positive benefit reserves are netted. The parameters for the computation of the reserves involve, in particular, assumptions regarding rates of return on investment, mortality, cancellations, and other costs. The company actuarial discount rate calculated in accordance with the procedure developed by the DAV is used in determining the health insurance discount rate. This procedure is based on a fundamental professional principle issued by the DAV for determining an appropriate discount rate. The discount rate was reduced for observation units with a premium adjustment effective January 1, 2020. The reason for this action is the persistently low level of interest rates. The group uses mortality tables issued by the Verband der Privaten Krankenversicherung e.V., Cologne, (PKV) [Association of German private healthcare insurers], entity-specific probability rates for policy cancellations, and profiles of benefit drawdown. These assumptions are regularly reviewed in accordance with actuarial principles and updated, where appropriate.

When the benefit reserves are prospectively calculated, the parameters used are generally retained throughout the term of the policy. If the actuarial analyses conducted once a year reveal that the level of cover offered is inadequate in terms of either biometric parameters or discount rate, appropriate adjustments are made. The biometric parameters used in such computations are based primarily on the mortality and invalidity tables published by the DAV.

In accordance with the German Regulation on the Principles Underlying the Calculation of the Premium Reserve (DeckRV), supplementary change-in-discount-rate reserves have been recognized for new policies with a discount rate in excess of the reference rate. With the approval of the Bundesanstalt für Finanzdienstleistungsaufsicht, Bonn, (BaFin) [German Federal Financial Supervisory Authority], the supplementary change-in-discount-rate reserve has been increased for existing policies. Entity-specific probabilities for cancellation and lump-sum payments are used for both new and existing policies.

Provision for claims outstanding

The provision for claims outstanding represents benefit obligations arising from claims in which it is not yet possible to reliably determine the amount and/or the timing of the payment. The provision is recognized for claims that have already been reported and also for insured events that have occurred but have not yet been reported. It includes both internal and external expenses as well as the cost of settling claims.

The provision for claims outstanding in direct non-life insurance business is determined on a case-by-case basis for all known claims. Recourse claims, excess proceeds, and claims under loss sharing agreements are netted. Based on the level of delayed claims reports observed in previous years, an additional claims provision is recognized for claims that occur or are caused before the balance sheet date but have not yet been reported by this date. Statistical estimates are used in this measurement. The provision for claims outstanding is not discounted, except in the case of the pension benefits reserve. The provisions for claims settlement expenses, which are also included in this item, have been calculated in accordance with the requirements set out in the coordinated regulations issued by the German federal states on February 2, 1973 and in accordance with the flat-rate calculation method (including claims incurred but not reported, IBNR) developed by the Gesamtverband der Deutschen Versicherungswirtschaft e.V., Berlin, (GDV) [German Insurance Association].

The provision for claims outstanding as regards life insurance and pension funds is determined on a case-by-case basis. The provision is recognized for claims that have already been incurred and reported by the balance sheet date, but have not yet been settled.

The provision for settlement expenses was determined in accordance with the letter from the BMF dated February 2, 1973.

In health insurance, the provision for claims outstanding is determined on the basis of the costs paid out in the financial year in connection with claims during the year. The calculation is based on claims experience over the previous 3 financial years. Recourse claims are deducted from the provision for claims outstanding, as are reimbursements due under the German Act on the Reform of the Pharmaceuticals Market (AMNOG). The recognized provision includes the costs of settling claims, calculated in accordance with tax rules. The reinsurers' share of the provision is determined in accordance with reinsurance treaties. Where appropriate, provisions for claims outstanding are recognized on a case-by-case basis for claims relevant to reinsurance.

Provision for premium refunds

The provision for premium refunds represents obligations not yet due for settlement on the balance sheet date relating to premium refunds to insured parties. It includes amounts allocated to policyholders under statutory or contractual arrangements for bonuses and rebates. In addition, the provision for premium refunds includes provisions resulting from time-restricted cumulative recognition and measurement differences between items in the financial statements prepared in accordance with IFRS and those prepared in accordance with HGB. In the case of measurement differences recognized in other comprehensive income, such as unrealized gains and losses on financial assets measured at fair value through other comprehensive income, corresponding expenses for deferred premium refunds are recognized in other comprehensive income; otherwise, changes in the provision are recognized in profit or loss.

The expenses for deferred premium refunds in the non-life insurance business are recognized in an amount equivalent to 90 percent of the difference between the carrying amounts for items in the financial statements prepared in accordance with IFRS and those in the financial statements prepared in accordance with HGB net of deferred taxes.

The provision for premium refunds related to life insurance policies and pension funds is recognized to cover the entitlement of policyholders to profit-related premium refunds. Funds earmarked in this way are therefore made available for future allocation of bonuses to policyholders on an individual policy basis. Within the overall provision for premium refunds, a distinction is made between provisions attributable to bonuses already declared but not yet allocated (including participation in valuation reserves in accordance with HGB), the funding used to finance future terminal bonuses, and the free provision for premium refunds. Under section 140 of the German Act on the Supervision of Insurance Undertakings (VAG), that element of the provision for premium refunds not attributable to bonuses already declared but not yet allocated may be used to avert an imminent crisis and may therefore be seen as mitigating risk. Expenses for deferred premium refunds are recognized in an amount equivalent to 90 percent of the difference between the carrying amounts for items in the financial statements prepared in accordance with IFRS and those in the financial statements prepared in accordance with HGB net of deferred taxes.

The provision for premium refunds related to health insurance includes amounts allocated to policyholders under statutory or contractual arrangements for bonuses and rebates. Expenses for deferred premium refunds are recognized in an amount equivalent to 80 percent of the difference between the carrying amounts for items in the financial statements prepared in accordance with IFRS and those in the financial statements prepared in accordance with HGB net of deferred taxes.

Other insurance liabilities

Other insurance liabilities relating to non-life insurance include obligations arising from membership of the Verein Verkehrsopferhilfe e.V. (VOH) [road casualty support organization], Berlin, in line with the object of this organization and the provision for unearned premiums under dormant vehicle insurance policies, the provision being determined on an individual policy basis. The cancellation provision is calculated on the basis of past experience. The provision for onerous contracts is calculated on the basis of prior-year figures and a forecast of other insurance gains and losses, taking into account interest income and residual maturities.

Other insurance liabilities for life insurance are computed on the basis of individual policies from premiums that are already due but have yet to be paid and have not yet been included in the life insurance liability to the extent that the investment risk is borne by the policyholders.

Other insurance liabilities for health insurance contain a cancellation provision. It contains the expected losses arising from the premature loss, not previously accounted for, of the negative portions of the provision for increasing age in health insurance.

Reinsurance business

In the case of reinsurance business, the insurance liabilities are recognized in accordance with the requirements specified by the ceding insurers. If no such details are available as at the balance sheet date, the provision for the financial year is estimated. The critical factors in estimating the provision are the contractual terms and conditions and the pattern of this business to date. In a few instances, loss provision details provided by ceding insurers are deemed to be too low in the experience of DZ BANK; in such cases, appropriate increases are applied, the increases having been determined in accordance with prudent business practice, past experience, and actuarial calculation methods.

Reserve for unit-linked insurance contracts

The reserve for unit-linked insurance contracts is an item largely corresponding to assets related to unit-linked contracts. This item is used to report policyholders' entitlements to their individual investment fund units where the related investments arise out of contracts to be reported in accordance with IFRS 4. The reserve is measured at fair value on the basis of the underlying investments. Gains and losses on the fund assets result in corresponding changes on the equity and liabilities side of the balance sheet.

Adequacy test for insurance liabilities

Insurance liabilities must be regularly reviewed and subjected to an adequacy test. The adequacy test determines, on the basis of a comparison with estimated future cash flows, whether the carrying amount of insurance liabilities needs to be increased.

To review the insurance liabilities in the health insurance companies, a regular comparison is made between the present values of estimated future insurance benefits and costs, on the one hand, and the present values of estimated future premium payments on the other. In the event of any deficits, the insurance company has the option of adjusting premiums.

>> 12 Leases

DZ BANK Group as lessor

A lease is classified as a finance lease if substantially all the risks and rewards incidental to the ownership of an asset are transferred to the lessee. If the risks and rewards remain substantially with the lessor, the lease is an operating lease.

If a lease is classified as a finance lease, a receivable due from the lessee must be recognized. The receivable is measured at an amount equal to the net investment in the lease at the inception of the lease. Lease payments are apportioned into a payment of interest and repayment of principal. The interest portion based on the lessor's internal discount rate for a constant periodic rate of return is recognized as interest income, whereas the repayment of principal reduces the carrying amount of the receivable.

If a lease is classified as an operating lease, the entities in the DZ BANK Group retain beneficial ownership of the leased asset. These leased assets are reported as assets. The leased assets are measured at cost less depreciation and any impairment losses. Unless another systematic basis is more representative of the pattern of income over time, lease income is recognized in profit or loss on a straight-line basis over the term of the lease and is included in the current income from operating leases reported under net interest income. Gains on disposal, reversals of impairment losses, depreciation, losses on disposal, and impairment losses relating to the underlying leased assets are also included in the current income from operating leases.

DZ BANK Group as lessee

For every lease, the lessee recognizes a right-of-use asset for a leased asset as well as a corresponding lease liability. The only exceptions are short-term leases (term of less than one year from the commencement date) and leases for low-value assets (cost of new purchase of up to €5,000 net); in these cases, the lease payments are recognized as an expense.

The amount of the right-of-use asset initially corresponds to the amount of the lease liability. In subsequent periods, the right-of-use asset is measured at amortized cost. Depreciation is recognized on a straight-line basis over the entire lease term and reported as an administrative expense.

The lease liability is measured as the present value of the future lease payments and is shown under other liabilities. Lease payments must be broken down into an interest portion and a repayment portion. The interest portion based on the internal discount rate or the incremental borrowing rate of interest is recognized as interest expense, whereas the repayment of principal reduces the liability.

The DZ BANK Group uses the practical expedient that enables a lessee to elect not to separate non-lease components from lease components and instead account for all components as a lease.

>> 13 Income

Interest and dividends received

Interest is recognized in the relevant period. If the effective interest method is used to calculate interest income, such income is reported under interest income calculated using the effective interest method.

The cash flows used to calculate the effective interest rate take into account contractual agreements in connection with the financial assets and financial liabilities concerned.

Premiums and discounts are allocated over the expected life of financial instruments using the effective interest method. Any additional costs incurred that are directly connected with the acquisition or sale of a financial asset or financial liability, and thus can be directly assigned to the transaction, are factored into the calculation of the effective interest rate. Such costs include sales charges directly associated with the origination of home savings contracts and commitment fees for loans.

Dividends are recognized as soon as a legal entitlement to the payment of such a dividend is established.

Interest income and interest expense arising in connection with derivatives that were not entered into for trading purposes or are used to hedge financial instruments for which the fair value option has been exercised are reported under net interest income. Interest income and interest expense on overnight money and fixed-term deposits arranged for economic management purposes between different organizational units and timing effects from currency swaps used for economic management of net interest income are recognized under net interest income or under gains and losses on trading activities, depending on their economic classification.

Revenue from contracts with customers

Revenue from contracts with customers is recognized when the underlying services have been performed, it is probable that the economic benefits will flow to the group, and the amount of the revenue can be reliably measured.

In the DZ BANK Group, revenue from contracts with customers primarily consists of fee and commission income. Revenue from contracts with customers is also included in gains and losses on investments held by insurance companies and other insurance company gains and losses as well as in other net operating income. The main components of fee and commission income are fee and commission income from securities business, fee and commission income from payments processing (including card processing), fee and commission income from lending and trust activities, and fee and commission income from asset management.

Fee and commission income from securities business is generated from funds business and brokerage, and also includes custody charges. The income is generally recognized as soon as the service has been performed. Fee and commission income from payments processing (including card processing) and fee and commission income from lending and trust activities is recognized immediately after the service has been provided.

Fees and commissions earned over the period in which a service is performed include certain types of fees for administration and safe custody as part of the securities business and asset management, and fees in connection with the furnishing of financial guarantees. In the case of performance-related management fees, income is recognized when the contractually agreed performance criteria have been satisfied. This is either when the service is contracted (brokering of life insurance or fund contracts, or brokering of home savings loans) or when the service is performed (fee and commission income from building society operations).

Fees and charges that form an integral part of the effective interest rate do not fall within the scope of IFRS 15 and are accounted for in accordance with IFRS 9 regardless of whether the financial assets are measured at fair value or at amortized cost.

The DZ BANK Group applies the following practical expedients as permitted by IFRS 15: it applies the standard to a portfolio of contracts, does not adjust the promised amount of consideration for the effects of a significant financing component, recognizes the incremental costs of obtaining a contract as an expense when incurred, and does not disclose certain information for some performance obligations.

Insurance business

For each insurance contract, gross premiums written are calculated pro rata for an exact number of days based on the actual start date of the insurance. These premiums comprise all amounts that become due in the financial year in connection with insurance premiums, premium installments, and single premiums for direct insurance and reinsurance business. Premiums for unit-linked life insurance, except capitalization transactions without policyholder participation, are also recognized as gross premiums written.

The components of premiums covering administration fees are reported pro rata as income in the income statement. In the case of index-linked policies and service contracts, additional administration charges, fees, and commissions from the service and brokerage business are deferred in accordance with IFRS 15 and apportioned over the relevant periods for the duration of the policy or contract concerned in line with the service performed.

>> 14 Cash and cash equivalents

Cash and cash equivalents are cash on hand and balances with central banks.

Cash on hand comprises euros and foreign currencies. Cash in euros is measured at nominal value; foreign currency cash is translated at the buying rate. Balances with central banks are allocated to the ‘financial assets measured at amortized cost’ category. Interest income on cash and cash equivalents is recognized as interest income from lending and money market business.

>> 15 Loans and advances to banks and customers

All receivables attributable to registered debtors that are categorized as ‘financial assets measured at amortized cost’, ‘financial assets measured at fair value through profit or loss’, or ‘financial assets measured at fair value through other comprehensive income’ are recognized as loans and advances to banks and customers. To eliminate or significantly reduce accounting mismatches, certain loans and advances are designated as at fair value through profit or loss. In addition to fixed-term receivables and receivables payable on demand in connection with lending, lease, and money market business, loans and advances to banks and to customers include promissory notes and registered bonds.

Loans and advances to banks and customers are measured predominantly at amortized cost using the effective interest method. In fair value hedges, the carrying amounts of hedged receivables are adjusted for the change in fair value attributable to the hedged risk. The resulting hedge adjustments are recognized within other gains and losses on valuation of financial instruments under gains and losses arising on hedging transactions. Finance lease receivables are recognized and measured in accordance with the requirements for the accounting treatment of leases.

Loss allowances for loans and advances to banks and customers are determined on the basis of the IFRS 9 requirements applicable to the relevant category of financial assets. Depending on these requirements, the loss allowances are reported as a separate line item deduction on the assets side of the balance sheet or in the reserve from other comprehensive income. Finance lease receivables are also subject to the IFRS 9 impairment requirements.

Interest income on loans and advances to banks and customers is recognized as interest income from lending and money market business. This also includes the amortization of hedge adjustments to carrying amounts due to fair value hedges. Realized gains and losses on loans and advances to banks and customers that are categorized as financial assets measured at amortized cost are included in the gains and losses from the derecognition of financial assets measured at amortized cost. Gains and losses on the valuation of loans and advances for which the fair value option has been exercised are shown under the item of the same name as part of other gains and losses on valuation of financial instruments.

>> 16 Hedging instruments (positive and negative fair values)

The carrying amounts of financial instruments designated as hedging instruments in effective and documented hedging relationships are reported under either hedging instruments (positive fair values) or hedging instruments (negative fair values).

These financial instruments are measured at fair value. Changes in the fair value of hedging instruments in the category ‘financial assets measured at fair value through profit or loss’ used in fair value hedges are recognized in the income statement as an element of other gains and losses on valuation of financial instruments under gains and losses from hedge accounting. If the hedged item is an equity instrument in which changes in fair value are recognized in other comprehensive income, the changes in the fair value of the hedging instruments are also recognized in other comprehensive income.

In the case of financial instruments used for cash flow hedges or hedges of net investments in foreign operations, changes in fair value attributable to the effective portion of the hedges are recognized in other comprehensive income. The cumulative amounts are recognized in the reserve from other comprehensive income as part of equity. Changes in fair value attributable to the ineffective portion of hedges are included in other gains and losses on valuation of financial instruments under gains and losses from hedge accounting.

>> 17 Financial assets and financial liabilities held for trading

Financial assets and financial liabilities held for trading comprise solely financial assets and financial liabilities that are held for trading.

Derivatives with positive fair values are classified as financial assets held for trading if they were entered into for trading purposes or, despite being intended to be used as hedges, do not meet the requirements for an accounting treatment as hedging instruments. Financial assets held for trading also include bonds and other fixed-income securities, shares and other variable-yield securities, and receivables held for trading purposes.

Financial liabilities held for trading include short positions, bonds and other debt certificates issued, and liabilities held for trading purposes. The procedure for classifying derivatives with negative fair values as financial liabilities held for trading is the same as that used for financial assets held for trading.

Financial instruments reported as financial assets or financial liabilities held for trading are always measured at fair value through profit or loss. Gains and losses on valuation, interest income and expense, and dividends arising from financial assets and financial liabilities held for trading are recognized under gains and losses on trading activities, provided that there is an actual intent to trade the instruments concerned.

Gains and losses on valuation of derivatives that are entered into for hedging purposes, but are not recognized as hedging transactions, are recognized under other gains and losses on valuation of financial instruments as gains and losses on derivatives used for purposes other than trading. If, to avoid accounting mismatches, hedged items are allocated to the category 'financial assets designated as at fair value through profit or loss', valuation gains and losses on the related hedging derivatives are recognized under gains and losses on financial instruments designated as at fair value through profit or loss. Interest income and interest expense arising in connection with derivatives that were not entered into for trading purposes or are used to hedge financial instruments designated as at fair value through profit or loss are reported under net interest income.

>> 18 Investments

The following are recognized as investments: bearer bonds and other fixed-income securities, shares and other variable-yield securities, and other bearer or registered shareholdings in entities in which the DZ BANK Group has no significant influence, provided that these securities or shares are not held for trading purposes. Investments also include investments in subsidiaries, joint ventures, and associates.

Investments are initially recognized at fair value. Investments in joint ventures and associates that are accounted for using the equity method are initially recognized at cost. These investments are subsequently measured in accordance with the principles applicable to the relevant measurement category. In the case of investments in joint ventures and associates, the equity method is used for subsequent measurement.

Impairment losses on investments are determined on the basis of the IFRS 9 requirements applicable to the relevant category of financial assets or on the basis of accounting standards relevant to the financial assets concerned. They are generally reported as a separate line item on the assets side of the balance sheet or in the reserve from other comprehensive income.

Interest and any investment premiums or discounts amortized over the maturity of the investment using the effective interest method are recognized under net interest income. Dividends derived from equity instruments are recognized as current income under net interest income. Gains or losses on investments accounted for using the equity method are also reported under net interest income.

Gains and losses realized on the sale of investments that are not categorized as financial assets measured at amortized cost, as well as impairment losses and reversals thereof on investments in associates and joint ventures that are accounted for using the equity method, are reported under gains and losses on investments. Realized gains and losses on investments that are categorized as financial assets measured at amortized cost are included in the gains and losses from the derecognition of financial assets measured at amortized cost.

Fair value gains and losses on investments that are measured at fair value through profit or loss are reported under other gains and losses on valuation of financial instruments.

>> 19 Property, plant and equipment, investment property, and right-of-use assets

Property, plant and equipment, investment property, and right-of-use assets comprises land and buildings as well as office furniture and equipment with an estimated useful life of more than one year used by the entities in the DZ BANK Group. This item also includes assets subject to operating leases and right-of-use assets arising from leases. Investment property is real estate held for the purposes of generating rental income or capital appreciation.

Property, plant and equipment, and investment property is measured at cost less cumulative depreciation and cumulative impairment losses in subsequent financial years. Depreciation is largely recognized on a straight-line basis over the useful life of the asset. In most cases, external valuations are used to measure recoverability.

Right-of-use assets arising from leases are measured in accordance with the lease accounting provisions and reduced by cumulative depreciation and cumulative impairment losses in subsequent financial years. Depreciation is largely recognized on a straight-line basis over the useful life of the asset.

If facts or circumstances give rise to indications that assets might be impaired, the recoverable amount is determined. An impairment loss is recognized if the recoverable amount is lower than the asset’s carrying amount. The recoverable amount is the higher of fair value less costs to sell and value in use.

Borrowing costs directly assignable to property, plant and equipment, and investment property are capitalized as part of the asset cost, provided that the asset concerned is a qualifying asset.

Depreciation on property, plant and equipment, investment property, and right-of-use assets is reported as an administrative expense. Impairment losses and reversals of impairment losses are reported under other net operating income.

>> 20 Income tax assets and liabilities

Current and deferred tax assets are shown under the income tax assets balance sheet item; current and deferred tax liabilities are reported under income tax liabilities. Current income tax assets and liabilities are recognized in the amount of any expected refund or future payment.

Deferred tax assets and liabilities are recognized for temporary differences between the carrying amounts recognized in the financial statements in accordance with IFRS and those in the financial statements for tax purposes. Deferred tax assets are also recognized in respect of as yet unused tax loss carryforwards, provided that utilization of these loss carryforwards is sufficiently probable. Deferred tax assets are measured using the national and entity-specific tax rates expected to apply at the time of recovery. A uniform tax rate is applied in the case of group companies forming a tax group with DZ BANK.

Deferred tax assets and liabilities are not discounted. Where temporary differences arise in relation to items recognized in other comprehensive income, the resulting deferred tax assets and liabilities are also recognized in other comprehensive income. Current and deferred tax income and expense to be recognized through profit or loss are reported under income taxes in the income statement.

>> 21 Other assets and other liabilities

Other assets also include intangible assets and contract assets. Intangible assets are recognized at cost. In the subsequent measurement of software, acquired customer relationships, and other intangible assets with a finite useful life, carrying amounts are reduced by cumulative amortization and cumulative impairment losses. Goodwill and other intangible assets with an indefinite useful life are not amortized but are subject to an impairment test at least once during the financial year.

If the group has satisfied its performance obligation in respect of a customer, but the customer has not yet paid the consideration and payment of the consideration still depends on a condition other than simply a due date, then the group recognizes a contract asset on the balance sheet in place of a receivable. As soon as an unconditional right to the consideration arises, the contract asset is reclassified as a receivable. Contract assets are not amortized, but are included in the calculation of the loss allowances in accordance with IFRS 9.

Other liabilities include other liabilities of insurance companies, accrued expenses, and lease liabilities.

The other assets and other liabilities line items are used to report assets and liabilities that cannot be allocated to any of the other asset or liability line items.

>> 22 Loss allowances

Loss allowances for cash and cash equivalents, loans and advances to banks and customers, investments, and other assets that are measured at amortized cost or designated as finance leases are reported as a separate line item on the assets side of the balance sheet. Additions to loss allowances for these balance sheet items, and any reversals of such allowances, are recognized under loss allowances in the income statement.

Loss allowances for investments held by insurance companies and other assets held by insurance companies measured at amortized cost are netted with the carrying amounts of these assets within the investments held by insurance companies and other assets held by insurance companies line items on the balance sheet. Additions to loss allowances for these balance sheet items, and any reversals of such allowances, are recognized under gains and losses on investments held by insurance companies and other insurance company gains and losses in the income statement.

Loss allowances for loans and advances to banks and customers, for investments, and for investments held by insurance companies that are measured at fair value through other comprehensive income are not reported on the assets side of the balance sheet but instead in the reserve from other comprehensive income.

Any additions to, or reversals of, provisions for loan commitments and financial guarantee contracts and other provisions for loans and advances are also recognized in profit or loss under loss allowances.

>> 23 Non-current assets and disposal groups classified as held for sale

The carrying amount of non-current assets or disposal groups for which a sale is planned is recovered principally through a sale transaction rather than through their continuing use. These assets and disposal groups therefore need to be classified as held for sale if the criteria set out below are satisfied.

To be classified as held for sale, the assets or disposal groups must be available for immediate sale in their present condition subject only to terms that are usual and customary for sales of such assets or disposal groups, and it must be highly probable that a sale will take place. A sale is deemed to be highly probable if there is a commitment to a plan to sell the asset or disposal group and an active program to locate a buyer and complete the plan has been initiated. In addition, the asset or disposal group must be actively marketed for sale at a price that is reasonable in relation to the current fair value. A sale must be expected to be completed within one year of the date on which the asset or disposal group is classified as held for sale.

Assets classified as held for sale are measured at the lower of carrying amount and fair value less costs to sell. The assets are no longer depreciated from the date on which they are classified as held for sale.

Assets and disposal groups classified as held for sale are shown separately on the balance sheet under non-current assets and disposal groups classified as held for sale and liabilities included in disposal groups classified as held for sale. Gains and losses arising on measurement as well as gains and losses on the sale of these assets or disposal groups that do not belong to a discontinued operation are recognized in the income statement under other net operating income. If the assets or disposal groups belong to discontinued operations, all gains and losses arising from these assets and disposal groups must be shown separately as 'profit/loss from discontinued operations, net of tax'.

>> 24 Deposits from banks and customers

All liabilities attributable to registered creditors not classified as 'financial liabilities mandatorily measured at fair value through profit or loss' are recognized as deposits from banks and customers. In addition to fixed-maturity liabilities and liabilities repayable on demand arising from the deposit, home savings and loan, and money market businesses, these liabilities also include, in particular, registered bonds and promissory notes issued.

Deposits from banks and customers are measured at amortized cost using the effective interest method. Where deposits from banks and customers are designated as a hedged item in an effective fair value hedge, the carrying amount is adjusted for any change in the fair value attributable to the hedged risk. If, to eliminate or significantly reduce accounting mismatches, the fair value option is applied for deposits from banks and customers, the liabilities are measured at fair value as at the balance sheet date.

Interest expense on deposits from banks and customers is recognized separately under net interest income. Interest expense also includes gains and losses on early redemptions and the amortization of hedge adjustments to carrying amounts due to fair value hedges. Hedge adjustments to the carrying amount due to fair value hedges are reported within other gains and losses on valuation of financial instruments under gains and losses from hedge accounting. If the fair value option has been exercised for deposits from banks and customers, valuation gains and losses are recognized under gains and losses on non-derivative financial instruments and embedded derivatives within other gains and losses on valuation of financial instruments.

>> 25 Debt certificates issued including bonds

Debt certificates issued including bonds cover 'Pfandbriefe', other bonds, and commercial paper for which transferable bearer certificates have been issued.

Debt certificates issued including bonds and gains and losses thereon are measured and recognized in the same way as deposits from banks and customers.

>> 26 Provisions

Provisions for employee benefits

Pension plans agreed with the employees of the entities in the DZ BANK Group are based on various types of pension schemes that depend on the legal, economic, and tax situation in each country and include both defined contribution plans and defined benefit plans.

Where a commitment is made to defined contribution plans, fixed contributions are paid to external pension providers. The amount of the contributions and the income earned from the pension assets determine the amount of future pension benefits. The risks arising from the obligation to pay such benefits in the future lie with the pension provider. No provisions are recognized for these indirect pension commitments. The contributions paid are recognized as pension and other post-employment benefit expenses under administrative expenses.

Under a defined benefit plan, the employer promises a specific benefit and bears all the risks arising from this promise. Defined benefit obligations are measured on the basis of the projected unit credit method. The measurement depends on various actuarial assumptions. These include, in particular, assumptions about long-term salary and pension trends and average life expectancy. Assumptions about salary and pension trends are based on past trends and take into account expectations regarding future changes in the labor market. Generally accepted biometric tables (2018 G mortality tables published by Professor Dr. Klaus Heubeck) are used to estimate average life expectancy. The discount rate used to discount future payment obligations is an appropriate market interest rate for investment-grade fixed-income corporate bonds with a maturity equivalent to that of the defined benefit obligations. The discount rate depends on the obligation structure (duration) and is determined using a portfolio of high-quality corporate bonds that must satisfy certain quality criteria. One of the notable quality criteria is a credit rating of at least AA from the two rating agencies with the greatest coverage in the currency area in question. For the eurozone, these are Moody's Investors Service and Standard & Poor's, both New York. Bonds with existing call options in the form of embedded derivatives are not included in this process. The process for determining the discount rate was refined in June 2020 owing to a change to Bloomberg's bond classification system. The discount rate would have been 33 basis points lower without this refinement. Note 69 contains disclosures on the sensitivity of the present value of the defined benefit obligations to changes in the actuarial parameters.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions regarding the defined benefit obligations, together with gains and losses arising from the remeasurement of plan assets and reimbursement rights, are recognized in other comprehensive income in the reporting period in which they occur.

The plan assets for the DZ BANK Group's defined benefit plans consist to a significant extent of the plan assets of DZ BANK.

In addition to the provisions for defined benefit pension plans, the provisions for employee benefits include provisions for other long-term employee benefits, provisions for termination benefits, and provisions for short-term employee benefits.

Provisions for other long-term employee benefits are recognized, in particular, to cover semi-retirement (Altersteilzeit) and long-service bonuses. Provisions for early retirement are included under the provisions for termination benefits.

Provisions for termination benefits linked with restructuring are reported separately from other restructuring provisions. The provisions for restructuring assigned to the provisions for employee benefits have been derived from a number of strategies, including DZ BANK's forward-looking 'Verbund First 4.0' initiative, VR Smart Finanz's strategy to transform itself into a digital provider of finance for the self-employed and small businesses, and the strategic agenda for DVB's business model.

Provisions for employee benefits are generally recognized as a charge to administrative expenses, although reversals of such provisions are reported under other net operating income. As an exception to the rule, provisions for restructuring are recognized under other net operating income.

Provisions for share-based payment transactions

The entities in the DZ BANK Group have entered into various agreements covering variable remuneration components to be paid to members of the Board of Managing Directors and certain other executives. The amount and timing of such remuneration depends on a number of factors, not least the performance of the entity concerned. These agreements are classified as cash-settled share-based payment transactions.

Provisions for share-based payment transactions are recognized (at fair value) if it is sufficiently probable that the remuneration will be paid out in the future. The timing of initial recognition is therefore before the grant date and before any payout in subsequent years. This results in discrepancies compared with the nominal amounts disclosed in note 99 for share-based payments granted but not yet paid out.

Provisions for share-based payment transactions are also subsequently measured at fair value. Any changes in fair value are recognized in profit or loss.

Other provisions

Provisions are liabilities in which the amounts or due dates are uncertain. Provisions are recognized for present obligations arising out of past events, in which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and the amount of the obligation can be reliably estimated.

The provisions are recognized and measured using the best estimate of the present value of their anticipated utilization. This estimate takes account of future events as well as the risks and uncertainties relating to the issue concerned.

Provisions for irrevocable loan commitments and provisions for financial guarantee contracts are recognized with the same model used for financial assets and in the amount of the expected credit losses.

Other provisions for loans and advances factor in the usual sector-specific level of uncertainty. The underlying assumptions and estimates used include figures based on past experience as well as expectations and forecasts relating to future trends and developments.

Subject to various criteria being met, the building society's terms and conditions provide for bonuses for home savings customers in the form of a reimbursement of some of the sales charge or in the form of interest bonuses on deposits. The bonuses constitute independent payment obligations and must be measured and recognized in accordance with IAS 37. Various options are available to home savings customers, for example drawing down the home savings loan, waiving the loan after allocation, or continuing with the home savings contract. In order to measure provisions relating to building society operations, building society simulations (collective simulations) that forecast home savings customers' future behavior are used to evaluate these options. The parameters for collective simulation, including the probabilities of the options being exercised by home savings customers, are set using the exercise rate determined by observing customer behavior in the past. The collective simulations form the basis for cash flow projections that are used to measure the provisions relating to building society operations. These cash flow projections are carried out at portfolio level for a projection period of 15 years. For validation purposes, an additional process is used and the results are compared against those obtained using the measurement method. Uncertainty in connection with the measurement of the provisions may arise depending on the extent to which the assumptions about future customer behavior – taking account of various interest-rate scenarios and management measures – that were forecast using collective simulation actually materialize in the future. Unconditional bonuses in the form of additional interest credit are recognized as part of the amortized cost of the home savings deposits in accordance with IFRS 9.5.2.1 in conjunction with IFRS 9.4.2.1.

Provisions are recognized for risks arising from ongoing legal disputes and cover the possible resulting losses. Such provisions are recognized when the reasons indicating that a legal dispute will result in a payment obligation for an entity in the DZ BANK Group are stronger than those indicating the opposite. Any concentration risk owing to similarities between individual cases is taken into consideration.

The amount in which provisions are recognized for risks arising from ongoing legal disputes is based on the information available at the time and is subject to assumptions and discretion in how a dispute is assessed. For example, this may be because the entity in the DZ BANK Group does not yet have at its disposal all the information required to make a final assessment of the legal dispute, particularly during the early stages of proceedings. Moreover, predictions made by entities in the DZ BANK Group in relation to changes to legal circumstances, changes to official interpretations, or – in the case of court cases – to procedural orders, decisions by the courts, or the arguments expected to be put forward by the opponent in the case may later turn out to be unfounded.

The expense incurred by the unwinding of the discount on provisions is recognized as interest expense under net interest income.

>> 27 Subordinated capital

Subordinated capital comprises all registered or bearer debt instruments that, in the event of insolvency or liquidation, are repaid only after settlement of all unsubordinated liabilities but before distribution to shareholders of any proceeds from the insolvency or liquidation.

Subordinated liabilities largely comprise subordinated bearer bonds and promissory notes. Profit-sharing rights outstanding comprise registered and bearer profit-participation certificates in issue. Regulatory Tier 1 capital that does not meet IFRS equity criteria is recognized as other hybrid capital. The share capital repayable on demand comprises the non-controlling interests in partnerships controlled by entities in the DZ BANK Group. These non-controlling interests must be classified as subordinated.

Subordinated capital and gains and losses on this capital are measured and recognized in the same way as deposits from banks and customers.

>> 28 Contingent liabilities

Contingent liabilities are possible obligations arising from past events. The existence of these obligations will only be confirmed by future events outside the control of the entities in the DZ BANK Group. Present obligations arising out of past events but not recognized as provisions because of the improbability of an outflow of resources embodying economic benefits or because the amount cannot be measured with sufficient reliability also constitute contingent liabilities.

The amount of contingent liabilities is disclosed in the notes unless the probability of an outflow of resources embodying economic benefits is remote. Contingent liabilities are measured at the best estimate of possible future outflows of resources embodying economic benefits.

Contingent liabilities in respect of litigation risk are reported when the reasons indicating that there is no current obligation are stronger than those indicating the opposite, but there is still a likelihood that a legal dispute will result in a payment obligation for an entity in the DZ BANK Group. Risks arising from legal disputes are assessed according to how likely they are to occur.

B Disclosure of interests in other entities

>> 29 Investments in subsidiaries

Proportion of the DZ BANK Group’s activities and cash flow attributable to non-controlling interests

In the DZ BANK Group, material non-controlling interests in the capital and net income exist in the following subsidiaries:

€ million	Dec. 31, 2020	Dec. 31, 2019
Bausparkasse Schwäbisch Hall subgroup	239	238
DZ PRIVATBANK	64	64
R+V Versicherung subgroup	1,237	1,168
Union Asset Management Holding subgroup	62	46
DZ BANK Capital Funding Trust I	285	296
DZ BANK Capital Funding Trust II	490	499
DZ BANK Capital Funding Trust III	348	350
DZ BANK Perpetual Funding Issuer (Jersey) Limited	240	241
Other	128	107
Total	**3,093**	**3,009**

Bausparkasse Schwäbisch Hall

Bausparkasse Schwäbisch Hall AG – Bausparkasse der Volksbanken und Raiffeisenbanken, Schwäbisch Hall (BSH) is the parent company of the BSH subgroup. BSH is headquartered in Schwäbisch Hall. DZ BANK directly holds 97.1 percent of the shares in BSH (December 31, 2019: 96.9 percent). The share of voting rights is equal to the shareholding. Non-controlling interests account for 2.9 percent of the voting rights and shares (December 31, 2019: 3.1 percent). As was the case a year earlier, most of these non-controlling interests are held by local cooperative banks.

The net income for the year attributable to the non-controlling interests was €8 million (2019: €17 million). This included the net income for the year attributable to non-controlling interests in the BSH subgroup of €6 million (2019: €11 million). The carrying amount of the non-controlling interests in the DZ BANK Group was €239 million (December 31, 2019: €238 million). Of this amount, €74 million was attributable to non-controlling interests within the BSH subgroup (December 31, 2019: €79 million). DZ BANK has entered into a profit-transfer agreement with BSH. This guarantees a cash settlement of €6.97 per non-par-value share (after corporation tax and ancillary taxes) for the outside shareholders of BSH until the end of the 2020 financial year. Guaranteed dividends of €1 million were paid to outside shareholders of BSH in 2020 (2019: €1 million). In the BSH subgroup, dividends of €4 million were paid to non-controlling interests (2019: €4 million).

Aggregated financial information for the BSH subgroup:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	81,673	77,469
Liabilities	75,608	71,769

€ million	2020	2019
Interest income and fee and commission income	1,606	1,681
Net profit	51	150
Other comprehensive income	318	408
Total comprehensive income	369	558
Cash flow	405	101

DZ PRIVATBANK

DZ PRIVATBANK S.A., Strassen, Luxembourg, (DZ PRIVATBANK S.A.), headquartered in Luxembourg, together with its wholly owned subsidiaries DZ PRIVATBANK (Schweiz) AG, Zurich, Switzerland, IPConcept (Luxemburg) S.A., Strassen, Luxembourg, and IPConcept (Schweiz) AG, Zurich, Switzerland, is the cooperative center of excellence for the private banking business of the local cooperative banks in Germany.

DZ BANK directly holds 91.7 percent (December 31, 2019: 91.5 percent) of the shares in DZ PRIVATBANK S.A. The share of voting rights is equal to the shareholding. The other shares are held by local cooperative banks and cooperative investors.

The net income for the year attributable to the non-controlling interests was €2 million (2019: €2 million). The carrying amount of the non-controlling interests was €64 million (December 31, 2019: €64 million). The dividend distributed to the non-controlling interests came to €1 million in 2020 (2019: €1 million).

Aggregated financial information for DZ PRIVATBANK:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	17,691	19,464
Liabilities	16,836	18,622

€ million	2020	2019
Interest income and fee and commission income	519	544
Net profit	28	28
Other comprehensive income/loss	-4	6
Total comprehensive income	24	34
Cash flow	-1,914	640

R+V Versicherung

The R+V Group is a subgroup of the DZ BANK Group that, with its individual companies, offers all types of insurance in all of the non-life, life, and health insurance sectors. It also takes on inward reinsurance business in the international market.

R+V Versicherung AG, Wiesbaden, (R+V) is the parent company of the R+V subgroup. R+V is headquartered in Wiesbaden. DZ BANK directly holds 92.2 percent of the shares in R+V (December 31, 2019: 92.1 percent). The share of voting rights is equal to the shareholding. Non-controlling interests account for 7.8 percent of the voting rights and shares (December 31, 2019: 7.9 percent). Within this figure, local cooperative banks hold 6.0 percent (December 31, 2019: 6.1 percent). The other 1.8 percent (December 31, 2019: 1.8 percent) is held by other entities in the cooperative sector.

The net income for the year attributable to the non-controlling interests was €35 million (2019: €97 million). This included the net income for the year attributable to non-controlling interests in the R+V subgroup of €28 million (2019: €47 million). The carrying amount of the non-controlling interests in the DZ BANK Group was €1,237 million (December 31, 2019: €1,168 million). Of this amount, €631 million was attributable to non-controlling interests within the R+V subgroup (December 31, 2019: €583 million). DZ BANK has entered into a profit-transfer agreement with R+V. This guarantees an annual cash settlement of €6.30 per non-par-value share (after corporation tax and ancillary taxes) for the outside shareholders of R+V until the end of the 2021 financial year. Guaranteed dividends of €7 million were paid to outside shareholders of R+V in 2020 (2019: €7 million). In the R+V subgroup, dividends of €8 million were paid to non-controlling interests (2019: €8 million).

Aggregated financial information for the R+V subgroup:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	130,027	121,973
Liabilities	121,539	113,761

€ million	2020	2019
Premiums earned	18,741	17,249
Net profit	43	607[1]
Other comprehensive income	241	945[1]
Total comprehensive income	284	1,552

1 Amount restated (see note 2).

Union Asset Management Holding

Union Asset Management Holding AG, Frankfurt am Main, (UMH) is the parent company of the UMH subgroup. UMH is headquartered in Frankfurt am Main. Other major locations are Hamburg and Luxembourg. DZ BANK's aggregated shareholding in UMH is 96.6 percent (December 31, 2019: 96.6 percent). The share of voting rights is equal to the aggregated shareholding. Non-controlling interests account for 3.4 percent of the shares (December 31, 2019: 3.4 percent). Most of these non-controlling interests are held by local cooperative banks. The proportion held indirectly by DZ BANK is 95.8 percent (December 31, 2019: 95.8 percent).

The carrying amount of the non-controlling interests within the DZ BANK Group was €62 million (December 31, 2019: €46 million) and related to the multiplicative share of the capital of UMH. Of this amount, €31 million was attributable to non-controlling interests within the UMH subgroup (December 31, 2019: €24 million). The net income for the year attributable to the non-controlling interests was €24 million (2019: €23 million). This included the net income for the year attributable to non-controlling interests in the UMH subgroup of €9 million (2019: €8 million). The dividend distributed to the non-controlling interests totaled €12 million in 2020 (2019: €14 million). €7 million of this amount was paid as dividends to non-controlling interests in the UMH subgroup (2019: €7 million).

Aggregated financial information for the UMH subgroup:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	3,561	3,012
Liabilities	1,721	1,406

€ million	2020	2019
Interest income and fee and commission income	2,791	2,671
Net profit	460	478
Other comprehensive income/loss	-22	-2
Total comprehensive income	438	476

DZ BANK Capital Funding Trust I, II, and III and DZ BANK Perpetual Funding Issuer (Jersey) Limited
DZ BANK has established companies in Delaware, USA, and Jersey, Channel Islands, in order to increase own funds in accordance with section 10a of the German Banking Act (KWG). The business activities of these companies are limited to the issuance of open-ended equity instruments without redemption incentives. These equity instruments that have been issued are held by non-voting non-controlling interests in the DZ BANK Group. The companies in question are:
- DZ BANK Capital Funding Trust I, Wilmington, Delaware,
- DZ BANK Capital Funding Trust II, Wilmington, Delaware,
- DZ BANK Capital Funding Trust III, Wilmington, Delaware,
- DZ BANK Perpetual Funding Issuer (Jersey) Limited, St. Helier, Jersey.

The companies were established at their current registered office. The Delaware companies are headquartered in New York, USA. The Channel Islands company is headquartered in Frankfurt am Main. Virtually 100 percent of the issued share capital of each of the companies is attributable to non-voting non-controlling interests, while the voting rights in the companies are attached to only a small proportion of the shares. As a result, virtually all of the profits and losses of the companies are attributable to the non-controlling interests.

The companies' net income for the year is shown in the following table:

€ million	2020	2019
DZ BANK Capital Funding Trust I	6	7
DZ BANK Capital Funding Trust II	6	6
DZ BANK Capital Funding Trust III	4	4
DZ BANK Perpetual Funding Issuer (Jersey) Limited	1	1

Distributions of dividends to the non-controlling interests generally take the form of a variable or fixed-rate coupon whose actual payment is not subject to a contractual obligation.

The dividends paid to the non-controlling interests in the financial year are shown in the following table:

€ million	2020	2019
DZ BANK Capital Funding Trust I	6	7
DZ BANK Capital Funding Trust II	6	6
DZ BANK Capital Funding Trust III	4	4
DZ BANK Perpetual Funding Issuer (Jersey) Limited	1	1

Aggregated financial information for the DZ BANK Capital Funding Trust companies and the DZ BANK Perpetual Funding Issuer company:

€ million	Dec. 31, 2020	Dec. 31, 2019
Non-current assets	1,410	1,410
Liabilities	-	-

€ million	2020	2019
Interest income and fee and commission income	17	18
Net profit	17	18
Total comprehensive income	17	18

Nature and extent of significant restrictions

National regulatory requirements, contractual provisions, and provisions of company law restrict the DZ BANK Group's ability to transfer assets within the group. Where these restrictions can be specifically assigned to individual line items on the balance sheet, the carrying amounts of the assets and liabilities subject to restrictions on the balance sheet date are shown in the following table:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	**95,445**	**89,997**
Loans and advances to customers	2,714	2,699
Investments	5	5
Investments held by insurance companies	92,723	87,290
Other assets	3	3
Liabilities	**156,261**	**148,690**
Deposits from banks	1,711	1,788
Deposits from customers	64,673	63,226
Provisions	1,443	1,406
Insurance liabilities	88,434	82,270

Nature of the risks associated with interests in consolidated structured entities

Risks arising from interests in consolidated structured entities largely result from loans to fully consolidated funds, some of which are extended in the form of junior loans.

>> 30 Interests in joint arrangements and associates

Nature, extent, and financial effects of interests in joint arrangements

Prvá stavebná sporiteľňa

Prvá stavebná sporiteľňa a.s., Bratislava, Slovakia, (PSS) is a joint venture between BSH and its partners Raiffeisen Bausparkasse Holding GmbH, Vienna, Austria, Slovenská sporiteľňa a.s., Bratislava, Slovakia, and Erste Group Bank AG, Vienna, Austria. PSS is headquartered in Bratislava, Slovakia. PSS is the market leader for building society operations in Slovakia. BSH's shareholding in PSS was 32.5 percent on the balance sheet date, as it had been at December 31, 2019. In the DZ BANK Group, the interests in PSS are accounted for using the equity method. PSS did not pay any dividend to BSH in 2020 (2019: no dividend).

Aggregated financial information for PSS:

€ million	Dec. 31, 2020	Dec. 31, 2019
Current assets	570	625
of which cash and cash equivalents	76	13
Non-current assets	2,413	2,405
Current liabilities	664	690
of which financial liabilities	650	670
Non-current liabilities	2,053	2,082
of which financial liabilities	2,042	2,068

€ million	2020	2019
Interest income	95	101
Interest expense	-33	-38
Fee and commission income	13	16
Fee and commission expenses	-1	-1
Administrative expenses	-36	-34
Income taxes	-3	-5
Profit from continuing operations, net of tax	8	15
Total comprehensive income	8	15

Reconciliation from the aggregated financial information to the carrying amount of the interests in PSS:

€ million	Dec. 31, 2020	Dec. 31, 2019
Total net assets	**266**	258
Share of net assets	**87**	84
Cumulative impairment losses on the carrying amount of the investment	-11	-11
Carrying amount under the equity method	**76**	73

Zhong De Zuh Fang Chu Xu Yin Hang (Sino-German-Bausparkasse)

Zhong De Zuh Fang Chu Xu Yin Hang (Sino-German-Bausparkasse), Tianjin, China, (SGB) is a joint venture between BSH and China Construction Bank Corporation, Beijing, China. SGB is headquartered in Tianjin, China. Its business activities are concentrated in the regions of Tianjin (population of approx. 13 million) and Chongqing (population of approx. 30 million). BSH's shareholding in this Chinese building society was 24.9 percent on the balance sheet date, as it had been at December 31, 2019. In the DZ BANK Group, the interests in SGB are accounted for using the equity method. SGB did not pay a dividend in 2020, as had also been the case in the previous year.

Aggregated financial information for SGB:

€ million	Dec. 31, 2020	Dec. 31, 2019
Current assets	1,105	578
of which cash and cash equivalents	417	502
Non-current assets	2,017	2,332
Current liabilities	2,062	1,931
of which financial liabilities	1,883	1,743
Non-current liabilities	685	602
of which financial liabilities	680	598

€ million	2020	2019
Interest income	107	84
Interest expense	-44	-47
Fee and commission income	5	9
Fee and commission expenses	-14	-13
Administrative expenses	-34	-36
Income taxes	-3	-2
Profit from continuing operations, net of tax	8	6
Other comprehensive income/loss	-10	3
Total comprehensive income/loss	-2	9

Reconciliation from the aggregated financial information to the carrying amount of the interests in SGB:

€ million	Dec. 31, 2020	Dec. 31, 2019
Total net assets	**375**	377
Share of net assets	**93**	94
Cumulative impairment losses on the carrying amount of the investment	-63	-64
Carrying amount under the equity method	**30**	30

Deutsche WertpapierService Bank

Deutsche WertpapierService Bank AG, Frankfurt am Main, (dwpbank) is a joint venture of DZ BANK with Westfälisch-Lippische Sparkassen- und Giroverband, Münster, Rheinischer Sparkassen- und Giroverband, Düsseldorf, and 3 other banks in Germany and is accounted for in the DZ BANK Group's financial statements using the equity method. dwpbank is headquartered in Frankfurt am Main. Its capital is divided into 20,000,000 voting registered shares with transfer restrictions. DZ BANK holds a 50.0 percent stake in dwpbank, as it did at December 31, 2019. The equity method is applied to dwpbank on the basis of financial statements prepared in accordance with HGB.

The shares in dwpbank are not traded in an active market. dwpbank did not pay any dividend to DZ BANK in 2020 (2019: no dividend).

Aggregated financial information for dwpbank:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	693	583
Liabilities	423	373
of which financial liabilities	208	150

dwpbank only has a small amount of cash and cash equivalents.

€ million	2020	2019
Interest income	3	4
Interest expense	-3	-3
Fee and commission income	400	321
Fee and commission expenses	-90	-76
Administrative expenses	-228	-211
Income taxes	-11	-10
Profit from continuing operations, net of tax	60	6
Total comprehensive income	60	6

Reconciliation from the aggregated financial information to the carrying amount of the interests in dwpbank:

€ million	Dec. 31, 2020	Dec. 31, 2019
Total net assets	**270**	210
Share of net assets	**135**	105
Capitalization of goodwill	29	29
Carrying amount under the equity method	**164**	134

Other joint ventures

The carrying amount of the equity-accounted joint ventures that, individually, are not material totaled €59 million on the balance sheet date (December 31, 2019: €76 million).

Aggregated financial information for equity-accounted joint ventures that, individually, are not material:

€ million	2020	2019
Share of profit from continuing operations, net of tax	5	4
Share of other comprehensive income	8	-
Share of total comprehensive income	13	4

Nature, extent, and financial effects of investments in associates

Other associates

The carrying amount of the equity-accounted associates that, individually, are not material totaled €112 million on the balance sheet date (December 31, 2019: €201 million).

Aggregated financial information for equity-accounted associates that, individually, are not material:

€ million	2020	2019
Share of profit/loss from continuing operations, net of tax	-2	21
Share of profit from discontinued operations, net of tax	1	7
Share of total comprehensive income/loss	-1	28

>> 31 Interests in unconsolidated structured entities

Structured entities are entities that have been designed so that voting rights or similar rights are not the dominant factor in deciding who controls the entity. The DZ BANK Group distinguishes between the following types of interests in unconsolidated structured entities, based on their design and the related risks:
- Interests in investment funds issued by the DZ BANK Group,
- Interests in investment funds not issued by the DZ BANK Group,
- Interests in securitization vehicles,
- Interests in asset-leasing vehicles.

Interests in investment funds issued by the DZ BANK Group

The interests in the investment funds issued by the DZ BANK Group largely comprise investment funds issued by entities in the Union Investment Group in accordance with the contractual form model without voting rights and, to a lesser extent, those that are structured as a company with a separate legal personality. The number of unit/share types and volume of investment funds issued and managed by the UMH subgroup can be broken down as follows:

	Dec. 31, 2020		Dec. 31, 2019	
€ million	Volume	Number	Volume	Number
Mutual funds	198,732	341	184,703	334
of which guarantee funds	790	14	1,703	25
Special funds	125,070	426	116,299	418
of which guarantee funds	-	-	-	-
Total	323,802	767	301,002	752

Furthermore, DVB Bank SE, Frankfurt am Main, (DVB) makes subordinated loans available to fully consolidated funds for the purpose of transport finance. In turn, these funds make subordinated loans or direct equity investments available to unconsolidated entities.

The maximum exposure of the investment funds issued and managed by the DZ BANK Group is shown in the following tables as a gross value, excluding deduction of available collateral:

AS AT DECEMBER 31, 2020

€ million	Mutual funds	of which guarantee funds	Special funds	of which guarantee funds	Total
Assets	2,077	-	5,241	-	7,318
Loans and advances to customers	3	-	5	-	8
Investments	1,673	-	6	-	1,679
Investments held by insurance companies	136	-	5,128	-	5,264
Property, plant and equipment, investment property, and right-of-use assets	71	-	-	-	71
Other assets	155	-	22	-	177
Non-current assets and disposal groups classified as held for sale	39	-	80	-	119
Liabilities	84	12	-	-	84
Hedging instruments (negative fair values)	12	12	-	-	12
Other liabilities	72	-	-	-	72
Net exposure recognized on the balance sheet	1,993	-12	5,241	-	7,234
Contingent liabilities	-	-	-	-	-
Financial guarantee contracts, loan commitments and other obligations	745	745	-	-	745
Financial guarantee contracts	-	-	-	-	-
Loan commitments	-	-	-	-	-
Other obligations	745	745	-	-	745
Actual maximum exposure	2,738	733	5,241	-	7,979

AS AT DECEMBER 31, 2019

€ million	Mutual funds	of which guarantee funds	Special funds	of which guarantee funds	Total
Assets	**1,824**	**-**	**6,012**	**-**	**7,836**
Loans and advances to customers	5	-	7	-	12
Investments	1,464	-	35	-	1,499
Investments held by insurance companies	122	-	5,477	-	5,599
Property, plant and equipment, investment property, and right-of-use assets	46	-	-	-	46
Other assets	149	-	19	-	168
Non-current assets and disposal groups classified as held for sale	38	-	474	-	512
Liabilities	**57**	**10**	**-**	**-**	**57**
Hedging instruments (negative fair values)	10	10	-	-	10
Other liabilities	47	-	-	-	47
Net exposure recognized on the balance sheet	1,767	-10	6,012	-	7,779
Contingent liabilities	**-**	**-**	**-**	**-**	**-**
Financial guarantee contracts, loan commitments and other obligations	**1,573**	**1,573**	**-**	**-**	**1,573**
Financial guarantee contracts	-	-	-	-	-
Loan commitments	-	-	-	-	-
Other obligations	1,573	1,573	-	-	1,573
Actual maximum exposure	**3,340**	**1,563**	**6,012**	**-**	**9,352**

Regarding the disclosure of the maximum exposure, it must be noted that the ‘Other obligations’ line item in the table above includes market price guarantees in the amount of the nominal amounts of the guarantee commitments for guarantee funds of €757 million (December 31, 2019: €1,584 million), less negative fair values of €12 million (December 31, 2019: €10 million) recognized as a liability for the put options embedded in these products. The maximum exposure for market price guarantees for the guarantee funds does not represent the economic risk of this product type because the economic risk also has to reflect these guarantee funds’ net assets of €790 million on the balance sheet date (December 31, 2019: €1,703 million) (net asset value) and the management model used with these products to safeguard the minimum payment commitments. The benefit under a market price guarantee is triggered if the fair value of the affected units does not reach the specified guaranteed level on particular dates. The put options embedded in the guarantee funds are reported as derivatives (negative fair values) under equity and liabilities on the balance sheet.

The interests in investment funds issued and managed by the DZ BANK Group resulted in losses of €66 million in the financial year (2019: losses of €13 million). Distributions in 2020 relating to each investment fund were offset in the calculation of the losses incurred in respect of each fund. No amount was added to loss allowances in 2020 (2019: €146 million).

The revenue generated from investment funds issued by the DZ BANK Group was as follows:

2020

€ million	Mutual funds	of which guarantee funds	Special funds	of which guarantee funds	Total
Interest income and current income and expense	7	-	2	-	9
Fee and commission income	2,309	7	199	-	2,508
Gains and losses on investments	-5	-	-	-	-5
Other gains and losses on valuation of financial instruments	16	-	2	-	18
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	-	29	-	29
Other operating income	-	-	2	-	2
Total	**2,327**	**7**	**234**	**-**	**2,561**

2019

€ million	Mutual funds	of which guarantee funds	Special funds	of which guarantee funds	Total
Interest income and current income and expense	8	-	-1	-	7
Fee and commission income	2,190	16	173	-	2,363
Gains and losses on investments	2	-	1	-	3
Other gains and losses on valuation of financial instruments	16	-	-1	-	15
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	-	33	-	33
Other operating income	-	-	-	-	-
Total	**2,216**	**16**	**205**	**-**	**2,421**

Interests in investment funds not issued by the DZ BANK Group

The interests in the investment funds not issued by the DZ BANK Group above all comprise investment funds managed by entities in the Union Investment Group within the scope of their own decision-making powers that have been issued by entities outside the DZ BANK Group and parts of such investment funds. Their total volume amounted to €39,836 million (December 31, 2019: €40,256 million). The DZ BANK Group also extends loans to investment funds in order to generate interest income.

In addition, there were investment funds issued by entities outside the group in connection with unit-linked life insurance amounting to €10,056 million (December 31, 2019: €8,837 million) that, however, do not result in a maximum exposure.

The maximum exposure arising from the investment funds not issued by the DZ BANK Group is shown as a gross value, excluding deduction of available collateral. The following assets and liabilities have been recognized on the DZ BANK Group's balance sheet in connection with interests in investment funds not issued by the DZ BANK Group:

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	**7,051**	6,771
Loans and advances to customers	7,051	6,771
Liabilities	-	-
Net exposure recognized on the balance sheet	7,051	6,771
Contingent liabilities	-	-
Financial guarantee contracts, loan commitments and other obligations	**267**	229
Financial guarantee contracts	37	-
Loan commitments	230	229
Other obligations	-	-
Maximum exposure	**7,318**	7,000

The revenue generated from interests in investment funds not issued by the DZ BANK Group was as follows:

€ million	2020	2019
Interest income	117	82
Fee and commission income	78	83
Total	**195**	165

Interests in securitization vehicles

The interests in securitization vehicles are interests in vehicles where the DZ BANK Group's involvement goes beyond that of an investor. The assets and liabilities listed below have been recognized on the DZ BANK Group's balance sheet in connection with these interests. There is also an additional exposure from contingent liabilities and from financial guarantee contracts, loan commitments, and other obligations, which are shown at their nominal amounts. Only financial guarantee contracts, loan commitments, and other obligations for which no liability or contingent liability has been recognized are included. The maximum exposure is determined as a gross value, excluding deduction of available collateral.

€ million	Dec. 31, 2020	Dec. 31, 2019
Assets	**1,658**	**1,529**
Loans and advances to customers	1,498	1,386
Financial assets held for trading	86	82
Investments	74	61
Liabilities	**7**	**4**
Deposits from customers	4	3
Financial liabilities held for trading	1	-
Provisions	2	1
Net exposure recognized on the balance sheet	1,651	1,525
Contingent liabilities	**-**	**-**
Financial guarantee contracts, loan commitments and other obligations	**2,932**	**2,479**
Financial guarantee contracts	-	-
Loan commitments	2,932	2,479
Other obligations	-	-
Maximum exposure	**4,583**	**4,004**

The revenue generated from interests in securitization vehicles was as follows:

€ million	2020	2019
Interest income	6	7
Fee and commission income	45	45
Gains and losses on trading activities	8	10
Gains and losses on investments	-	1
Total	**59**	**63**

The material interests in securitization vehicles comprise the two multi-seller asset-backed commercial paper (ABCP) programs: CORAL and AUTOBAHN.

DZ BANK acts as sponsor and program agent for both programs. It is also the program administrator for AUTOBAHN. As sponsor, DZ BANK was involved in setting up the structured entities and provides various services for them. Under the CORAL program, customers of the bank sell assets to separate special-purpose entities. The assets purchased essentially consist of trade receivables, loans, and lease receivables. Under the AUTOBAHN program, assets of North American customers are sold to specially established special-purpose entities and funded through the issuing company by means of ABCP issues.

The special-purpose entities are unconsolidated structured entities. Owing to the cellular structure of the transactions, there are no investee companies to be assessed. DZ BANK does not have control over the individual silos because it acts as agent and not as principal.

The purchase of the assets is funded using liquidity lines and by issuing money market-linked ABCPs. DZ BANK is a liquidity agent for the program, which involves making liquidity facilities available.

In 2020, DZ BANK did not provide either of the programs with any non-contractual support. Moreover, it currently has no intention to provide financial or other support. Because the ABCP programs are fully supported programs, DZ BANK bears all the credit risk.

Interests in asset-leasing vehicles

The interests in asset-leasing vehicles comprised shares in limited partnerships and voting shares, other than the shares in limited partnerships, in partnerships established by VR Smart Finanz for the purpose of real estate leasing (asset-leasing vehicles), in which the asset, and the funding occasionally provided by the DZ BANK Group, were placed. This business model was discontinued in 2019.

In 2019, the interests in asset-leasing vehicles had given rise to interest income and current income and expense of €1 million and other net operating income of €2 million.

>> 32 Sponsoring arrangements for unconsolidated structured entities

The DZ BANK Group sponsors an unconsolidated structured entity within the meaning of IFRS 12 if it was involved in establishing the structured entity or if the structured entity is linked by name to DZ BANK or a subsidiary within the DZ BANK Group and there are no interests, within the meaning of IFRS 12, in the structured entity.

Until the majority of the shares were acquired in October 2020, the DZ BANK Group acted as sponsor for an unconsolidated structured entity because it was linked with the structured entity by name and did not have any interests in the structured entity within the meaning of IFRS 12. The structured entity is an open-ended real estate fund for which the DZ BANK Group received a fee for sales and for services. In 2020, the fees amounted to €24 million (2019: €28 million) under net fee and commission income and €1 million (2019: €1 million) under other net operating income.

C Disclosures relating to the income statement and the statement of comprehensive income

>> 33 Segment information

Information on operating segments

2020

€ million	BSH	R+V	TeamBank	UMH
Net interest income	531	-	492	10
Net fee and commission income	-9	-	-30	1,566
Gains and losses on trading activities	-	-	-	-
Gains and losses on investments	56	-	-	44
Other gains and losses on valuation of financial instruments	5	-	-1	-83
Gains and losses from the derecognition of financial assets measured at amortized cost	15	-	-	-
Premiums earned	-	18,741	-	-
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	2,091	-	-
Insurance benefit payments	-	-17,499	-	-
Insurance business operating expenses	-	-3,046	-	-
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business	-	-19	-	-
Loss allowances	-29	-	-59	-
Administrative expenses	-526	-	-256	-919
Other net operating income	38	9	8	31
Profit/loss before taxes	**81**	**277**	**154**	**649**
Cost/income ratio (%)	82.7	-	54.6	58.6
Regulatory RORAC (%)	6.6	2.6	27.0	>100.0
Average own funds/solvency requirement	1,216	10,473	569	432
Total assets/total equity and liabilities as at Dec. 31, 2020	81,673	130,027	9,285	3,561

	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	DZ BANK – holding function	Other/ Consolidation	**Total**
	832	714	69	138	30	-50	31	2,797
	441	6	188	-24	25	-	-42	2,121
	488	9	17	-	26	-	12	552
	15	1	-	-	-1	-	51	166
	41	118	-2	-	-81	-	-19	-22
	-3	-	-	-	-	-	-14	-2
	-	-	-	-	-	-	-	18,741
	-	-	-	-	-	-	-44	2,047
	-	-	-	-	-	-	-	-17,499
	-	-	-	-	-	-	124	-2,922
	-	-	-	-	-	-	-1	-20
	-337	-47	-1	-49	-153	-	-3	-678
	-1,272	-237	-235	-102	-154	-188	-147	-4,036
	39	18	2	-8	23	-	50	210
	244	**582**	**38**	**-45**	**-285**	**-238**	**-2**	**1,455**
	68.6	27.4	85.8	96.2	>100.0	-	-	65.4
	4.6	36.7	10.8	-17.5	>100.0	-	-	7.2
	5,298	1,586	352	255	154	-	-	20,336
	314,612	94,486	17,691	3,684	10,247	21,297	-91,990	594,573

2019

€ million	BSH	R+V	TeamBank	UMH	
Net interest income	450	-	482	40	
Net fee and commission income	-28	-	-28	1,468	
Gains and losses on trading activities	-	-	-	-	
Gains and losses on investments	163	-	-	2	
Other gains and losses on valuation of financial instruments	18	-	-	-43	
Gains and losses from the derecognition of financial assets measured at amortized cost	18	-	-	-	
Premiums earned	-	17,249	-	-	
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	6,204	-	-	
Insurance benefit payments[1]	-	-19,394	-	-	
Insurance business operating expenses	-	-2,973	-	-	
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business	-	-12	-	-	
Loss allowances	-4	-	-77	-	
Administrative expenses	-486	-	-230	-910	
Other net operating income	58	-11	5	91	
Profit/loss before taxes	**189**	**1,063**	**152**	**648**	
Cost/income ratio (%)	71.6	-	50.1	58.4	
Regulatory RORAC (%)	16.5	13.3	30.0	>100.0	
Average own funds/solvency requirement	1,147	8,415	506	357	
Total assets/total equity and liabilities as at Dec. 31, 2019[1]	77,469	121,973	9,455	3,012	

1 Amount restated (see note 2).

	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	DZ BANK – holding function	Other/ Consolidation	**Total**
	772	656	65	147	146	-55	35	2,738
	388	2	176	-10	48	-	-41	1,975
	437	-2	9	-	6	-	22	472
	-3	10	-	-	-1	-	11	182
	39	275	2	1	-36	-	-1	255
	50	-	-	-	-	-	-53	15
	-	-	-	-	-	-	-	17,249
	-	-	-	-	-	-	-47	6,157
	-	-	-	-	-	-	-	-19,394
	-	-	-	-	-	-	150	-2,823
	-	-	-	-	-	-	-3	-15
	-77	1	-	-30	-141	-	-1	-329
	-1,296	-259	-220	-127	-202	-203	-141	-4,074
	-17	4	4	9	72	-	35	250
	293	**687**	**36**	**-10**	**-108**	**-258**	**-34**	**2,658**
	77.8	27.4	85.9	86.4	86.0	>100.0	-	57.7
	5.8	44.5	11.2	-3.4	-42.1	-	-	15.2
	5,056	1,543	319	291	256	-	-	17,890
	288,841	92,377	19,464	4,283	14,239	20,191	-91,832	559,472

General information on operating segments
The information on operating segments has been prepared using the management approach in accordance with IFRS 8. Under this standard, external reporting must include segment information that is used internally for the management of the entity and for the purposes of quantitative reporting to the chief operating decision-makers. The DZ BANK Group's information on operating segments has therefore been prepared on the basis of the internal management reporting system.

Definition of operating segments
Segmentation is fundamentally based on the integrated risk and capital management system in the DZ BANK Group, the function of which is to create transparency, notably in respect of the risk structure and risk-bearing capacity of the individual management units in the group. The segment information presents separate disclosures for the management units DZ HYP AG, Hamburg/Münster, (DZ HYP), TeamBank AG Nürnberg, Nuremberg, (TeamBank), DZ PRIVATBANK, and the BSH, DVB, R+V, UMH, and VR Smart Finanz subgroups. DZ BANK is broken down into the central institution and corporate bank (DZ BANK – CICB) and the group management function (DZ BANK – holding function) in line with the internal financial reporting structure. The DZ BANK – CICB operating segment comprises the cooperative central institution function, which supports the operating activities of the local cooperative banks, and the corporate bank function. DZ BANK – holding function is mainly used to pool tasks carried out on behalf of the DZ BANK Group in relation to commercial law, tax, and prudential supervision. The total assets of DZ BANK – holding function include the equity, plus a number of other items such as a notional carrying amount for the long-term equity investment in DZ BANK – CICB, together with the carrying amounts of the long-term equity investments in the other management units. The notional long-term equity investment in DZ BANK – CICB is measured in an amount equating to 11 percent of the risk-weighted assets of DZ BANK – CICB. DZ BANK – holding function does not constitute an operating segment within the meaning of IFRS 8.5 but is presented separately in line with the internal reporting structure. All other companies in the DZ BANK Group, which are not required to provide regular quantitative reports to the chief operating decision-makers, and the consolidations are reported on an aggregated basis under Other/Consolidation.

Presentation of operating segments
Interest income and associated interest expenses generated by the operating segments are offset and reported as net interest income in the information on operating segments because, from a group perspective, the operating segments are managed solely on the basis of the net figure.

Measurement
Internal reporting to the chief operating decision-makers in the DZ BANK Group is primarily based on the generally accepted accounting and measurement principles applicable to the DZ BANK Group.

Intragroup transactions between operating segments are carried out on an arm's-length basis. These transactions are reported internally using the financial reporting standards applied to external financial reporting.

The key indicators for assessing the performance of the operating segments are profit/loss before taxes, the cost/income ratio, and the return on risk-adjusted capital (regulatory RORAC).

The cost/income ratio shows the ratio of administrative expenses to operating income and reflects the economic efficiency of the operating segment concerned.

Operating income comprises net interest income, net fee and commission income, gains and losses on trading activities, gains and losses on investments, other gains and losses on valuation of financial instruments, gains and losses from the derecognition of financial assets measured at amortized cost, net income from insurance business, and other net operating income.

Regulatory RORAC is a risk-adjusted performance measure. In the financial year, it reflected the relationship between profit before taxes and the average own funds for the year (calculated as an average of the figure for the four quarters) in accordance with the own funds/solvency requirements for the financial conglomerate. It therefore shows the return on the regulatory risk capital employed.

Other/Consolidation

The consolidation-related adjustments shown under Other/Consolidation to reconcile operating segment profit/loss before taxes to consolidated profit/loss before taxes are attributable to the elimination of intragroup transactions and to the fact that investments in joint ventures and associates were accounted for using the equity method.

The adjustments to net interest income were primarily the result of the elimination of intragroup dividend payments and profit distributions in connection with intragroup liabilities to dormant partners and were also attributable to the early redemption of issued bonds and commercial paper that had been acquired by entities in the DZ BANK Group other than the issuer.

The figure under Other/Consolidation for net fee and commission income largely relates to the fee and commission business of TeamBank and the BSH subgroup with the R+V subgroup.

The remaining adjustments are mostly also attributable to the consolidation of income and expenses.

DZ BANK Group-wide disclosures

Information about geographical areas

The DZ BANK Group's operating income was generated in the following geographical areas:

€ million	**2020**	2019
Germany	5,330	6,273[1]
Rest of Europe	786	836
Rest of World	206	103
Consolidation/reconciliation	-153	-151
Total	**6,169**	**7,061**

1 Amount restated (see note 2).

Information on geographical areas is presented according to the home countries of the companies included in the consolidated financial statements.

This information does not include the separate disclosure of certain non-current (largely tangible) assets because these assets are of minor significance in the DZ BANK Group's business model.

Information about products and services

Information on products and services offered by the DZ BANK Group is included in the income statement disclosures below.

>> 34 Net interest income

€ million	2020	2019
INTEREST INCOME AND CURRENT INCOME AND EXPENSE	**5,193**	6,355
Interest income from	**5,111**	6,272
Lending and money market business	4,915	6,053
of which relating to mortgage loans	975	918
of which relating to home savings loans advanced by building society	1,067	1,073
of which relating to pass-through loans	608	674
of which relating to registered securities	310	356
of which relating to finance leases	47	76
Bonds and other fixed-income securities	519	656
Portfolio hedges of interest-rate risk	-128	-171[1]
Financial assets with a negative effective interest rate	-188	-266
Other assets	-7	-
Current income and expense from	**82**	83
Shares and other variable-yield securities	22	27
of which income from other shareholdings	13	16
Investments in subsidiaries	7	2
Investments in associates	1	2
Operating leases	-3	13
Entities accounted for using the equity method	49	35
of which relating to investments in joint ventures	39	7
of which relating to investments in associates	10	28
Income from profit-pooling, profit-transfer and partial profit-transfer agreements	6	4
INTEREST EXPENSE ON	**-2,396**	-3,617
Deposits from banks and customers	-2,274	-3,181
of which relating to home savings deposits	-984	-1,145
Debt certificates issued including bonds	-453	-695
Subordinated capital	-62	-71
Portfolio hedges of interest-rate risk	45	85[1]
Financial liabilities with a positive effective interest rate	357	252
Provisions and other liabilities	-9	-7
Total	**2,797**	2,738

1 Amount restated (see note 2).

The interest income from other assets included losses of €7 million from non-credit-risk-related modifications resulting from financial assets (2019: no losses). The interest expense on provisions and other liabilities included interest expense on lease liabilities of €3 million (2019: €4 million).

>> 35 Net fee and commission income

€ million	2020	2019
Fee and commission income	**4,267**	4,044
Securities business	3,307	3,051
Asset management	287	251
Payments processing including card processing	281	289
Lending business and trust activities	125	149
Financial guarantee contracts and loan commitments	60	58
International business	12	10
Building society operations	39	34
Other	156	202
Fee and commission expenses	**-2,146**	-2,069
Securities business	-1,456	-1,369
Asset management	-194	-163
Payments processing including card processing	-134	-144
Lending business	-85	-88
Financial guarantee contracts and loan commitments	-10	-10
Building society operations	-72	-84
Other	-195	-211
Total	**2,121**	**1,975**

In the financial year, fee and commission income included revenue from contracts with customers pursuant to IFRS 15 in an amount of €4,258 million (2019: €4,032 million); see note 93.

>> 36 Gains and losses on trading activities

€ million	2020	2019
Gains and losses on non-derivative financial instruments and embedded derivatives	-32	-1,373
Gains and losses on derivatives	665	1,794
Gains and losses on exchange differences	-81	51
Total	**552**	**472**

>> 37 Gains and losses on investments

€ million	2020	2019
Gains and losses on the disposal of bonds and other fixed-income securities	**71**	70
Gains and losses on the disposal of shares and other variable-yield securities	**-2**	2
Gains and losses on the disposal of investments in subsidiaries	**6**	-1
Gains and losses on investments in joint ventures	**6**	116
Disposals	-1	116
Transitional accounting	7	-
Impairment losses	-33	-
Reversals of impairment losses	33	-
Gains and losses on investments in associates	**85**	-5
Disposals	37	4
Transitional accounting	48	-
Impairment losses	-4	-16
Reversals of impairment losses	4	7
Total	**166**	182

In the financial year, further shares were acquired in ZBI Partnerschaftsholding GmbH, Erlangen, as part of a business combination achieved in stages. The company was previously accounted for using the equity method. It has been fully consolidated since control was obtained. The net gain resulting from transitional accounting amounted to €48 million. Further shares in GMS Holding GmbH, Paderborn, were also acquired. The investment in the joint venture, which was previously accounted for using the equity method, has been measured at fair value through profit or loss since control was obtained. This led to a net gain resulting from transitional accounting of €7 million.

In 2019, the bulk of the gains from the sale of investments in joint ventures had been derived from the disposal of Českomoravská stavební spořitelna, a.s., Prague, Czech Republic, (ČMSS).

>> 38 Other gains and losses on valuation of financial instruments

€ million	2020	2019
Gains and losses from fair value hedge accounting	**41**	-2
Gains and losses on derivatives used for purposes other than trading	**-173**	-45
Gains and losses on financial instruments designated as at fair value through profit or loss	**110**	273
Gains and losses on non-derivative financial instruments and embedded derivatives	234	211
Gains and losses on derivatives	-124	62
Gains and losses on financial assets mandatorily measured at fair value through profit or loss	**-**	29
Total	**-22**	255

Gains and losses on derivatives used for purposes other than trading result from the recognition and measurement of derivatives that are used for economic hedging but are not included in hedge accounting.

>> 39 Gains and losses from the derecognition of assets measured at amortized cost

€ million	2020	2019
Gains from the derecognition of financial assets measured at amortized cost	**12**	**47**
Loans and advances to banks and customers	5	9
Investments	7	38
Losses on derecognition of financial assets measured at amortized cost	**-14**	**-32**
Investments	-2	-2
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	-12	-30
Total	**-2**	**15**

The derecognition of financial assets measured at amortized cost was primarily attributable to the sale of impaired loans and advances to customers and early redemptions at the request of customers.

>> 40 Premiums earned

€ million	2020	2019
Net premiums written	**18,754**	**17,255**
Gross premiums written	18,952	17,398
Reinsurance premiums ceded	-198	-143
Change in provision for unearned premiums	**-13**	**-6**
Gross premiums	-14	-10
Reinsurers' share	1	4
Total	**18,741**	**17,249**

>> 41 Gains and losses on investments held by insurance companies and other insurance company gains and losses

€ million	2020	2019
Income from investments held by insurance companies	**8,691**	**8,961**
Interest income and current income	2,270	2,476
Income from reversals of impairment losses and reversals of loss allowances, and unrealized gains	346	655
Gains on valuation through profit or loss of investments held by insurance companies	4,857	5,058
Gains on disposals	1,218	772
Expenses in connection with investments held by insurance companies	**-6,962**	**-2,694**
Administrative expenses	-179	-171
Depreciation/amortization expense, additions to loss allowances, and impairment losses and unrealized losses	-1,252	-507
Losses on valuation through profit or loss of investments held by insurance companies	-4,310	-1,539
Losses on disposals	-1,220	-477
Expenses from the transfer of losses	-1	-
Other gains and losses of insurance companies	**318**	**-110**
Other insurance gains and losses	296	317
Other non-insurance gains and losses	22	-427
Total	**2,047**	**6,157**

Other non-insurance gains and losses included interest expenses on lease liabilities amounting to €1 million (2019: €1 million).

Income from and expenses in connection with investments held by insurance companies and other gains and losses of insurance companies included currency translation losses of €603 million (2019: gains of €123 million).

Income from and expenses in connection with investments held by insurance companies included additions to loss allowances of €82 million (2019: €5 million), reversals of loss allowances of €23 million (2019: €8 million), and no directly recognized impairment losses (2019: €1 million).

Around €46 million of the expenses for additions to loss allowances were related to the effects of the COVID-19 pandemic. The requirement for the addition in connection with the COVID-19 pandemic arose because the anticipated macroeconomic conditions were included in the calculation, in particular by adjusting the model-based default probability profiles (referred to as shift factors), which are taken into account when determining the expected losses. In the event of an extreme weighting of 100 percent for both the baseline scenario and the risk scenario underlying the calculation of loss allowances, the additions to loss allowances required because of the pandemic would reduce by approximately 0 percent and increase by approximately 2 percent respectively.

>> 42 Insurance benefit payments

€ million	2020	2019
EXPENSES FOR CLAIMS	**-12,122**	**-11,953**
Payments for claims	**-10,745**	**-10,710**
Gross payments for claims	-10,807	-10,753
Reinsurers’ share	62	43
Change in the provision for claims outstanding	**-1,377**	**-1,243**
Gross change in the provision for claims outstanding	-1,394	-1,228
Reinsurers’ share	17	-15
CHANGE IN THE BENEFIT RESERVE AND IN OTHER INSURANCE LIABILITIES	**-5,107**	**-5,649**
Change in the benefit reserve	**-5,116**	**-5,654**
Gross change in the benefit reserve	-5,130	-5,669
Reinsurers’ share	14	15
Change in other insurance liabilities	**9**	**5**
EXPENSES FOR PREMIUM REFUNDS	**-270**	**-1,792**
Gross expenses for premium refunds	-503	-622
Expenses for deferred premium refunds	233	-1,170[1]
Total	**-17,499**	**-19,394**

1 Amount restated (see note 2).

The net reinsurance expense amounted to €78 million (2019: €76 million).

Claims rate trend for direct non-life insurance business including claim settlement costs

Gross claims provisions in direct business and payments made against the original provisions:

€ million	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
At the end of the year	4,845	4,716	4,551	4,276	4,173	3,856	3,634	3,901	3,345	3,341	3,324
1 year later		4,606	4,471	4,142	4,103	3,767	3,523	3,847	3,336	3,359	3,135
2 years later			4,405	4,067	4,046	3,682	3,457	3,769	3,247	3,279	3,160
3 years later				4,021	4,020	3,647	3,389	3,731	3,220	3,254	3,139
4 years later					3,980	3,625	3,382	3,696	3,189	3,241	3,122
5 years later						3,624	3,389	3,691	3,198	3,250	3,139
6 years later							3,329	3,626	3,126	3,183	3,080
7 years later								3,616	3,118	3,172	3,065
8 years later									3,108	3,165	3,060
9 years later										3,153	3,059
10 years later											3,060
Settlements	-	**110**	**146**	**255**	**193**	**232**	**305**	**285**	**237**	**188**	**264**

Net claims provisions in direct business and payments made against the original provisions:

€ million	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
At the end of the year	4,787	4,702	4,518	4,255	4,110	3,827	3,574	3,669	3,313	3,298	3,254
1 year later		4,589	4,438	4,118	4,050	3,736	3,460	3,613	3,300	3,317	3,056
2 years later			4,373	4,044	3,994	3,655	3,393	3,533	3,211	3,236	3,077
3 years later				3,999	3,965	3,624	3,331	3,490	3,180	3,208	3,057
4 years later					3,928	3,601	3,361	3,465	3,139	3,194	2,939
5 years later						3,602	3,369	3,670	3,166	3,191	3,049
6 years later							3,309	3,605	3,095	3,144	2,957
7 years later								3,594	3,087	3,134	2,981
8 years later									3,076	3,127	2,977
9 years later										3,115	2,977
10 years later											2,978
Settlements	-	**113**	**145**	**256**	**182**	**225**	**265**	**75**	**237**	**183**	**276**

Claims rate trend for inward reinsurance business

Gross claims provisions in inward reinsurance business and payments made against the original provisions:

€ million	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Gross provisions for claims outstanding	**5,009**	**4,411**	**3,642**	**3,197**	**2,718**	**2,433**	**1,976**	**1,710**	**1,506**	**1,409**	**1,190**
Cumulative payments for the year concerned and prior years											
1 year later		1,082	955	852	569	622	464	481	385	463	437
2 years later			1,396	1,237	852	867	783	685	630	640	632
3 years later				1,482	1,062	1,022	919	897	764	345	739
4 years later					1,189	1,154	1,026	987	930	891	856
5 years later						1,249	1,117	1,051	996	1,029	922
6 years later							1,171	1,114	1,035	1,072	1,043
7 years later								1,155	1,085	1,103	1,067
8 years later									1,117	1,140	1,090
9 years later										1,161	1,106
10 years later											1,119
Gross provisions for claims outstanding and payments made against the original provision											
At the end of the year	5,009	4,411	3,642	3,197	2,718	2,433	1,976	1,710	1,506	1,409	1,190
1 year later		4,313	3,951	3,392	2,654	2,434	2,157	1,840	1,593	1,536	1,402
2 years later			3,651	3,315	2,561	2,271	2,004	1,859	1,569	1,472	1,343
3 years later				3,131	2,486	2,224	1,915	1,779	1,628	1,014	1,338
4 years later					2,361	2,179	1,887	1,720	1,580	1,528	1,360
5 years later						2,088	1,848	1,699	1,550	1,501	1,396
6 years later							1,779	1,677	1,536	1,486	1,379
7 years later								1,627	1,526	1,481	1,368
8 years later									1,490	1,468	1,354
9 years later										1,444	1,337
10 years later											1,324
Settlements	**-**	**98**	**-9**	**66**	**357**	**345**	**197**	**83**	**16**	**-35**	**-134**

Net claims provisions in inward reinsurance business and payments made against the original provisions:

€ million	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Net provisions for claims outstanding	**5,001**	**4,408**	**3,639**	**3,193**	**2,710**	**2,428**	**1,970**	**1,695**	**1,491**	**1,389**	**1,164**
Cumulative payments for the year concerned and prior years											
1 year later		1,082	955	851	567	622	464	473	383	461	432
2 years later			1,396	1,236	849	866	782	677	620	636	625
3 years later				1,480	1,058	1,020	918	888	754	333	729
4 years later					1,186	1,153	1,025	978	919	878	839
5 years later						1,247	1,115	1,042	985	1,016	904
6 years later							1,170	1,105	1,024	1,059	1,025
7 years later								1,146	1,074	1,090	1,049
8 years later									1,105	1,126	1,071
9 years later										1,147	1,086
10 years later											1,100
Net provisions for claims outstanding and payments made against the original provision											
At the end of the year	5,001	4,408	3,639	3,193	2,710	2,428	1,970	1,695	1,491	1,389	1,164
1 year later		4,310	3,950	3,388	2,648	2,429	2,152	1,827	1,576	1,519	1,377
2 years later			3,649	3,312	2,555	2,267	1,999	1,845	1,554	1,454	1,321
3 years later				3,129	2,482	2,219	1,911	1,766	1,612	997	1,314
4 years later					2,356	2,176	1,883	1,708	1,566	1,510	1,337
5 years later						2,086	1,845	1,687	1,536	1,484	1,372
6 years later							1,777	1,666	1,522	1,470	1,357
7 years later								1,616	1,513	1,464	1,346
8 years later									1,477	1,453	1,332
9 years later										1,429	1,317
10 years later											1,304
Settlements	**-**	**98**	**-10**	**64**	**354**	**342**	**193**	**79**	**14**	**-40**	**-140**

>> 43 Insurance business operating expenses

€ million	2020	2019
Gross expenses	-2,945	-2,842
Reinsurers' share	23	19
Total	**-2,922**	**-2,823**

>> 44 Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business

The derecognition of financial assets measured at amortized cost in the insurance business gave rise to gains of €8 million (2019: €9 million) and losses of €28 million (2019: €24 million).

The gains and losses from the derecognition of financial assets measured at amortized cost may include gains and losses from disposals and also gains and losses from derecognition as a result of substantial modification.

>> 45 Loss allowances

€ million	2020	2019
Loss allowances for cash and cash equivalents	**1**	-1
Additions	-8	-3
Reversals	9	2
Loss allowances for loans and advances to banks	**-12**	2
Additions	-30	-26
Reversals	18	26
Recoveries on loans and advances to banks previously impaired	-	2
Loss allowances for loans and advances to customers	**-610**	-307
Additions	-2,419	-1,907
Reversals	1,756	1,525
Directly recognized impairment losses	-41	-28
Recoveries on loans and advances to customers previously impaired	68	76
Other	26	27
Loss allowances for investments	**-2**	7
Additions	-38	-21
Reversals	36	28
Loss allowances for other assets	**-2**	-1
Additions	-1	-1
Directly recognized impairment losses	-1	-
Other loss allowances for loans and advances	**-53**	-29
Additions to and reversals of provisions for loan commitments	-36	-22
Additions to and reversals of provisions for financial guarantee contracts	-4	-13
Additions to and reversals of other provisions for loans and advances	-13	6
Total	**-678**	-329

Gains and losses from credit-risk-related modifications and other gains and losses on POCI assets are reported under the ‘Other’ line item. Other gains and losses on POCI assets consist of the changes in the loss allowances for these assets within the reporting period.

Of the net addition of €678 million to loss allowances for loans and advances to banks and customers, investments, and other lending business, €220 million was related to the effects of the COVID-19 pandemic. The requirement for the addition in connection with the COVID-19 pandemic arose because the anticipated macroeconomic conditions were included in the calculation, in particular by adjusting the model-based default probability profiles (referred to as shift factors), which are taken into account when determining the expected losses. In the event of an extreme weighting of 100 percent for both the baseline scenario and the risk scenario underlying the calculation of loss allowances, the additions to loss allowances required because of the pandemic would reduce by approximately 3 percent and increase by approximately 11 percent respectively.

>> 46 Administrative expenses

€ million	2020	2019
Staff expenses	**-1,910**	**-1,878**
Wages and salaries	-1,590	-1,558[1]
Social security contributions	-201	-198
Pension and other post-employment benefit expenses	-108	-109
Expenses for share-based payment transactions	-11	-13[1]
General and administrative expenses	**-1,838**	**-1,921**
Expenses for temporary staff	-22	-31
Contributions and fees	-212	-199
of which contributions to the resolution fund for CRR credit institutions	-68	-68
Consultancy	-465	-517
Office expenses	-166	-198
IT expenses	-523	-486
Property and occupancy costs	-113	-122
Information procurement	-85	-85
Public relations and marketing	-143	-161
Other general and administrative expenses	-104	-116
Expenses for administrative bodies	-5	-6
Depreciation and amortization	**-288**	**-275**
Property, plant and equipment, and investment property	-85	-81
Right-of-use assets	-76	-72
Other assets	-127	-122
Total	**-4,036**	**-4,074**

1 Amount restated (see note 2).

>> 47 Other net operating income

€ million	2020	2019
Income from the reversal of provisions and accruals	116	103
Gains and losses on non-current assets and disposal groups classified as held for sale	49	211
Gains on the disposal of other assets	33	15
Restructuring expenses	-27	-84
Expenses for other taxes	-5	-24
Residual other net operating income	44	29
Total	**210**	**250**

Gains and losses on non-current assets and disposal groups classified as held for sale included realized gains of €104 million on disposals (2019: €333 million), impairment losses of €81 million (2019: €122 million), and reversals of impairment losses of €26 million (2019: no reversals).

Restructuring expenses included additions of €13 million to provisions for termination benefits linked with restructuring (2019: €72 million).

Residual other net operating income included rental income from investment property of €13 million (2019: €13 million) and directly assignable expenses of €3 million (2019: €3 million).

>> 48 Income taxes

€ million	2020	2019
Current tax expense	-529	-615
Deferred tax income/expense	54	-163[1]
Total	**-475**	**-778**

1 Amount restated (see note 2).

The total for current taxes includes income of €20 million (2019: expenses of €19 million) attributable to previous years. Deferred taxes include income of €83 million (2019: expenses of €167 million (amount restated; see note 2)) related to temporary differences and their reversal.

Current taxes in relation to the German limited companies in the group are calculated using an effective corporation tax rate of 15.825 percent based on a corporation tax rate of 15.0 percent plus the solidarity surcharge. The tax rate applied in 2020 was unchanged from the rate used in 2019. The effective rate of trade tax for DZ BANK and subsidiaries that are members of the tax group was unchanged on the previous year at 15.435 percent.

Deferred taxes must be calculated using tax rates expected to apply when the tax asset is recovered or liability settled. The tax rates used are therefore those that are valid or have been announced for the periods in question as at the balance sheet date.

The following table shows a reconciliation from expected income taxes to recognized income taxes based on application of the current tax law in Germany:

€ million	2020	2019
Profit before taxes	**1,455**	2,658[1]
Group income tax rate	31.260%	31.260%
Expected income taxes	**-455**	-831
Income tax effects	**-20**	53
Impact of tax-exempt income and non-deductible expenses	-6	29
Adjustments resulting from other types of income tax, other trade tax multipliers, and changes in tax rates	20	17
Tax rate differences on income subject to taxation in other countries	-1	10
Current and deferred taxes relating to prior years	19	-12
Change in impairment losses on deferred tax assets	-30	-37
Other effects	-22	46[1]
Recognized income taxes	**-475**	**-778**

1 Amount restated (see note 2).

>> 49 Items reclassified to the income statement

The following amounts were recognized in other comprehensive income/loss or reclassified from other comprehensive income/loss to the income statement in the reporting period:

€ million	2020	2019
Gains and losses on debt instruments measured at fair value through other comprehensive income	**1,143**	1,700
Gains (+)/losses (-) arising during the reporting period	1,391	1,918[1]
Gains (-)/losses (+) reclassified to the income statement during the reporting period	-248	-218
Exchange differences on currency translation of foreign operations	**-32**	-1
Gains (+)/losses (-) arising during the reporting period	-32	5
Gains (-)/losses (+) reclassified to the income statement during the reporting period	-	-6
Gains and losses on hedges of net investments in foreign operations	**3**	3
Gains (+)/losses (-) arising during the reporting period	3	3
Gains (-)/losses (+) reclassified to the income statement during the reporting period	-	-
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	**-6**	1
Gains (+)/losses (-) arising during the reporting period	-6	1
Gains (-)/losses (+) reclassified to the income statement	-	-

1 Amount restated (see note 2).

>> 50 Income taxes relating to components of other comprehensive income

The table below shows the income taxes on the various components of other comprehensive income:

	2020			2019		
€ million	Amount before taxes	Income taxes	Amount after taxes	Amount before taxes	Income taxes	Amount after taxes
Items that may be reclassified to the income statement	**1,108**	**-360**	**748**	1,703	-533	1,170
Gains and losses on debt instruments measured at fair value through other comprehensive income	1,143	-362	781	1,700[1]	-536[1]	1,164
Exchange differences on currency translation of foreign operations	-32	3	-29	-1	-	-1
Gains and losses on hedges of net investments in foreign operations	3	-1	2	3	3	6
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	-6	-	-6	1	-	1
Items that will not be reclassified to the income statement	**-276**	**49**	**-227**	205	47	252
Gains and losses on equity instruments for which the fair value OCI option has been exercised	-97	9	-88	476[1]	-39[1]	437
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk	-60	18	-42	-96	30	-66
Gains and losses arising from remeasurement of defined benefit plans	-119	22	-97	-175	56	-119
Total	**832**	**-311**	**521**	1,908	-486	1,422

1 Amount restated (see note 2).

D Balance sheet disclosures

>> 51 Cash and cash equivalents

€ million	Dec. 31, 2020	Dec. 31, 2019
Cash on hand	206	378
Balances with central banks	68,148	52,167
Total	**68,354**	**52,545**

The average target minimum reserve for 2020 was €3,829 million (2019: €3,971 million).

>> 52 Loans and advances to banks

	Repayable on demand		Other loans and advances		Total	
€ million	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Domestic banks	**4,488**	5,811	**89,789**	83,288	**94,277**	89,099
Affiliated banks	1,667	2,720	84,711	76,286	86,378	79,006
Other banks	2,821	3,091	5,078	7,002	7,899	10,093
Foreign banks	**5,290**	4,923	**3,453**	3,522	**8,743**	8,445
Total	**9,778**	**10,734**	**93,242**	**86,810**	**103,020**	**97,544**

The following table shows the breakdown of loans and advances to banks by type of business:

€ million	Dec. 31, 2020	Dec. 31, 2019
Mortgage loans	131	99
Registered securities	9,094	9,823
Pass-through loans	58,733	51,773
Other bank loans	16,103	16,596
Money market placements	15,413	16,214
Current account debit balances	2,896	2,882
Other loans and advances	650	157
Total	**103,020**	**97,544**

>> 53 Loans and advances to customers

€ million	Dec. 31, 2020	Dec. 31, 2019
Loans and advances to domestic customers	164,071	157,573
Loans and advances to foreign customers	26,223	28,651
Total	**190,294**	**186,224**

The following table shows the breakdown of loans and advances to customers by type of business:

€ million	Dec. 31, 2020	Dec. 31, 2019
Mortgage loans	53,784	50,935
Ship mortgage loans	341	583
Home savings loans advanced by building society	55,698	50,372
Finance leases	1,096	1,547
Registered securities	9,604	10,033
Pass-through loans	7,147	6,275
Other bank loans	43,307	44,338
Money market placements	3,439	3,056
Current account debit balances	4,703	5,443
Other loans and advances	11,175	13,642
Total	**190,294**	**186,224**

>> 54 Hedging instruments (positive fair values)

Hedging instruments (positive fair values) amounted to €161 million and resulted solely from derivatives used as fair value hedges. As at December 31, 2019, hedging instruments (positive fair values) had amounted to €211 million (amount restated; see note 2).

>> 55 Financial assets held for trading

€ million	Dec. 31, 2020	Dec. 31, 2019
DERIVATIVES (POSITIVE FAIR VALUES)	**22,303**	**19,281**
Interest-linked contracts	19,488	17,053[1]
Currency-linked contracts	1,758	1,270
Share-/index-linked contracts	719	554
Other contracts	1	30
Credit derivatives	337	374
BONDS AND OTHER FIXED-INCOME SECURITIES	**10,488**	**12,644**
Money market instruments	373	978
Bonds	10,115	11,666
SHARES AND OTHER VARIABLE-YIELD SECURITIES	**1,444**	**1,210**
Shares	1,444	1,208
Investment fund units	-	1
Other variable-yield securities	-	1
RECEIVABLES	**8,611**	**11,636**
of which from affiliated banks	152	400
of which from other banks	7,821	8,505
Money market placements	**7,412**	**10,594**
with banks	7,197	8,242
with customers	215	2,352
Promissory notes and registered bonds	**1,199**	**1,042**
from banks	776	663
from customers	423	379
Total	**42,846**	**44,771**

1 Amount restated (see note 2).

>> 56 Investments

€ million	Dec. 31, 2020	Dec. 31, 2019
Bonds and other fixed-income securities	**57,423**	**54,231**
Money market instruments	519	419
Bonds	56,904	53,812
Shares and other variable-yield securities	**2,071**	**1,872**
Shares and other shareholdings	324	321
Investment fund units	1,735	1,541
Other variable-yield securities	12	10
Investments in subsidiaries	**297**	**310**
Investments in joint ventures	**329**	**313**
Investments in associates	**112**	**201**
Total	**60,232**	**56,927**

The carrying amount of investments in joint ventures accounted for using the equity method totaled €329 million (December 31, 2019: €313 million). €112 million of the investments in associates has been accounted for using the equity method (December 31, 2019: €201 million).

>> 57 Investments held by insurance companies

€ million	Dec. 31, 2020	Dec. 31, 2019
Investment property	3,835	3,558
Investments in subsidiaries	831	785
Investments in joint ventures	19	17
Investments in associates	-	1
Mortgage loans	10,882	9,749
Promissory notes and loans	7,050	7,235
Registered bonds	9,081	9,146
Other loans	863	716
Variable-yield securities	11,639	11,300
Fixed-income securities	61,540	55,811
Derivatives (positive fair values)	553	417
Loss allowances	-23	-3
Deposits with ceding insurers and other investments	578	449
Assets related to unit-linked contracts	14,820	14,368
Total	**121,668**	**113,549**

The fair value of investment property was €5,178 million as at the balance sheet date (December 31, 2019: €4,601 million).

Some investment property has been pledged as collateral and is subject to restrictions on disposal, the total furnished collateral value of the property being €776 million (December 31, 2019: €760 million). The group also has capital expenditure commitments amounting to €119 million (December 31, 2019: €394 million). A total of €38 million was spent on the repair and maintenance of investment property in 2020 (2019: €30 million). Vacant property resulted in repair and maintenance expenses of €2 million (2019: €1 million).

The table below shows the changes in loss allowances for investments held by insurance companies in the financial year.

	Investments held by insurance companies			Total
€ million	Stage 1	Stage 2	Stage 3	
Balance as at Jan. 1, 2019	2	-	2	4
Additions	-	-	-1	-1
Reversals	-1	-	-	-1
Other changes	1	-	-	1
Balance as at Dec. 31, 2019	2	-	1	3
Additions	19	4	-	23
Reversals	-3	-	-	-3
Other changes	1	-1	-	-
Balance as at Dec. 31, 2020	**19**	**3**	**1**	**23**

>> 58 Property, plant and equipment, investment property, and right-of-use assets

€ million	Dec. 31, 2020	Dec. 31, 2019
Land and buildings	884	917
Office furniture and equipment	179	182
Assets subject to operating leases	-	17
Investment property	235	238
Right-of-use assets	446	278
Total	**1,744**	**1,632**

The fair value of investment property was €302 million as at the balance sheet date (December 31, 2019: €273 million). Payments in advance are allocated to the relevant item of property, plant and equipment.

>> 59 Income tax assets and liabilities

€ million	Dec. 31, 2020	Dec. 31, 2019
Income tax assets	**879**	**1,018**
Current income tax assets	368	372
Deferred tax assets	511	646
Income tax liabilities	**1,229**	**1,069**
Current income tax liabilities	308	293
Deferred tax liabilities	921	776

In addition to deferred tax assets recognized for tax loss carryforwards, deferred tax assets and liabilities are also recognized for temporary differences in respect of the items shown below:

	Deferred tax assets		Deferred tax liabilities	
€ million	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Tax loss carryforwards	14	43		
Loans and advances to banks and customers	86	51	965	1,115
Financial assets and liabilities held for trading, hedging instruments (positive and negative fair values)	809	837	109	169
Investments	15	19	1,150	840
Loss allowances	229	202	2	5
Investments held by insurance companies	109	115	1,248	1,150
Property, plant and equipment, investment property, and right-of-use assets	24	24	197	146
Deposits from banks and customers	917	1,021	158	174
Debt certificates issued including bonds	210	177	-	-
Provisions for employee benefits and for share-based payment transactions	727	685	70	59
Other provisions	202	206	29	30
Insurance liabilities	74	77	49	115
Other balance sheet items	291	247	140	31
Total (gross)	3,707	3,704	4,117	3,834
Netting of deferred tax assets and deferred tax liabilities	-3,196	-3,058	-3,196	-3,058
Total (net)	**511**	**646**	**921**	**776**

Deferred tax assets for temporary differences and tax loss carryforwards are only recognized if it is sufficiently probable that the asset can be recovered in the future. No deferred tax assets have been recognized for corporation tax loss carryforwards amounting to €332 million (December 31, 2019: €308 million), which can be carried forward indefinitely, or for trade tax loss carryforwards amounting to €211 million (December 31, 2019: €224 million). There remained foreign loss carryforwards of €1,043 million (December 31, 2019: €1,049 million) for which no deferred tax assets are recognized. Of this total, €517 million will expire by 2031 and €526 million can be used indefinitely. As regards companies (or permanent establishments of companies) in the DZ BANK Group that have suffered tax losses in 2020 or 2019 in their tax jurisdiction, it will be possible to utilize no deferred tax assets (December 31, 2019: €4 million) in the future if a corresponding level of taxable income is available. It is assumed that this will in fact be the case based on information available from planning of taxable income.

Overall, there was a net deferred tax liability recognized through other comprehensive income of €717 million (December 31, 2019: €401 million (amount restated; see note 2)).

Deferred tax assets of €234 million (December 31, 2019: €341 million (amount restated; see note 2)) and deferred tax liabilities of €487 million (December 31, 2019: €313 million) are expected to be realized only after a period of 12 months.

As at December 31, 2020, no deferred tax liabilities were recognized for temporary differences of €307 million (December 31, 2019: €290 million) relating to long-term equity investments in subsidiaries.

>> 60 Other assets

€ million	Dec. 31, 2020	Dec. 31, 2019
Other assets held by insurance companies	3,416	3,759
Goodwill	140	41
Other intangible assets	546	462
of which software	442	419
of which acquired customer relationships	65	4
Other loans and advances	360	382
Residual other assets	1,054	800
Total	**5,516**	**5,444**

Other intangible assets include internally generated intangible assets amounting to €14 million (December 31, 2019: €23 million).

The breakdown of other assets held by insurance companies is as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
Intangible assets	**157**	**157**
Reinsurers' share of insurance liabilities	**149**	**130**
Provision for unearned premiums	12	11
Benefit reserve	39	38
Provision for claims outstanding	98	81
Receivables	**1,604**	**1,593**
Receivables arising out of direct insurance operations	428	422
Receivables arising out of reinsurance operations	294	282
Other receivables	882	889
Credit balances with banks, checks and cash on hand	**357**	**826**
Residual other assets	**1,151**	**1,055**
Property, plant and equipment	427	425
Prepaid expenses	82	67
Remaining assets held by insurance companies	642	563
Loss allowances	**-2**	**-2**
Total	**3,416**	**3,759**

The intangible assets in the other assets held by insurance companies include internally generated intangible assets amounting to €8 million (December 31, 2019: €1 million).

Property, plant and equipment includes right-of-use assets amounting to €66 million (December 31, 2019: €56 million).

The following tables show the reinsurers' share of the changes in insurance liabilities:

REINSURERS' SHARE OF THE CHANGES IN THE PROVISION FOR UNEARNED PREMIUMS

€ million	2020	2019
Balance as at Jan. 1	11	6
Additions	18	17
Utilizations/reversals	-17	-12
Balance as at Dec. 31	**12**	**11**

REINSURERS' SHARE OF THE CHANGES IN THE BENEFIT RESERVE

€ million	2020	2019
Balance as at Jan. 1	38	36
Additions	2	2
Utilizations/reversals	-1	-
Balance as at Dec. 31	**39**	**38**

REINSURERS' SHARE OF THE CHANGES IN THE PROVISION FOR CLAIMS OUTSTANDING

€ million	2020	2019
Balance as at Jan. 1	81	97
Claims expenses	72	19
less payments	-55	-35
Balance as at Dec. 31	**98**	**81**

The breakdown of maturities for the reinsurers' share of insurance liabilities is shown in the following tables:

AS AT DECEMBER 31, 2020

€ million	≤ 1 year	> 1 year – 5 years	> 5 years	Indefinite
Provision for unearned premiums	8	2	2	-
Benefit reserve	-	2	13	24
Provision for claims outstanding	40	28	30	-
Total	**48**	**32**	**45**	**24**

AS AT DECEMBER 31, 2019

€ million	≤ 1 year	> 1 year – 5 years	> 5 years	Indefinite
Provision for unearned premiums	8	2	1	-
Benefit reserve	1	2	10	25
Provision for claims outstanding	34	20	27	-
Total	**43**	**24**	**38**	**25**

>> 61 Loss allowances

Loss allowances for loans and advances to banks and for loans and advances to customers also comprise the loss allowances recognized for finance lease receivables.

The following table shows the changes in loss allowances, which are reported on the assets side of the balance sheet, broken down by individual balance sheet item:

	Cash and cash equivalents	Loans and advances to banks			Loans and advances to customers			
€ million	Stage 1	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	POCI assets
Balance as at Jan. 1, 2019	-	8	-	4	218	164	1,957	3
Additions	3	22	-	4	288	457	1,150	12
Utilizations	-	-	-	-	-	-1	-559	-1
Reversals	-2	-23	-	-3	-432	-202	-876	-13
Other changes	-	-	-	-	128	-215	135	-
Balance as at Dec. 31, 2019	1	7	-	5	202	203	1,807	1
Additions	8	22	5	3	314	732	1,355	16
Utilizations	-	-	-	-	-	-1	-604	-1
Reversals	-9	-15	-1	-2	-412	-350	-977	-16
Other changes	-	-	-1	-	142	-248	80	7
Balance as at Dec. 31, 2020	**-**	**14**	**3**	**6**	**246**	**336**	**1,661**	**7**

	Investments			Other assets	Total
€ million	Stage 1	Stage 2	Stage 3	Stage 1	
Balance as at Jan. 1, 2019	5	40	17	-	2,416
Additions	3	8	1	1	1,949
Utilizations	-	-	-	-	-561
Reversals	-7	-16	-	-	-1,574
Other changes	5	-6	-	-	47
Balance as at Dec. 31, 2019	6	26	18	1	2,277
Additions	4	21	4	1	2,485
Utilizations	-	-	-	-	-606
Reversals	-15	-12	-5	-	-1,814
Other changes	11	-13	-	-	-22
Balance as at Dec. 31, 2020	**6**	**22**	**17**	**2**	**2,320**

>> 62 Changes in non-current assets

The following table shows the changes in investment property included in the investments held by insurance companies, the changes in property, plant and equipment, and investment property, and the changes in intangible assets included in other assets:

€ million	Investments held by insurance companies Investment property
Carrying amounts as at Jan. 1, 2019	2,842
Cost as at Jan. 1, 2019	3,330
Adjustment due to first-time adoption of IFRS 16	19
Adjusted cost as at Jan. 1, 2019	3,349
Additions	671
Additions in respect of borrowing costs eligible for capitalization	1
Reclassifications	-
Reclassifications to/from non-current assets and disposal groups classified as held for sale	9
Disposals	-14
Changes attributable to currency translation	-
Changes in scope of consolidation	108
Cost as at Dec. 31, 2019	**4,124**
Reversals of impairment losses as at Jan. 1, 2019	25
Additions	1
Reclassifications[1]	-
Changes attributable to currency translation	-
Reversals of impairment losses as at Dec. 31, 2019	**26**
Depreciation/amortization and impairment losses as at Jan. 1, 2019	-513
Depreciation/amortization expense for the year	-77
Impairment losses for the year	-
Reclassifications[1]	-
Reclassifications to/from non-current assets and disposal groups classified as held for sale	-3
Disposals	1
Changes attributable to currency translation	-
Changes in scope of consolidation	-
Depreciation/amortization and impairment losses as at Dec. 31, 2019	**-592**
Carrying amounts as at Dec. 31, 2019	3,558
Cost as at Jan. 1, 2020	4,124
Additions	393
Additions in respect of borrowing costs eligible for capitalization	1
Reclassifications	-
Reclassifications to/from non-current assets and disposal groups classified as held for sale	-9
Disposals	-3
Changes attributable to currency translation	-
Changes in scope of consolidation	-
Cost as at Dec. 31, 2020	**4,506**
Reversals of impairment losses as at Jan. 1, 2020	26
Additions	1
Reclassifications	-
Disposals	-
Reversals of impairment losses as at Dec. 31, 2020	**27**
Depreciation/amortization and impairment losses as at Jan. 1, 2020	-592
Depreciation/amortization expense for the year	-78
Impairment losses for the year	-29
Reclassifications	-
Reclassifications to/from non-current assets and disposal groups classified as held for sale	-
Disposals	1
Changes attributable to currency translation	-
Changes in scope of consolidation	-
Depreciation/amortization and impairment losses as at Dec. 31, 2020	**-698**
Carrying amounts as at Dec. 31, 2020	**3,835**

1 Amount restated (see note 2).

	Property, plant and equipment, and investment property				**Other assets**	
	Land and buildings	Office furniture and equipment	Assets subject to operating leases	Investment property	Goodwill	Other intangible assets
	911	182	72	258	41	436
	1,294	550	169	283	272	1,673
	-	-	-	-	-	-
	1,294	550	169	283	272	1,673
	12	65	-	2	-	154
	-	-	-	-	-	-
	20	-	-	-19	-	-
	-	-	-	-	-	-
	-	-77	-98	-	-3	-16
	-	1	3	-	-	-
	-	-	-	-	-	-
	1,326	**539**	**74**	**266**	**269**	**1,811**
	13	-	64	5	-	5
	-	-	13	-	-	-
	-	-	-	-	-	-
	-	-	4	-	-	-
	13	**-**	**81**	**5**	**-**	**5**
	-396	-368	-161	-30	-231	-1,242
	-24	-52	-8	-5	-	-122
	-	-	-5	-	-	-1
	-2	-	-	2	-	-
	-	-	-	-	-	-
	-	64	42	-	3	11
	-	-1	-6	-	-	-
	-	-	-	-	-	-
	-422	**-357**	**-138**	**-33**	**-228**	**-1,354**
	917	182	17	238	41	462
	1,326	539	74	266	269	1,811
	31	56	-	2	-	151
	-	-	-	-	-	-
	1	-	-	-1	-	-
	-72	-3	-	-	-	-
	-6	-46	-61	-	-	-15
	-	-2	3	-	-	-3
	-	4	-	-	99	66
	1,280	**548**	**16**	**267**	**368**	**2,010**
	13	-	81	5	-	5
	-	-	-	-	-	1
	-	-	-	-	-	-
	-	-	-	-	-	-5
	13	**-**	**81**	**5**	**-**	**1**
	-422	-357	-138	-33	-228	-1,354
	-24	-56	-5	-4	-	-127
	-	-	-1	-	-	-
	-	-	-	-	-	-
	31	2	-	-	-	-
	6	43	49	-	-	16
	-	1	-2	-	-	1
	-	-2	-	-	-	-1
	-409	**-369**	**-97**	**-37**	**-228**	**-1,465**
	884	**179**	**-**	**235**	**140**	**546**

In 2020, the useful life of the assets ranged from 2 to 60 years for buildings (2019: 2 to 61 years), from 1 to 25 years for office furniture and equipment (2019: 3 to 25 years), and – as in 2019 – from 6 months to 25 years for assets subject to an operating lease; the useful life for investment property was 3 to 80 years (2019: 1 to 67 years). Software included in other intangible assets was amortized over a useful life of 1 to 12 years (2019: 1 to 20 years) while acquired customer relationships were amortized over 10 to 20 years (2019: 10 to 12 years). Depreciation and amortization are recognized on a straight-line basis over the useful life of the asset.

The assets subject to an operating lease comprised office furniture and equipment.

Payments in advance are allocated to the relevant item of property, plant and equipment.

In 2020, borrowing costs relating to investment property held by insurance companies were capitalized in an amount of €1 million (2019: €1 million). The capitalization rate used for borrowing costs was 1.33 percent for investment property held by insurance companies (2019: 1.07 percent).

Disclosures regarding the changes in goodwill are included in note 91.

Other intangible assets include acquired customer relationships amounting to €65 million (December 31, 2019: €4 million). The associated amortization expense came to €1 million (2019: €0 million).

The changes in right-of-use assets are described in note 92 (Leases).

>> 63 Non-current assets and disposal groups classified as held for sale

The non-current assets and disposal groups classified as held for sale include individual non-current assets together with assets and liabilities from disposal groups not qualifying as discontinued operations, as described below. Gains and losses arising from the classification of assets and disposal groups as held for sale are reported under other net operating income.

At the level of the DVB subgroup, a material part of the aviation finance business, which previously constituted a disposal group not qualifying as a discontinued operation, was sold in 2020. The disposal gave rise to a net gain of €83 million, which was recognized under other net operating income. The impairment loss requirement of €18 million identified for this disposal group was also recognized under other net operating income. As at December 31, 2020, assets of €14 million and liabilities of €1 million were recognized in this disposal group. The sale is expected to take place in 2021.

The disposal group not qualifying as a discontinued operation, which had been classified as such in 2019 and consists of associates, joint ventures, and fully consolidated subsidiaries of the DVB subgroup, included assets totaling €66 million and a small volume of liabilities as at the reporting date. In this disposal group, the impairment loss requirement amounted to €54 million and reversals of impairment losses amounted to €26 million; the overall figure was recognized in other net operating income. The sale is expected to be completed by the end of 2021.

Furthermore, a receivable of €42 million was categorized as an individual asset classified as held for sale in the DVB subgroup. The impairment loss on this asset of €9 million was recognized in other net operating income. The sale is expected to take place by December 31, 2021.

Property, plant and equipment, and investment property were also sold in the year under review. The net gain on disposal of €21 million was recognized under other net operating income.

Other disposal groups not qualifying as discontinued operations included units in various investment funds. The individual non-current assets classified as held for sale comprise long-term equity investments and items of property, plant and equipment, and investment property that were classified as held for sale in 2020. The share of the reserve from other comprehensive income attributable to the long-term equity investments is presented separately within equity (see note 73 (Equity)).

>> 64 Deposits from banks

	Repayable on demand		With agreed maturity or notice period		Total	
€ million	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Domestic banks	59,958	43,890	109,573	84,059	169,531	127,949
Affiliated banks	56,001	38,831	21,285	20,237	77,286	59,068
Other banks	3,957	5,059	88,288	63,822	92,245	68,881
Foreign banks	2,974	3,566	5,347	9,606	8,321	13,172
Total	62,932	47,456	114,920	93,665	177,852	141,121

The following table shows the breakdown of deposits from banks by type of business:

€ million	Dec. 31, 2020	Dec. 31, 2019
Home savings deposits	1,576	1,653
Money market deposits	34,140	24,576
Other deposits	142,136	114,892
Total	177,852	141,121

>> 65 Deposits from customers

	Repayable on demand		With agreed maturity or notice period		Total	
€ million	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Domestic customers	21,522	17,158	94,680	95,887	116,202	113,045
Foreign customers	11,563	12,144	6,160	6,327	17,723	18,471
Total	33,085	29,302	100,840	102,214	133,925	131,516

The following table shows the breakdown of deposits from customers by type of business:

€ million	Dec. 31, 2020	Dec. 31, 2019
Home savings deposits	64,673	63,226
Money market deposits	21,168	21,880
Other deposits	48,084	46,410
Total	**133,925**	**131,516**

>> 66 Debt certificates issued including bonds

€ million	Dec. 31, 2020	Dec. 31, 2019
Bonds issued	**62,838**	**51,536**
Mortgage Pfandbriefe	25,364	22,445
Public-sector Pfandbriefe	1,764	2,180
Other bonds	35,710	26,911
Other debt certificates issued	**7,662**	**33,587**
Total	**70,500**	**85,123**

All other debt certificates issued are commercial paper.

>> 67 Hedging instruments (negative fair values)

Hedging instruments (negative fair values) amounted to €2,638 million and resulted solely from derivatives used as fair value hedges. As at December 31, 2019, hedging instruments (negative fair values) had amounted to €2,018 million (amount restated; see note 2).

>> 68 Financial liabilities held for trading

€ million	Dec. 31, 2020	Dec. 31, 2019
DERIVATIVES (NEGATIVE FAIR VALUES)	**20,138**	**18,189**
Interest-linked contracts	16,501	15,056[1]
Currency-linked contracts	1,805	1,772
Share-/index-linked contracts	1,550	1,181
Other contracts	188	105
Credit derivatives	94	75
SHORT POSITIONS	**604**	**1,128**
BONDS ISSUED	**22,224**	**22,261**
DEPOSITS	**7,438**	**9,472**
of which from affiliated banks	3,660	2,616
of which from other banks	3,516	6,659
Money market deposits	**7,279**	**9,306**
from banks	7,078	9,167
from customers	201	139
Promissory notes and registered bonds issued	**159**	**166**
to banks	98	108
to customers	61	58
Total	**50,404**	**51,050**

1 Amount restated (see note 2).

Bonds issued mainly comprise share certificates and index-linked certificates.

>> 69 Provisions

€ million	Dec. 31, 2020	Dec. 31, 2019
Provisions for employee benefits	**1,835**	**1,704**
Provisions for defined benefit plans	1,321	1,198
Provisions for other long-term employee benefits	186	165
of which for semi-retirement schemes	43	27
Provisions for termination benefits	295	305
of which for early retirement schemes	19	15
of which for restructuring	224	263
Provisions for short-term employee benefits	33	36[1]
Provisions for share-based payment transactions	**46**	**49[1]**
Other provisions	**2,122**	**2,090**
Provisions for onerous contracts	10	15
Provisions for restructuring	14	24
Provisions for loan commitments	107	71
Provisions for financial guarantee contracts	123	124
Other provisions for loans and advances	37	33
Provisions relating to building society operations	1,444	1,406
Residual provisions	387	417
Total	**4,003**	**3,843**

1 Amount restated (see note 2).

Provisions for defined benefit plans

The provisions for defined benefit plans predominantly result from pension plans that employees can no longer join (closed plans). There are also defined benefit pension plans for members of boards of managing directors. New employees in Germany are almost always only offered defined contribution pension plans, for which it is not generally necessary to recognize a provision. The picture outside Germany is more varied because there are both defined contribution and defined benefit plans that are open to new employees. However, the proportion of the group's total obligations accounted for by obligations outside Germany is not material. The expense for defined contribution pension plans came to €20 million in 2020 (2019: €21 million).

The present value of the defined benefit obligations is broken down by risk category as follows:

	Germany		Other countries		Total	
€ million	**Dec. 31, 2020**	Dec. 31, 2019	**Dec. 31, 2020**	Dec. 31, 2019	**Dec. 31, 2020**	Dec. 31, 2019
Final-salary-dependent plans	**2,792**	2,703	**129**	124	**2,921**	2,827
Defined benefit contributory plans	**605**	519	**256**	243	**861**	762
Accessorial plans	**74**	70	**-**	4	**74**	74
Total	**3,471**	**3,292**	**385**	**371**	**3,856**	**3,663**

A significant risk factor for all plans is the level of market interest rates for investment-grade fixed-income corporate bonds because the discount rate determined from this data affects both the amount of the obligations and the measurement of the plan assets.

Final-salary-dependent plans are pension obligations to employees, the amount of which depends on the employee's final salary before the pension trigger event occurs and that, for the most part, can be assumed to constitute a life-long payment obligation. In Germany, section 16 (1) of the Occupational Pensions Act (BetrAVG) requires the amount of the pension to be adjusted every 3 years to reflect the change in consumer prices or net wages. The main risk factors for final-salary-dependent pension plans are longevity, changes in salary, inflation risk, and the discount rate.

The majority of defined benefit contributory plans comprise obligations to pay fixed capital amounts or amounts at fixed interest rates. An annuitization option exists for around half of the obligations. As a result, there may be lifelong payment obligations as well as lump-sum payments and installments. For most obligations, the contributions are linked to remuneration. Most of these plans are closed.

Accessorial plans are when the employer commits to a benefit that essentially corresponds to the benefit that is provided when an insured event occurs if the contributions are invested in a financial product of a third-party pension provider or insurer. The amount of the pension benefits therefore depends on the pension plan of the third-party pension provider, which is directly exposed to the risk factors longevity, changes in salary, and market interest-rate risk. Accessorial plans are almost risk free for the employer.

The pension plans agreed in Germany are not subject to minimum funding requirements. Minimum funding is required for some pension plans outside Germany owing to local regulations.

The changes in the present value of the defined benefit obligations were as follows:

€ million	2020	2019
Present value of defined benefit obligations as at Jan. 1	3,663	3,317
Current service cost	63	57
Interest expense	37	58
Employee contributions	6	6
Pension benefits paid including plan settlements	-123	-118
of which relating to plan settlements	-7	-5
Past service cost	2	-
Actuarial gains (-)/losses (+)	207	340
of which due to changes in demographic assumptions	40	-1
of which due to changes in financial assumptions	153	334
of which experience-based	14	7
Plan takeovers	6	-
Changes attributable to currency translation	-5	5
Reclassifications	-	-2
Present value of defined benefit obligations as at Dec. 31	**3,856**	**3,663**

The actuarial losses from the change in financial assumptions mainly resulted from the decrease in the underlying discount rate from 1.0 percent to 0.75 percent as at December 31, 2020 (December 31, 2019: from 1.75 percent to 1.0 percent).

Virtually all of the actuarial losses arising from the change in demographic assumptions arose because the changes in take-up of the option were taken into account in the measurement of defined benefit contributory plans with an annuitization option.

The following actuarial assumptions were used in the measurement of the defined benefit obligations:

%	Dec. 31, 2020	Dec. 31, 2019
Discount rate	0.75	1.00
Weighted salary increases	1.98	1.97
Weighted pension increases	1.67	1.67

Sensitivity analysis

The following table shows the sensitivity of the present value of the defined benefit obligations to changes in the actuarial parameters. The effects shown are based on an isolated change to one parameter, with the other parameters remaining constant. Correlation effects between individual parameters are not considered. The range relevant to the discount rate was reduced to plus or minus 50 basis points due to the environment of low interest rates.

	Dec. 31, 2020		Dec. 31, 2019	
	€ million	%	€ million	%
Change in the present value of defined benefit obligations as at balance sheet date if				
the discount rate were 50 (Dec. 31, 2019: 100) basis points higher	-270	-7.00	-479	-13.08
the discount rate were 50 (Dec. 31, 2019: 100) basis points lower	305	7.91	604	16.49
the future salary increase were 50 basis points higher	39	1.01	38	1.04
the future salary increase were 50 basis points lower	-38	-0.99	-38	-1.04
the future pension increase were 25 basis points higher	89	2.31	87	2.38
the future pension increase were 25 basis points lower	-87	-2.26	-84	-2.29

The duration of the defined benefit obligations as at December 31, 2020 was 15.50 years (December 31, 2019: 15.22 years).

Plan assets

Defined benefit obligations are offset by plan assets. €1,952 million of the plan assets (December 31, 2019: €1,904 million) are attributable to contractual trust arrangements (CTAs) at DZ BANK and BSH, and are managed as trust assets by DZ BANK Pension Trust e.V., Frankfurt am Main. The relevant CTA investment committee defines the investment policy and strategy for the asset management company. Plan assets relating to obligations in the United States and United Kingdom are also managed by independent trusts. In Luxembourg, the assets were transferred to a pension fund and, in Switzerland, to a foundation. Trustees/administrators are responsible for the administration and management of the pension plans and for compliance with regulatory requirements.

The changes in the funding status of the defined benefit obligations were as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
Present value of defined benefit obligations funded by plan assets	3,188	3,025
Present value of defined benefit obligations not funded by plan assets	668	638
Present value of defined benefit obligations	**3,856**	**3,663**
less fair value of plan assets	-2,535	-2,466
Recognized surplus	-	1
Provisions for defined benefit plans	**1,321**	**1,198**
Reimbursement rights recognized as assets	3	3

The following table shows the changes in plan assets:

€ million	2020	2019
Fair value of plan assets as at Jan. 1	2,466	2,158
Interest income	25	38
Return on/expenses from plan assets (excluding interest income)	95	196
Contributions to plan assets	23	139
of which contributions by employer	17	133
of which employee contributions	6	6
Pension benefits paid	-73	-70
Changes attributable to the takeover of defined benefit obligations	6	-
Changes attributable to currency translation	-7	5
Fair value of plan assets as at Dec. 31	**2,535**	**2,466**

Contributions to plan assets of €21 million are expected for 2021 (2020: €18 million).

As at December 31, 2020, 62 percent of the plan assets (December 31, 2019: 62 percent) were invested in fixed-income assets, thereby allowing for the defined benefit obligations' sensitivity to interest rates. The defined benefit obligations and the plan assets are largely in the euro, US dollar, and pound sterling currency areas. If the defined benefit obligations and the plan assets are in different currencies, derivative hedges are entered into in order to hedge the currency risk. The fixed-income investments in the form of Pfandbriefe, government bonds, and corporate bonds are generally of high quality. A small proportion of non-investment-grade corporate bonds are held. The bulk of the investments (particularly Pfandbriefe and government bonds) are of prime quality (AAA to AA).

The other investments are predominantly variable-yield securities (equities and investment fund units) from around the world, plus entitlements arising from insurance policies, short-term investments, and real estate assets.

The fair value of the plan assets is broken down by asset class as follows:

€ million	Dec. 31, 2020 With quoted market price in an active market	Without quoted market price in an active market	Total	Dec. 31, 2019 With quoted market price in an active market	Without quoted market price in an active market	Total
Cash and money market investments	-	47	47	-	50	50
Bonds and other fixed-income securities	1,563	-	1,563	1,531	-	1,531
Shares	158	-	158	130	-	130
Investment fund units	210	250	460	297	134	431
Other shareholdings	-	29	29	-	35	35
Derivatives	1	-	1	1	1	2
Land and buildings	-	5	5	-	5	5
Entitlements arising from insurance policies	-	160	160	-	158	158
Other assets	-	112	112	-	124	124
Total	**1,932**	**603**	**2,535**	**1,959**	**507**	**2,466**

As at December 31, 2020, the plan assets included €248 million of the group's own financial instruments (December 31, 2019: €244 million). The real estate and other assets contained in the plan assets are not used by the companies themselves.

In Luxembourg, there is a joint plan with other employers. Provisions and contributions are allocated to the contributors as stipulated in the regulations. The gains or losses on investments are distributed to the contributors on the basis of the proportion of the net assets attributable to them at the start of the year.

Other provisions

The following table shows the changes in other provisions in 2020:

€ million	Provisions for onerous contracts	Provisions for restructuring	Provisions for loan commitments	Provisions for financial guarantee contracts	Other provisions for loans and advances	Provisions relating to building society operations	Residual provisions	Total
Balance as at Jan. 1, 2020	15	24	71	124	33	1,406	417	2,090
Additions	1	12	257	87	45	326	283	1,011
Utilizations	-	-13	-	-	-11	-288	-231	-543
Reversals	-7	-7	-221	-83	-32	-	-84	-434
Interest expense/changes in discount rate	1	-	-	1	1	-	-	3
Other changes	-	-2	-	-6	1	-	1	-6
Balance as at Dec. 31, 2020	**10**	**14**	**107**	**123**	**37**	**1,444**	**387**	**2,122**

The residual provisions include provisions totaling €28 million for litigation risk (December 31, 2019: €36 million). In particular, provisions have been recognized in connection with capital market and lending products. No information pursuant to IAS 37.84 and IAS 37.85 is disclosed for these provisions because it is believed that disclosure of this information would seriously harm the outcome of the proceedings.

The expected maturities of other provisions are shown in the tables below.

AS AT DECEMBER 31, 2020

€ million	≤ 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years	Indefinite
Provisions for onerous contracts	-	-	-	10	-
Provisions for restructuring	-	5	9	-	-
Provisions for loan commitments	5	14	63	22	3
Provisions for financial guarantee contracts	24	7	80	12	-
Other provisions for loans and advances	-	34	1	2	-
Provisions relating to building society operations	5	950	426	63	-
Residual provisions	51	150	65	108	13
Total	**85**	**1,160**	**644**	**217**	**16**

AS AT DECEMBER 31, 2019

€ million	≤ 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years	Indefinite
Provisions for onerous contracts	-	-	-	15	-
Provisions for restructuring	1	2	21	-	-
Provisions for loan commitments	7	6	38	16	4
Provisions for financial guarantee contracts	21	22	65	16	-
Other provisions for loans and advances	-	30	1	2	-
Provisions relating to building society operations	6	883	454	63	-
Residual provisions	63	153	64	109	28
Total	**98**	**1,096**	**643**	**221**	**32**

The changes in loss allowances recognized under provisions for loan commitments and provisions for financial guarantee contracts were as follows:

	Loss allowances for loan commitments				**Loss allowances for financial guarantee contracts**			**Total**
€ million	Stage 1	Stage 2	Stage 3	POCI assets	Stage 1	Stage 2	Stage 3	
Balance as at Jan. 1, 2019	27	6	16	-	8	3	102	162
Additions	123	21	47	-	11	7	71	280
Reversals	-111	-15	-43	-	-16	-4	-56	-245
Other changes	1	-4	3	-	2	-4	-	-2
Balance as at Dec. 31, 2019	40	8	23	-	5	2	117	195
Additions	119	68	66	4	15	11	61	344
Reversals	-105	-48	-65	-3	-9	-3	-71	-304
Other changes	-	-2	2	-	-2	1	-4	-5
Balance as at Dec. 31, 2020	**54**	**26**	**26**	**1**	**9**	**11**	**103**	**230**

>> 70 Insurance liabilities

€ million	Dec. 31, 2020	Dec. 31, 2019
Provision for unearned premiums	1,194	1,188
Benefit reserve	70,470	65,502
Provision for claims outstanding	14,627	13,415
Provision for premium refunds	12,569	12,149
Other insurance liabilities	50	59
Reserve for unit-linked insurance contracts	12,303	12,033
Total	**111,213**	**104,346**

CHANGES IN THE PROVISION FOR UNEARNED PREMIUMS

€ million	2020	2019
Balance as at Jan. 1	1,188	1,171
Additions	1,253	1,252
Utilizations/reversals	-1,239	-1,241
Changes attributable to currency translation	-8	6
Balance as at Dec. 31	**1,194**	**1,188**

CHANGES IN THE BENEFIT RESERVE

€ million	2020	2019
Balance as at Jan. 1	65,502	61,709
Additions	8,093	7,095
Interest component	982	1,015
Utilizations/reversals	-4,106	-4,318
Changes attributable to currency translation	-1	1
Balance as at Dec. 31	**70,470**	**65,502**

Supplementary change-in-discount-rate reserves totaling €4,698 million have been recognized for policies with a discount rate in excess of the reference rate specified in the DeckRV (December 31, 2019: €3,957 million).

CHANGES IN THE PROVISION FOR CLAIMS OUTSTANDING

€ million	2020	2019
Balance as at Jan. 1	13,415	12,079
Claims expenses	7,821	7,504
less payments	-6,427	-6,276
Changes attributable to currency translation	-182	108
Balance as at Dec. 31	**14,627**	**13,415**

CHANGES IN THE PROVISION FOR PREMIUM REFUNDS

€ million	2020	2019
Balance as at Jan. 1	12,149	8,283
Additions	516	689
Utilizations/reversals	-759	-794
Changes resulting from unrealized gains and losses on investments (through other comprehensive income)	919	2,796[1]
Changes resulting from other remeasurements (through profit or loss)	-233	1,170[1]
Changes attributable to currency translation	-23	5
Balance as at Dec. 31	**12,569**	**12,149**

1 Amount restated (see note 2).

The breakdown of maturities for insurance liabilities is shown in the following tables:

AS AT DECEMBER 31, 2020

€ million	≤ 1 year	> 1 year – 5 years	> 5 years	Indefinite
Provision for unearned premiums	967	182	45	-
Benefit reserve	2,040	5,205	13,917	49,308
Provision for claims outstanding	5,262	5,437	3,928	-
Provision for premium refunds	857	664	649	10,399
Other insurance liabilities	29	6	11	4
Total	**9,155**	**11,494**	**18,550**	**59,711**

AS AT DECEMBER 31, 2019

€ million	≤ 1 year	> 1 year – 5 years	> 5 years	Indefinite
Provision for unearned premiums	983	168	37	-
Benefit reserve	1,749	5,998	13,181	44,574
Provision for claims outstanding	4,868	4,918	3,629	-
Provision for premium refunds	843	685	734	9,887
Other insurance liabilities	37	10	8	4
Total	**8,480**	**11,779**	**17,589**	**54,465**

In connection with the COVID-19 pandemic, €215 million was added to the provisions for claims outstanding in respect of the direct insurance companies in the non-life insurance division and in respect of inward reinsurance business. Of this amount, €52 million was attributable to claims already reported and €163 million to the provision for claims incurred but not reported (IBNR). This was mitigated by a positive effect of €87 million in the provisions for individual claims in the branches of insurance not adversely affected by COVID-19 (particularly motor vehicle insurance).

In the reinsurance business, €310 million was added for claims outstanding in connection with the COVID-19 pandemic. Of this amount, €83 million was attributable to claims already reported and €227 million to the provision for claims incurred but not (enough) reported (IBNR/IBNER). In accordance with the realization principle, it is not yet possible to quantify mitigating effects because the ceding insurers' final settlements were not available by December 31, 2020.

>> 71 Other liabilities

€ million	Dec. 31, 2020	Dec. 31, 2019
Other liabilities of insurance companies	7,472	6,780
Accruals	1,279	1,248[1]
Financial liabilities from contingent considerations in a business combination	-	5
Other payables	226	189
Lease liabilities	454	279
Residual other liabilities	812	664
Total	**10,243**	**9,165**

1 Amount restated (see note 2).

The table below gives a breakdown of insurance companies' other liabilities.

€ million	Dec. 31, 2020	Dec. 31, 2019
Other provisions	**436**	**428**
Provisions for employee benefits	403	389
Provisions for share-based payment transactions	3	3
Other provisions	30	36
Payables and residual other liabilities	**7,036**	**6,352**
Subordinated capital	75	89
Deposits received from reinsurers	41	41
Payables arising out of direct insurance operations	1,525	1,464
Payables arising out of reinsurance operations	566	442
Debt certificates issued including bonds	31	31
Deposits from banks	606	581
Derivatives (negative fair values)	23	20
Liabilities from capitalization transactions	3,053	2,751
Insurance lease liabilities	68	63
Other payables	293	284
Residual other liabilities	755	586
Total	**7,472**	**6,780**

>> 72 Subordinated capital

€ million	Dec. 31, 2020	Dec. 31, 2019
Subordinated liabilities	3,077	2,106
Profit-sharing rights	-	68
Share capital repayable on demand	13	13
Total	**3,090**	**2,187**

>> 73 Equity

Subscribed capital

The subscribed capital of DZ BANK consists of 1,791,344,757 registered non-par-value shares each with an imputed value of €2.75. All shares in issue are fully paid-up.

The Board of Managing Directors did not propose a dividend for 2019 to the Annual General Meeting of DZ BANK AG on May 27, 2020. The Board of Managing Directors is thereby following the recommendation of the European Central Bank (ECB) that no dividends be distributed in 2020 in view of the COVID-19 pandemic. In 2020, therefore, no dividend was paid for the 2019 financial year (paid in 2019: €0.18 per share). A dividend of €0.16 per share for 2020 will be proposed to the Annual General Meeting.

Authorized capital

The Board of Managing Directors is authorized, subject to the approval of the Supervisory Board, to increase the share capital by May 31, 2021 on one or more occasions by up to a total of €100 million by way of issuing new registered non-par-value shares in return for cash or non-cash contributions. The Board of Managing Directors is authorized, subject to the approval of the Supervisory Board, to exclude the subscription right of shareholders both in the case of capital increases in return for non-cash contributions and in the case of capital increases in return for cash contributions if the capital is increased for the purpose of

- issuing new shares to employees of the corporation (employee shares),
- issuing new shares to one or more cooperative banks which, measured in terms of their total assets, directly and indirectly have a below-average stake in the corporation's share capital, i.e. less than 0.5 percent of their total assets (based on the nominal value of €2.75 per DZ BANK share),
- acquiring companies, equity investments in companies or for granting equity investments in the corporation in order to back strategic partnerships.

The Board of Managing Directors is also authorized, subject to the approval of the Supervisory Board, to exclude fractions from the subscription right of shareholders ('Authorized Capital I').

The Board of Managing Directors is authorized, subject to the approval of the Supervisory Board, to increase the share capital by May 31, 2021 on one or more occasions by up to a total of €300 million by issuing new registered non-par-value shares in return for cash contributions. The Board of Managing Directors is authorized, subject to the approval of the Supervisory Board, to exclude fractions from the subscription right of shareholders ('Authorized Capital II').

The new shares issued on the basis of utilizing Authorized Capital I or Authorized Capital II can also be acquired by credit institutions determined by the Board of Managing Directors if aforesaid credit institutions agree to offer said shares to the shareholders (indirect subscription right).

The Board of Managing Directors did not make use of any of this authorized action in 2020.

Contingent capital

The share capital is to be contingently raised by up to €52,859,413.75 by issuing up to 19,221,605 new, registered non-par-value shares (Contingent Capital). The increase in the Contingent Capital shall serve to grant registered non-par value shares (subscription shares) for the fulfillment of corresponding conversion rights and/or conversion obligations of creditors of convertible bonds or registered bonds, as the case may be, that were issued until June 24, 2015 in return for a cash contribution on the basis of the authorization resolution of the Annual General Meeting of WGZ BANK AG Westdeutsche Genossenschafts-Zentralbank of June 24, 2014. The increase in the Contingent Capital must only be carried out to the extent that the creditors of aforesaid convertible bonds or registered bonds, as the case may be, entitled or obliged to convert make use of their conversion right or fulfill their conversion obligation and that no own shares are used for aforesaid fulfillment. The subscription shares shall at all times be issued at a ratio of one registered bond to 7,435.824 subscription shares.

The subscription shares participate from the beginning of the financial year in which they come into existence in the profits of the current financial year as well as in the profits of previous years if a resolution of the appropriation of said profits has yet to be passed.

The Board of Managing Directors is authorized, subject to the approval of the Supervisory Board, to determine the further details pertaining to the execution of the increase in the Contingent Capital.

Disclosures on shareholders

At the end of 2020, 99.5 percent of shares were held by cooperative enterprises (December 31, 2019: 99.5 percent). These cooperative enterprises include the cooperative banks and other legal entities and trading companies economically associated with the cooperative movement or cooperative housing sector.

Capital reserve

The capital reserve comprises the amounts from the issue of DZ BANK shares in excess of the imputed par value of the shares.

Retained earnings

Retained earnings comprise earned, undistributed consolidated profit together with gains and losses arising from remeasurement of defined benefit plans after taking into account deferred taxes. Cumulative gains and losses arising from remeasurement of defined benefit plans amounted to a loss of €777 million (December 31, 2019: loss of €682 million).

Reserve from other comprehensive income

Reserve from equity instruments for which the fair value OCI option has been exercised

The reserve from equity instruments for which the fair value OCI option has been applied is used to report the changes in the fair value of equity instruments measured at fair value through other comprehensive income after taking into account deferred taxes. If the equity instruments are sold, the related reserve is reclassified to retained earnings.

At the end of 2020, an amount of €10 million was attributable to the reserve from non-current assets and disposal groups classified as held for sale (December 31, 2019: no amount).

Reserve from gains and losses on financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk

The portion of the changes in fair value of financial liabilities designated as at fair value through profit or loss attributable to changes in the DZ BANK Group's own credit risk is also recognized in the reserve from other comprehensive income. If the liabilities are derecognized, the cumulative gains and losses recognized through other comprehensive income are reclassified to retained earnings.

Reserve from debt instruments measured at fair value through other comprehensive income

The reserve from debt instruments measured at fair value through other comprehensive income is used to report the changes in fair value after taking into account deferred taxes. In the case of debt instruments, gains and losses are only recognized in profit or loss when the relevant asset is sold. Loss allowances are recognized for these assets in accordance with IFRS 9.

Currency translation reserve

The currency translation reserve is the result of the translation of financial statements of subsidiaries denominated in foreign currency into euros (the group reporting currency). It also includes the gains and losses on hedges of net investments in foreign operations and the change in the currency translation reserve for entities accounted for using the equity method.

Additional equity components

Additional Tier 1 notes

In previous years, DZ BANK had issued tranches of additional Tier 1 notes (AT1 bonds) in 2 placements with a total volume of €2,150 million. In both placements, the AT1 bonds are split into 4 types depending on their interest-rate arrangements (types A to D). All interest is payable annually; the date for the payment of interest has been specified as August 1 each year in both placements. Under the terms and conditions of the bonds, interest payments are at the discretion of the issuer. They may be canceled, either wholly or in part, depending on the items eligible for distribution or by order of the competent supervisory authority. Interest payments are not cumulative; canceled or reduced payments will not be made up in subsequent periods.

The bonds do not have any maturity date and are subject to the terms and conditions set out in the relevant prospectus. Among other things, the terms and conditions specify that DZ BANK may only call the bonds in their entirety, and not in part, provided that there are certain regulatory or tax reasons for doing so. In all instances, DZ BANK must obtain the consent of the competent supervisory authority in order to call the bonds.

The tranches of AT1 bonds issued are shown in the 'Additional equity components' sub-item. According to the provisions of IAS 32, the AT1 bonds have characteristics of equity. The AT1 bonds are unsecured, subordinated bearer bonds of DZ BANK.

Other hybrid capital

As a result of the merger of DZ BANK with WGZ BANK, the convertible bond issued by WGZ BANK was taken over by DZ BANK as the legal successor. Upon initial recognition when the convertible bond was taken over, the components had to be defined as a financial liability or an equity instrument. The portion of the convertible bond that was not classified as a component of equity was recognized under subordinated capital. As was the case in the previous year, the equity component of €95 million is included as an additional equity component within the equity of the DZ BANK Group until such time as it is potentially converted into non-par-value shares of DZ BANK. Further disclosures on conversion into non-par-value shares of DZ BANK can be found in the section on contingent capital.

Non-controlling interests

Non-controlling interests comprise the equity of subsidiaries not attributable to DZ BANK.

Breakdown of changes in equity by component of other comprehensive income

2020

€ million	Equity earned by the group	Reserve from other compre-hensive income	Non-controlling interests
Gains and losses on debt instruments measured at fair value through other comprehensive income	-	710	71
Exchange differences on currency translation of foreign operations	-	-22	-7
Gains and losses on hedges of net investments in foreign operations	-	2	-
Gains and losses on equity instruments for which the fair value OCI option has been exercised	-	-73	-15
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk	-	-42	-
Gains and losses arising from remeasurement of defined benefit plans	-95	-	-2
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	-	-6	-
Other comprehensive income/loss	**-95**	**569**	**47**

2019

€ million	Equity earned by the group	Reserve from other compre-hensive income	Non-controlling interests
Gains and losses on debt instruments measured at fair value through other comprehensive income	-	1,051[1]	113
Exchange differences on currency translation of foreign operations	-	-	-1
Gains and losses on hedges of net investments in foreign operations	-	6	-
Gains and losses on equity instruments for which the fair value OCI option has been exercised	-	398[1]	39
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk	-	-64	-2
Gains and losses arising from remeasurement of defined benefit plans	-114	-	-5
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	-	1	-
Other comprehensive income/loss	**-114**	**1,392**	**144**

1 Amount restated (see note 2).

The table below shows a breakdown of the reserve from other comprehensive income:

€ million	Items not reclassified to the income statement		Items reclassified to the income statement	
	Reserve from equity instruments for which the fair value OCI option has been exercised	Reserve from gains and losses on financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk	Reserve from debt instruments measured at fair value through other compre-hensive income	Currency translation reserve
Equity as at Jan. 1, 2019	361	23	131	84
Restatements according to IAS 8	1	-	-2	-
Equity restated as at Jan. 1, 2019	362	23	129	84
Other comprehensive income/loss	398[1]	-65	1,051[1]	8
Total comprehensive income/loss	**398**	**-65**	**1,051**	**8**
Changes in scope of consolidation	-	-	-	-7
Acquisition/disposal of non-controlling interests	1	-	-	-
Reclassifications within equity	-298	-	-	-
Equity as at Dec. 31, 2019	463	-42	1,180	85
Other comprehensive income/loss	-73	-42	710	-26
Total comprehensive income/loss	**-73**	**-42**	**710**	**-26**
Acquisition/disposal of non-controlling interests	-	-	-1	-
Reclassifications within equity	-50	8	-	-
Equity as at Dec. 31, 2020	**340**	**-76**	**1,889**	**59**

1 Amount restated (see note 2).

The changes in loss allowances included in the reserve from other comprehensive income, broken down by individual balance sheet item, were as follows:

	Loans and advances to customers			Investments		
€ million	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
Balance as at Jan. 1, 2019	1	2	-	3	1	29
Additions	-	-	-	5	-	4
Reversals	-1	-1	-	-4	-	-1
Other changes	1	-1	-	-	-	-2
Balance as at Dec. 31, 2019	1	-	-	4	1	30
Additions	1	1	-	9	-	-
Utilizations	-	-	-	-1	-	-8
Reversals	-	-1	-	-3	-1	-
Other changes	-	-	-	-1	-	2
Balance as at Dec. 31, 2020	**2**	**-**	**-**	**8**	**-**	**24**

	Investments held by insurance companies			Total
€ million	Stage 1	Stage 2	Stage 3	
Balance as at Jan. 1, 2019	4	-	-	40
Additions	5	-	-	14
Reversals	-5	-	-	-12
Other changes	-	-	-	-2
Balance as at Dec. 31, 2019	4	-	-	40
Additions	9	3	-	23
Utilizations	-	-	-	-9
Reversals	-4	-	-	-9
Other changes	1	-1	-	1
Balance as at Dec. 31, 2020	**10**	**2**	**-**	**46**

E Financial instruments and fair value disclosures

>> 74 Classes, categories, and fair values of financial instruments

The following tables show the breakdown of net carrying amounts and fair values of financial assets and financial liabilities by class (in accordance with IFRS 7) and by category of financial instrument (in accordance with IFRS 9):

€ million	Dec. 31, 2020 Carrying amount	Fair value	Dec. 31, 2019 Carrying amount	Fair value
FINANCIAL ASSETS MEASURED AT FAIR VALUE	**196,505**	**196,505**	**187,377**	**187,377**
Financial assets measured at fair value through profit or loss	**83,473**	**83,473**	**84,894**	**84,894**
Financial assets mandatorily measured at fair value through profit or loss	***74,003***	***74,003***	***74,563***	***74,563***
Loans and advances to customers	241	241	258	258
Hedging instruments (positive fair values)	161	161	211[1]	211[1]
Financial assets held for trading	42,846	42,846	44,771[1]	44,771[1]
Investments	2,720	2,720	2,591	2,591
Investments held by insurance companies	28,035	28,035	26,732	26,732
Financial assets designated as at fair value through profit or loss	***9,470***	***9,470***	***10,331***	***10,331***
Loans and advances to banks	1,967	1,967	2,427	2,427
Loans and advances to customers	1,213	1,213	1,488	1,488
Investments	6,290	6,290	6,416	6,416
Financial assets measured at fair value through other comprehensive income	**112,857**	**112,857**	**102,169**	**102,169**
Financial assets mandatorily measured at fair value through other comprehensive income	***106,935***	***106,935***	***95,857***	***95,857***
Loans and advances to banks	116	116	152	152
Loans and advances to customers	3,436	3,436	3,569	3,569
Investments	35,450	35,450	29,731	29,731
Investments held by insurance companies	67,933	67,933	62,405	62,405
Financial assets designated as at fair value through other comprehensive income	***5,922***	***5,922***	***6,312***	***6,312***
Investments	393	393	379	379
Investments held by insurance companies	5,529	5,529	5,933	5,933
Non-current assets and disposal groups classified as held for sale	**175**	**175**	**314**	**314**
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**385,370**	**394,481**	**359,662**	**366,937**
Cash and cash equivalents	68,148	68,148	52,166	52,167
Loans and advances to banks	100,913	104,646	94,953	97,570
Loans and advances to customers	182,079	185,968	177,165	180,501
Investments	14,894	15,838	17,246	18,148
Investments held by insurance companies	15,757	18,282	14,472	16,259
Other assets	1,595	1,595	2,094	2,094
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	1,980		1,368[1]	
Non-current assets and disposal groups classified as held for sale	**4**	**4**	**198**	**198**
FINANCE LEASES	**1,076**	**1,091**	**1,531**	**1,534**
Loans and advances to customers	1,076	1,091	1,531	1,534

1 Amount restated (see note 2).

€ million	Dec. 31, 2020 Carrying amount	Dec. 31, 2020 Fair value	Dec. 31, 2019 Carrying amount	Dec. 31, 2019 Fair value
FINANCIAL LIABILITIES MEASURED AT FAIR VALUE	**84,968**	**84,968**	**84,261**	**84,261**
Financial liabilities mandatorily measured at fair value through profit or loss	**53,065**	**53,065**	**53,093**	**53,093**
Hedging instruments (negative fair values)	2,638	2,638	2,018[1]	2,018[1]
Financial liabilities held for trading	50,404	50,404	51,050[1]	51,050[1]
Other liabilities	23	23	25	25
Financial liabilities designated as at fair value through profit or loss	**31,903**	**31,903**	**31,168**	**31,168**
Deposits from banks	4,564	4,564	5,060	5,060
Deposits from customers	9,511	9,511	10,114	10,114
Debt certificates issued including bonds	17,589	17,589	15,647	15,647
Subordinated capital	239	239	347	347
FINANCIAL LIABILITIES MEASURED AT AMORTIZED COST	**355,644**	**363,304**	**330,704**	**336,160**
Deposits from banks	173,288	177,515	136,061	139,028
Deposits from customers	124,413	126,803	121,402	123,345
Debt certificates issued including bonds	52,911	54,117	69,476	70,137
Other liabilities	1,865	1,867	1,688	1,689
Subordinated capital	2,851	3,001	1,840	1,961
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	315		237[1]	
Liabilities included in disposal groups classified as held for sale	**1**	**1**	-	-
LEASES	**522**	**522**	**342**	**342**
Other liabilities	522	522	342	342
FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS	**230**	**230**	**195**	**195**
Financial guarantee contracts	**123**	**123**	**124**	**124**
Provisions	123	123	124	124
Loan commitments	**107**	**107**	**71**	**71**
Provisions	107	107	71	71

1 Amount restated (see note 2).

Given the complex structure of home savings contracts and the multitude of scales of rates and charges, there is currently no suitable method for calculating the fair value of an individual contract as at the balance sheet date. Consequently, the fair value cannot be determined using either comparable market prices or suitable option pricing models. The fair values of financial assets and financial liabilities resulting from building society operations are therefore shown in simplified form at their carrying amounts. On the basis of the models used for building society management, which comprise both collective and non-collective business including deposits, the overall amount for building society operations during the reporting period was positive.

The carrying amounts and fair values reported under investments held by insurance companies relate to receivables and fixed-income securities matched as cover for long-term insurance contract obligations as part of insurance operations. Because these instruments are normally held over their entire maturity, interest-rate-related changes in fair value during the maturity of the financial assets balance each other out in full. The fair values of the investments held by insurance companies comprise both the proportion of the fair values that is attributable to the policyholders and the proportion attributable to the shareholders of the DZ BANK Group. The fair value attributable to the shareholders of the DZ BANK Group of investments held by insurance companies measured at amortized cost was €16,505 million (December 31, 2019: €15,050 million).

>> 75 Equity instruments designated as at fair value through other comprehensive income

Investments and investments held by insurance companies include shares and other variable-yield securities and investments in subsidiaries, joint ventures, and associates that the DZ BANK Group has elected to measure at fair value through other comprehensive income. These investments and investments held by insurance companies are not held for trading or to generate returns. The DZ BANK Group believes that it would be inappropriate to report gains and losses in profit or loss in this case.

€ million	Dec. 31, 2020	Dec. 31, 2019
Investments	**393**	**379**
Shares and other variable-yield securities	262	222
Investments in subsidiaries	131	157
Investments held by insurance companies	**5,529**	**5,933**
Shares and other variable-yield securities	5,109	5,537
Investments in subsidiaries	402	378
Investments in joint ventures	18	17
Investments in associates	-	1
Total	**5,922**	**6,312**

Dividends of €74 million (2019: €176 million) were recognized in 2020 in respect of investments and investments held by insurance companies as at the reporting date.

Investments and investments held by insurance companies with a carrying amount of €576 million (2019: €712 million) were derecognized in 2020. The derecognition of these investments was attributable to capital repayments, liquidations, and disposals. No further current gains or losses are expected from these assets. These derecognitions resulted in cumulative net gains of €54 million (2019: €350 million), which were reclassified to retained earnings or the provision for premium refunds in the financial year. In 2020, dividends of €80 million (2019: €13 million) were recognized in respect of investments and investments held by insurance companies that have been sold.

>> 76 Assets and liabilities measured at fair value on the balance sheet

Fair value hierarchy

The fair value measurements are assigned to the levels of the fair value hierarchy as follows:

€ million	Level 1		Level 2		Level 3	
	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Assets	**89,438**	82,382	**97,616**	96,062	**9,451**	8,933
Loans and advances to banks	-	-	2,083	2,579	-	-
Loans and advances to customers	-	-	4,029	4,408	861	907
Hedging instruments (positive fair values)	-	-	161	211[1]	-	-
Financial assets held for trading	2,032	1,645	40,045	42,335[1]	769	791
Investments	20,421	19,770	22,726	17,378	1,705	1,969
Investments held by insurance companies	66,935	60,873	28,532	29,106	6,030	5,091
Non-current assets and disposal groups classified as held for sale	50	94	39	45	86	175
of which non-recurring measurement	50	94	-	-	2	41
Liabilities	**4,451**	4,320	**94,466**	93,039	**774**	1,172
Deposits from banks	-	-	4,564	5,060	-	-
Deposits from customers	-	-	9,511	10,114	-	-
Debt certificates issued including bonds	3,416	3,340	13,691	11,699	482	608
Hedging instruments (negative fair values)	-	-	2,638	2,018[1]	-	-
Financial liabilities held for trading	1,032	973	49,101	49,562[1]	271	515
Financial liabilities arising from unit-linked insurance products	-	-	14,722	14,270	-	-
Other liabilities	3	7	20	13	-	5
Subordinated capital	-	-	219	303	20	44

1 Amount restated (see note 2).

The investments held by insurance companies measured at fair value include assets related to unit-linked contracts. These are offset on the equity and liabilities side of the balance sheet by financial liabilities measured at fair value arising from unit-linked insurance products, which consist of the reserve for unit-linked insurance contracts and liabilities from capitalization transactions allocated to unit-linked life insurance.

Transfers

Assets and liabilities held at the balance sheet date and measured at fair value on a recurring basis were transferred as follows between Levels 1 and 2 of the fair value hierarchy:

€ million	Transfers from Level 1 to Level 2		Transfers from Level 2 to Level 1	
	2020	2019	2020	2019
Financial assets measured at fair value	**753**	957	**1,732**	3,759
Investments	-	-	-	3,577
Investments held by insurance companies	753	957	1,732	182

Transfers from Level 1 to Level 2 were due to quoted prices no longer being obtainable in active markets for identical assets or liabilities. Transfers from Level 2 to Level 1 were due to the availability of quoted prices in active markets that had previously not existed.

In the DZ BANK Group, transfers between Levels 1 and 2 take place when there is a change in the inputs that is relevant to categorization in the fair value hierarchy.

Fair value measurements within Levels 2 and 3

Fair value measurements within Level 2 of the fair value hierarchy either use prices available in active markets for similar, but not identical, financial instruments or use valuation techniques largely based on observable market data. If valuation techniques are used that include a significant valuation input that is not observable in the market, the relevant fair value measurements are categorized within Level 3 of the fair value hierarchy.

Generally, the discounted cash flow (DCF) method is used in the model-based measurement of the fair value of financial instruments without optionalities. Modeling of the yield curves is based on a multi-curve approach with collateral discounting. Simple products on which options exist are measured using customary standard models in which the inputs are quoted in active markets. For structured products on which options exist, a wide range of standard valuation techniques are used. Valuation models are calibrated to available market prices and validated regularly. The fair values of structured products can be measured by breaking these products into their constituent parts, which are then measured using the valuation methods described below.

The basis for measurement is the selection of an adequate yield curve for each specific instrument. The measurement is carried out by selecting appropriate tenor-specific forward curves for projecting variable cash flows. The nature and collateralization of the transactions determines how they are discounted using yield curves that can be adjusted on the basis of relevant spreads.

The DZ BANK Group uses prices in active markets (provided these prices are available) for the fair value measurement of loans and advances as well as unstructured bonds. Otherwise, it mainly uses the DCF method. Discounting is based on yield curves that are adjusted for liquidity-related and credit rating-related costs using spreads. Product-dependent funding spreads are added to the yield curve for liabilities attributable to registered creditors, debt certificates issued including bonds, and subordinated capital. Debt instruments held are adjusted using issuer-specific spreads or spreads derived from the issuer’s internal and external credit rating, sector, and risk category. Customer-appropriate spreads and collateralization rates are taken into account for the measurement of loans when the DCF method is used. If significant unobservable inputs are used for measurement and there are no indications that the transaction price is not identical to the fair value at the time of first-time recognition on the balance sheet, the valuation method is calibrated in such a way that the model price at the time of acquisition corresponds to the transaction price. In exceptional cases, the nominal amount of the debt instrument in question provides the best evidence of fair value.

The fair value measurements of shares and other variable-yield securities and of long-term equity investments accounted for in accordance with IFRS 9 are determined by applying income capitalization approaches and observing transaction prices. The best indicator of fair value is deemed to be the transaction prices for recent transactions involving the relevant financial instruments, provided there have been any such transactions. Otherwise, the fair value is measured using income capitalization approaches in which future income and dividends – calculated on the basis of forecasts and estimates – are discounted, taking risk parameters into account.

The fair value measurements of investment fund units are determined using the pro rata net asset value. This is adjusted for any outstanding performance-related remuneration entitlements of fund managers; risk adjustments are also taken into account. Some long-term equity investments in real estate companies are also measured at net asset value. In this case, the liabilities are subtracted from the fair values of the real estate tied up in the company and the result is multiplied by the percentage of shareholding. The prices of units in real estate funds that are not managed by the DZ BANK Group are provided by the asset management company that manages these funds. These units are measured regularly at net asset value. Fair value measurements are also based on valuations, current values, and prices in recent transactions.

The fair value measurement of standardized derivatives traded in liquid markets is based on observable market prices and/or industry-standard models using observable inputs. To discount the cash flows of derivatives, a distinction is made between non-collateralized and collateralized transactions when using yield curves in order to take into account the specific funding costs. Moreover, calculation of the model prices for products on which options exist mostly requires the input of additional market data (e.g. volatilities, correlations, repo rates). As far as possible, this data is derived implicitly from quoted market prices that are available. If observable quoted market prices are not available, or only available to a limited extent, the DZ BANK Group uses customary interpolation and extrapolation mechanisms, historical time series analyses, and fundamentals analyses of economic variables to generate the required inputs. It also uses expert assessments on a small scale.

The fair value measurement of OTC financial derivatives applies the option in IFRS 13.48, which enables the total net amount to be measured. In the first step, credit risk is not taken into account. Counterparty-specific credit risk arising from derivatives is recognized after the total net amount has been determined. Credit valuation adjustments (CVAs) are recognized to take into account counterparty credit risk and debt valuation adjustments (DVAs) are recognized to take into account the group’s own credit risk. Their measurement also takes account of collateral and uses market-implied parameters with matching maturities or internal parameters with matching maturities for the probability of default and loss given default.

The measurement of financial instruments also involves carrying out measurement adjustments to a suitable degree. These include, among other things, model reserves that enable uncertainties regarding model selection, model parameters, and model configuration to be taken into account. The DZ BANK Group measures financial instruments at the price at which these financial instruments can be realized in the market. If this differs from the measurement of the individual instruments (e.g. measurement at middle rates), the bid/ask adjustments (close-out reserves) are determined on a net basis applying the option in IFRS 13.48. Measurement takes account of the group’s funding structure.

The following table shows the valuation techniques, the unobservable inputs, and the spreads of the unobservable inputs used for the fair value measurements at Level 3 of the fair value hierarchy as at December 31, 2020.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Loans and advances to customers	Loans	580	DCF method	BVAL price adjustment	-4.0 to 4.9
		79	DCF method	Credit spread	0.1 to 8.3
	Profit-participation certificates	28	DCF method	Internal credit ratings	4.0 to 24.2
	Shareholders' loans	112	DCF method	Internal credit ratings	4.0 to 24.2
	Receivables arising from silent partnerships	62	DCF method	Internal credit ratings	4.0 to 24.2
Financial assets held for trading	ABSs	4	DCF method	Credit spread	7.7
	Equity/commodity basket products	3	Local volatility model	Correlation of the risk factors considered	9.9 to 85.3
	Loans and advances to issuers in default	6	DCF method	Recovery rate	-
	Collateralized loan obligations	121	Gaussian copula model	Liquidity spread	1.6 to 3.3
	Bearer securities	235	DCF method	BVAL price adjustment	0.2 to 2.6
	Registered securities	400	DCF method	BVAL price adjustment	-4.0 to 4.9
Investments	ABSs	93	DCF method	Credit spread	0.6 to 7.0
	Other variable-yield securities	10	DCF method	Assumptions for measurement of risk parameters	11.4 to 14.5
	Investments in subsidiaries	66	DCF method	Assumptions for measurement of risk parameters	11.4 to 14.5
		231	Income capitalization approach, net asset value method	Future income	-
	Collateralized loan obligations	3	Gaussian copula model	Liquidity spread	0.0 to 2.1
	Loans and advances to issuers in default	6	DCF method	Recovery rate	-
	Bearer securities	164	DCF method	BVAL price adjustment	0.2 to 132.7
	Investment fund units	13	Net asset value	-	-
	Mortgage-backed securities	276	DCF method	Duration	-
		37	DCF method	Recovery rate	0.0 to 94.3
	Other shareholdings	88	DCF method	Capitalization rate, growth factor	1.0 to 10.3
		235	Income capitalization approach, net asset value method	Future income	-
	VR Circle	483	DCF method	Multiple-year default probabilities	0.0 to 100.0

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Investments held by insurance companies	ABSs	1,379	Third-party pricing information	-	-
	Investments in subsidiaries, associates, and joint ventures, real estate funds, profit-participation certificates, and other long-term equity investments	2,923	Net asset value	-	-
	Investments in subsidiaries, associates, and joint ventures, other long-term equity investments, and shares in cooperatives	309	Income capitalization approach	Future income	6.5 to 9.4
	Fixed-income securities, convertible bonds, shares, investment fund units, and shares in cooperatives	959	Third-party pricing information	-	-
	Profit-participation certificates and promissory notes	451	DCF method	Credit spread	5.0 to 6.8
	Other shareholdings	9	Approximation	-	-
Non-current assets and disposal groups classified as held for sale	Investments in corporations	29	Income capitalization approach	Future income	0.0 to 10.8
	Loans	57	DCF method	Credit spread	0.1 to 8.3
Debt certificates issued including bonds	VR Circle	482	DCF method	Multiple-year default probabilities	0.0 to 100.0
Financial liabilities held for trading	Equity/commodity basket products	254	Local volatility model	Correlation of the risk factors considered	9.9 to 85.3
	Products with commodity volatility derived from comparable instruments	17	Local volatility model	Volatility	7.0 to 72.1
Subordinated capital	Loans	20	DCF method	Credit spread	0.3 to 3.2

The following table shows the valuation techniques, the unobservable inputs, and the spreads of the unobservable inputs used for the fair value measurements at Level 3 of the fair value hierarchy as at December 31, 2019.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Loans and advances to customers	Loans	632	DCF method	BVAL price adjustment	-4.0 to 4.0
		69	DCF method	Credit spread	0.0 to 8.3
	Profit-participation certificates	46	DCF method	Internal credit ratings	5.2 to 16.5
	Shareholders' loans	102	DCF method	Internal credit ratings	5.2 to 16.5
	Receivables arising from silent partnerships	58	DCF method	Internal credit ratings	5.2 to 16.5
Financial assets held for trading	ABSs	4	DCF method	Credit spread	6.5
	Equity/commodity basket products	6	Local volatility model	Correlation of the risk factors considered	9.9 to 85.3
	Loans and advances to issuers in default	20	DCF method	Recovery rate	-
	Collateralized loan obligations	99	Gaussian copula model	Liquidity spread	1.1 to 4.5
	Bearer securities	466	DCF method	BVAL price adjustment	-1.7 to 0.6
	Registered securities	168	DCF method	BVAL price adjustment	-4.0 to 4.0
	Option in connection with acquisition of long-term equity investments	28	Black-Scholes model	Earnings indicator	-
Investments	ABSs	79	DCF method	Credit spread	0.5 to 5.4
	Other variable-yield securities	10	DCF method	Assumptions for measurement of risk parameters	9.6 to 13.5
	Investments in subsidiaries	37	DCF method	Assumptions for measurement of risk parameters	9.6 to 13.5
		273	Income capitalization approach, net asset value method	Future income	-
	Collateralized loan obligations	6	Gaussian copula model	Liquidity spread	0.0 to 1.7
	Bearer securities	342	DCF method	BVAL price adjustment	-1.7 to 132.0
	Investment fund units	20	Net asset value	-	-
	Mortgage-backed securities	334	DCF method	Duration	-
		41	DCF method	Recovery rate	0.0 to 94.6
	Other shareholdings	72	DCF method	Capitalization rate, growth factor	0.0 to 11.6
		249	Income capitalization approach, net asset value method	Future income	-
	VR Circle	506	DCF method	Multiple-year default probabilities	0.0 to 100.0

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Investments held by insurance companies	ABSs	1,044	Third-party pricing information	-	-
	Investments in subsidiaries, associates, and joint ventures, real estate funds, profit-participation certificates, and other long-term equity investments	2,455	Net asset value	-	-
	Investments in subsidiaries, associates, and joint ventures, other long-term equity investments, and shares in cooperatives	404	Income capitalization approach	Future income	7.8 to 8.4
	Fixed-income securities, convertible bonds, shares, and shares in cooperatives	719	Third-party pricing information	-	-
	Profit-participation certificates and promissory notes	462	DCF method	Credit spread	4.4 to 6.0
	Other shareholdings	7	Approximation	-	-
Non-current assets and disposal groups classified as held for sale	Loans	175	DCF method	Credit spread	0.0 to 8.3
Debt certificates issued including bonds	Bearer issue	102	DCF method	BVAL price adjustment	0.1
	VR Circle	506	DCF method	Multiple-year default probabilities	0.0 to 100.0
Financial liabilities held for trading	Equity/commodity basket products	479	Local volatility model	Correlation of the risk factors considered	9.9 to 85.3
	Option in connection with acquisition of long-term equity investments	10	Black-Scholes model	Earnings indicators	-
	Products with commodity volatility derived from comparable instruments	26	Local volatility model	Volatility	7.0 to 59.5
Other liabilities	Incentivization commitment in connection with acquisition of long-term equity investments	5	Expected value	-	-
Subordinated capital	Loans	44	DCF method	Credit spread	0.3 to 3.2

Fair value measurements within Level 3 of the fair value hierarchy

The table below shows the changes in the fair value measurements of assets within Level 3 of the fair value hierarchy:

€ million	Loans and advances to customers	Financial assets held for trading	Investments	Investments held by insurance companies	Non-current assets and disposal groups classified as held for sale
Balance as at Jan. 1, 2019	928	554	2,179	4,261	388
Additions (purchases)	51	774	187	1,488	289
Transfers	-10	223	-36	-137	-
from Level 3 to Levels 1 and 2	-10	-71	-266	-234	-
from Levels 1 and 2 to Level 3	-	294	230	97	-
Disposals (sales)	-132	-732	-201	-679	-780
Changes resulting from measurement at fair value	-26	-28	65	158	46
through profit or loss	-33	-28	43	89	-59
through other comprehensive income	7	-	22	69	105
Other changes	96	-	-225	-	232
Balance as at Dec. 31, 2019	907	791	1,969	5,091	175
Additions (purchases)	71	762	101	1,297	-
Transfers	-	376	-150	-2	-
from Level 3 to Levels 1 and 2	-	-106	-442	-133	-
from Levels 1 and 2 to Level 3	-	482	292	131	-
Disposals (sales)	-102	-1,155	-296	-290	-141
Changes resulting from measurement at fair value	-25	-7	32	-40	-27
through profit or loss	-29	-7	-10	-128	-27
through other comprehensive income	4	-	42	88	-
Other changes	9	2	49	-26	79
Balance as at Dec. 31, 2020	**861**	**769**	**1,705**	**6,030**	**86**

The table below shows the changes in the fair value measurements of liabilities within Level 3 of the fair value hierarchy:

€ million	Debt certificates issued including bonds	Financial liabilities held for trading	Other liabilities	Subordinated capital
Balance as at Jan. 1, 2019	565	907	7	45
Additions (issues)	-	103	-	-
Transfers	101	-367	-	-
from Level 3 to Level 2	-	-468	-	-
from Level 2 to Level 3	101	101	-	-
Disposals (settlements)	-42	-154	-2	-1
Changes resulting from measurement at fair value	-16	26	-	-
through profit or loss	-16	26	-	-2
through other comprehensive income	-	-	-	2
Balance as at Dec. 31, 2019	608	515	5	44
Additions (issues)	-	86	-	-
Transfers	-101	-192	-	-
from Level 3 to Level 2	-101	-396	-	-
from Level 2 to Level 3	-	204	-	-
Disposals (settlements)	-18	-140	-5	-21
Changes resulting from measurement at fair value	-6	3	-	-2
through profit or loss	-5	3	-	-2
through other comprehensive income	-1	-	-	-
Other changes	-	-	-	-1
Balance as at Dec. 31, 2020	**482**	**271**	**-**	**20**

As part of the processes for fair value measurement, the DZ BANK Group reviews whether the valuation methods used for the measurement are typical and whether the valuation inputs used in the valuation methods are observable in the market. This review takes place at every balance sheet date, i.e. at least every 6 months. On the basis of this review, the fair value measurements are assigned to the levels of the fair value hierarchy. In the DZ BANK Group, transfers between the levels generally take place as soon as there is a change in the inputs that is relevant to categorization in the fair value hierarchy.

In each step of these processes, both the distinctive features of the particular product type and the distinctive features of the business models of the group entities are taken into consideration.

Transfers of fair values from Levels 1 and 2 to Level 3 of the fair value hierarchy during the financial year are largely attributable to a revised estimate of the market observability of the valuation inputs used in the valuation methods. Transfers from Level 3 to Levels 1 or 2 are essentially due to the availability of a price listed in an active market and to the inclusion in the valuation method of material valuation inputs observable in the market.

The amount of gains or losses recognized in profit or loss resulting from the recurring fair value measurements within Level 3 of assets and liabilities held at the balance sheet date constituted a net loss of €149 million during the year under review (2019: net gain of €54 million). The gains or losses are included in the line items net interest income, gains and losses on trading activities, other gains and losses on valuation of financial instruments, gains and losses on investments held by insurance companies and other insurance company gains and losses, loss allowances, and other net operating income.

For the fair values of investments held by insurance companies reported within Level 3, a worsening in the credit rating or a rise in the interest rate of 1 percent would lead to the recognition of a €37 million loss in the income statement (2019: loss of €40 million) and a loss of €1 million under other comprehensive income/loss (2019: loss of €1 million). In the case of the fair values of loans and advances to customers, the same change would lead to the recognition of an €11 million loss in the income statement (2019: loss of €8 million). For the fair values of investments, there would be a €19 million loss under other comprehensive income/loss (2019: loss of €26 million) and a €20 million loss in the income statement (2019: loss of €24 million). In the case of financial assets held for trading, financial liabilities held for trading, and debt certificates issued including bonds, a worsening in the credit rating or a rise in the interest rate of 1 percent would not lead to any material change in fair value. In 2019, the changes would have given rise to a loss of €8 million recognized in the income statement within financial assets held for trading and a gain of €3 million recognized in the income statement within financial liabilities held for trading. For debt certificates issued including bonds, a gain of €3 million would have been recognized under other comprehensive income/loss in 2019.

The fair values of bonds without liquid markets that are reported within financial assets held for trading, financial liabilities held for trading, investments, and loans and advances to customers are given an individual adjustment spread or are measured using Bloomberg Valuation Service prices, which are observable in the market. All other things being equal, an increase in the pertinent measurement assumptions of 1 percent would lead to the recognition of a €24 million loss in the income statement (2019: loss of €14 million) and a loss of €16 million under other comprehensive income/loss (2019: loss of €19 million). Historical spreads are used for bonds recognized under subordinated capital whose spread components are no longer observable in the market. All other things being equal, an increase of 1 percent in the spread would lead to a €1 million increase in fair value that would be recognized in the income statement (2019: increase of €4 million).

An alternative assumption about the credit spreads used could lead to a significant change in the fair values of some of the ABSs reported under financial assets held for trading and under investments. All other things being equal, an increase in these spreads of 1 percent would lead to the recognition of a €1 million loss in the income statement (2019: loss of €2 million) and a loss of €2 million under other comprehensive income/loss (2019: loss of €1 million).

An alternative assumption about the liquidity spreads used could lead to a significant change in respect of collateralized loan obligations reported under investments and under financial assets held for trading. All other things being equal, a rise in the liquidity spread assumptions by 1 percent would lead to a €4 million decrease in the fair values of these financial assets that would be recognized in the income statement (2019: decrease of €5 million).

Sensitivity analysis is used to calculate the aforementioned changes in the fair value measurements. Non-performing exposures and strategically held investments in subsidiaries and other shareholdings whose fair values are calculated using an income capitalization approach are not included in the sensitivity analysis.

Exercise of option pursuant to IFRS 13.48

The option offered by IFRS 13.48 of measuring a net risk position for financial assets and financial liabilities is used for portfolios whose components are recognized under the balance sheet items loans and advances to banks, loans and advances to customers, financial assets held for trading, investments, and financial liabilities held for trading.

>> 77 Assets and liabilities not measured at fair value on the balance sheet

Fair value hierarchy

Fair value measurements of assets and liabilities that are not recognized at fair value on the balance sheet, but whose fair value must be disclosed, are assigned to the levels of the fair value hierarchy as follows:

€ million	Level 1 Dec. 31, 2020	Level 1 Dec. 31, 2019	Level 2 Dec. 31, 2020	Level 2 Dec. 31, 2019	Level 3 Dec. 31, 2020	Level 3 Dec. 31, 2019
Assets	**486**	800	**226,890**	205,088	**172,600**	165,927
Cash and cash equivalents	-	-	68,148	52,167	-	-
Loans and advances to banks	-	-	100,553	92,984	4,093	4,586
Loans and advances to customers	-	-	38,347	37,758	147,620	142,743
Investments	486	431	14,959	17,320	393	397
Investments held by insurance companies	-	369	4,369	4,357	19,091	16,134
Property, plant and equipment, investment property, and right-of-use assets	-	-	154	121	148	152
Other assets	-	-	359	381	1,236	1,713
Non-current assets and disposal groups classified as held for sale	-	-	-	-	19	202
Liabilities	**20,443**	16,992	**271,567**	250,466	**71,523**	68,897
Deposits from banks	-	-	175,854	137,288	1,661	1,740
Deposits from customers	-	-	61,727	59,747	65,076	63,598
Debt certificates issued including bonds	20,443	16,992	33,674	53,145	-	-
Provisions	-	-	39	19	191	176
Other liabilities	-	-	215	201	1,652	1,488
Subordinated capital	-	-	58	66	2,943	1,895
Liabilities included in disposal groups classified as held for sale	-	-	1	-	-	-

Fair value measurements within Levels 2 and 3

The fair value measurements of assets and liabilities that are not recognized at fair value on the balance sheet largely correspond to the fair value measurements of assets and liabilities that are recognized at fair value on the balance sheet.

The following table shows the valuation techniques and the unobservable inputs used in these techniques for the fair value measurements at Level 3 of the fair value hierarchy as at the balance sheet date.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs
Loans and advances to banks	Loans	4,093	DCF method	Credit spread, recovery rate
Loans and advances to customers	Building loans	55,517	Amortized cost	-
	Loans	92,103	DCF method	Credit spread, recovery rate, internal spread
Investments	ABSs	94	DCF method	Credit spread
	Bonds with adjustment spread	299	DCF method	BVAL price adjustment
Investments held by insurance companies		160	Cost	Nominal amounts
	Investment property	5,018	DCF method	Future rent, reference prices in the market
	Loans and bank accounts	13,848	DCF method	Yield curves, credit spread
	Loans	65	Cost	Nominal amounts
Property, plant and equipment	Investment property	148	Valuation reports	-
Other assets	Credit balances with banks	356	Cost	Nominal amounts
	Other receivables	880	Cost	Nominal amounts
Non-current assets and disposal groups classified as held for sale	Loans	4	DCF method	Credit spread
	Property, plant and equipment, investment property, and right-of-use assets	15	Cost	Nominal amounts
Deposits from banks	Home savings deposits	1,576	Cost	-
	Loans	85	DCF method	Credit spread
Deposits from customers	Home savings deposits	64,673	Cost	-
	Loans	365	DCF method	Credit spread
	Overpayments on consumer finance loans	15	Cost	-
	Other deposits	23	Cost	-
Provisions	Provisions for loan commitments	191	Settlement amount	-
Other liabilities	Bonds with adjustment spread	68	DCF method	Credit spread
	Loans	605	Cost	Nominal amounts
	Non-controlling interests in special funds	153	Cost	Nominal amounts
	Subordinated liabilities	14	DCF method	Yield curves, credit spread
	Registered securities	31	Cost	Nominal amounts
	Other payables	141	Cost	Nominal amounts
	Liabilities arising from rented software	6	Carrying amount	Assumptions regarding the exercise of extension or termination options
	Liabilities from capitalization transactions	634	Cost	Nominal amounts
Subordinated capital	Bonds with adjustment spread	2,943	DCF method	Credit spread

The following table shows the valuation techniques and the unobservable inputs used in these techniques for the fair value measurements at Level 3 of the fair value hierarchy as at December 31, 2019.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs
Loans and advances to banks	Loans	4,586	DCF method	Credit spread, recovery rate
Loans and advances to customers	Building loans	50,209	Amortized cost	-
	Loans	92,534	DCF method	Credit spread, recovery rate, internal spread
Investments	ABSs	108	DCF method	Credit spread
	Bonds with adjustment spread	289	DCF method	BVAL price adjustment
Investments held by insurance companies		111	Cost	Nominal amounts
	Investment property	4,490	DCF method	Future rent, reference prices in the market
	Loans and bank accounts	11,482	DCF method	Yield curves, credit spread
	Loans	51	Cost	Nominal amounts
Property, plant and equipment	Investment property	152	Valuation reports	-
Other assets	Credit balances with banks	825	Cost	Nominal amounts
	Other receivables	888	Cost	Nominal amounts
Non-current assets and disposal groups classified as held for sale	Loans	198	DCF method	Credit spread
	Property, plant and equipment, and investment property	4	Cost	Nominal amounts
Deposits from banks	Home savings deposits	1,653	Cost	-
	Loans	87	DCF method	Credit spread
Deposits from customers	Home savings deposits	63,222	Cost	-
	Loans	358	DCF method	Credit spread
	Overpayments on consumer finance loans	18	Cost	-
Provisions	Provisions for loan commitments	176	Settlement amount	-
Other liabilities	Loans	542	Cost	Nominal amounts
	Non-controlling interests in special funds	153	Cost	Nominal amounts
	Subordinated liabilities	73	DCF method	Yield curves, credit spread
	Registered securities	31	Cost	Nominal amounts
	Other payables	169	Cost	Nominal amounts
	Liabilities arising from rented software	6	Carrying amount	Assumptions regarding the exercise of extension or termination options
	Liabilities from capitalization transactions	514	Cost	Nominal amounts
Subordinated capital	Bonds with adjustment spread	1,895	DCF method	Credit spread

>> 78 Financial liabilities designated as at fair value through profit or loss

A residual value method is used to determine changes in fair value attributable to changes in the DZ BANK Group's own credit risk. In this method, the measurement effect caused by changes in own credit risk is determined by deducting the measurement effect caused by factors other than the change in own credit risk from the overall change in fair value. The cumulative changes in fair value resulting from changes in own credit risk amounted to a loss of €109 million in 2020 (2019: loss of €56 million). The use of this method ensures that the changes in fair value attributable to changes in own credit risk are not distorted by other effects caused by changes in market risk.

The following overview compares fair values with the amounts contractually required to be paid at maturity to the creditors concerned for liabilities designated as at fair value through profit or loss, but whose changes in fair value attributable to own credit risk are reported in other comprehensive income:

€ million	Fair value		Repayment amount	
	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Deposits from banks	4,564	5,060	4,441	4,962
Deposits from customers	9,511	10,114	8,965	9,555
Debt certificates issued including bonds	17,589	15,647	17,161	15,383
Subordinated capital	239	347	230	332
Total	**31,903**	**31,168**	**30,797**	**30,232**

In the course of the year under review, a loss of €8 million was reclassified to retained earnings within equity as a result of the recognition of measurement effects in connection with changes in the DZ BANK Group's own credit risk. Only a negligible loss had been reclassified in the previous year.

The derecognition of financial liabilities gave rise to a loss of €3 million that had previously been reported in other comprehensive income/loss (2019: loss of €9 million (amount restated; see note 2)).

>> 79 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities reference standard master agreements, such as ISDA Master Agreements and German Master Agreements for Financial Futures. However, these standard master agreements do not generally satisfy the offsetting criteria in IAS 32.42 because the legal right to set off the amounts under these agreements is contingent on the occurrence of a future event.

The following tables show financial assets that were offset or that were subject to a legally enforceable global netting agreement or a similar arrangement:

AS AT DECEMBER 31, 2020

€ million	Gross amount of financial assets before offsetting	Gross amount of offset financial liabilities	Net amount of financial assets (carrying amount)	Associated amounts not offset on the balance sheet		Net amount
				Financial instruments	Cash collateral received	
Derivatives	49,946	26,358	23,588	15,617	4,267	3,704
Reverse repos/securities borrowing	8,453	-	8,453	8,424	-	29
Total	**58,399**	**26,358**	**32,041**	**24,041**	**4,267**	**3,733**

AS AT DECEMBER 31, 2019

€ million	Gross amount of financial assets before offsetting	Gross amount of offset financial liabilities	Net amount of financial assets (carrying amount)	Associated amounts not offset on the balance sheet		Net amount
				Financial instruments	Cash collateral received	
Derivatives	48,375	27,698	20,677	13,855	4,130	2,692
Reverse repos/securities borrowing	11,920	-	11,920	11,769	-	151
Total	**60,295**	**27,698**	**32,597**	**25,624**	**4,130**	**2,843**

The following tables show financial liabilities that were offset or that were subject to a legally enforceable global netting agreement or a similar arrangement:

AS AT DECEMBER 31, 2020

€ million	Gross amount of financial liabilities before offsetting	Gross amount of offset financial assets	Net amount of financial liabilities (carrying amount)	Associated amounts not offset on the balance sheet		Net amount
				Financial instruments	Cash collateral furnished	
Derivatives	51,892	29,906	21,986	14,633	7,045	308
Repos/securities lending	4,198	-	4,198	4,176	8	14
Other financial instruments	143	143	-	-	-	-
Total	**56,233**	**30,049**	**26,184**	**18,809**	**7,053**	**322**

AS AT DECEMBER 31, 2019

€ million	Gross amount of financial liabilities before offsetting	Gross amount of offset financial assets	Net amount of financial liabilities (carrying amount)	Associated amounts not offset on the balance sheet		Net amount
				Financial instruments	Cash collateral furnished	
Derivatives	50,401	30,543	19,858	13,325	6,343	190
Repos/securities lending	7,050	-	7,050	6,998	-	52
Other financial instruments	77	77	-	-	-	-
Total	**57,528**	**30,620**	**26,908**	**20,323**	**6,343**	**242**

>> 80 Sale and repurchase agreements, securities lending

Transfers of financial assets

In 2020, the only transfers carried out by the DZ BANK Group in which the transferred assets remained on the balance sheet in their entirety were transfers under sale and repurchase agreements (repos), in which the DZ BANK Group was the original seller, and transfers as part of securities lending transactions.

Sale and repurchase agreements

The entities in the DZ BANK Group enter into sale and repurchase agreements using standard banking industry master agreements, notably the Global Master Repurchase Agreement (GMRA) and the master agreement provided by the International Securities Market Association (ISMA). Under these agreements, the buyer of the securities is permitted to make use of the securities without restriction (with no requirement for a prior counterparty default) and return securities of the same type. If the fair value of the securities received or transferred in such transactions increases or decreases, the entity concerned may be required to furnish additional collateral or may demand additional collateral.

As at the balance sheet date, the sale and repurchase agreements entered into by companies in the DZ BANK Group were exclusively genuine sale and repurchase agreements, i.e. the buyer is obliged to sell back the securities.

Sale and repurchase agreements in which DZ BANK acts as a seller (repos)

Under sale and repurchase agreements, bonds and other fixed-income securities classified as financial assets measured at fair value and financial assets measured at amortized cost are temporarily transferred to another party. As at the balance sheet date, the carrying amounts of securities subject to such sale and repurchase agreements were:

€ million	Dec. 31, 2020	Dec. 31, 2019
FINANCIAL ASSETS MEASURED AT FAIR VALUE	**544**	959
Financial assets measured at fair value through profit or loss	**400**	959
Financial assets mandatorily measured at fair value through profit or loss	***400***	*945*
Financial assets held for trading	400	945
Financial assets designated as at fair value through profit or loss	***-***	*14*
Investments	-	14
Financial assets measured at fair value through other comprehensive income	**144**	-
Financial assets mandatorily measured at fair value through other comprehensive income	***52***	-
Investments	52	-
Financial assets designated as at fair value through other comprehensive income	***92***	-
Investments	92	-
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**1,266**	966
Investments	1,266	966
Total	**1,810**	**1,925**

As at the balance sheet date, additional collateral with a carrying amount of €70 million had been furnished in connection with repos (December 31, 2019: €127 million). This collateral is recognized under financial assets held for trading and may be sold or repledged by the recipient even if the provider is not in default.

The carrying amounts of liabilities arising from sale and repurchase agreements were as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
LIABILITIES ASSOCIATED WITH FINANCIAL ASSETS MEASURED AT FAIR VALUE	**538**	956
Liabilities associated with financial assets measured at fair value through profit or loss	**400**	956
Liabilities associated with financial assets mandatorily measured at fair value through profit or loss	***400***	*942*
Liabilities associated with financial assets held for trading	400	942
Liabilities associated with financial assets designated as at fair value through profit or loss	**-**	*14*
Liabilities associated with investments	-	14
Liabilities associated with financial assets measured at fair value through other comprehensive income	**138**	-
Liabilities associated with financial assets mandatorily measured at fair value through other comprehensive income	***45***	-
Liabilities associated with investments	45	-
Liabilities associated with financial assets designated as at fair value through other comprehensive income	***93***	-
Liabilities associated with investments	93	-
LIABILITIES ASSOCIATED WITH FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**1,273**	967
Liabilities associated with investments	1,273	967
Total	**1,811**	**1,923**

Sale and repurchase agreements in which DZ BANK acts as the buyer (reverse repos)

In reverse repo transactions, bonds and other fixed-income securities are bought on a temporary basis. As at December 31, 2020, the fair value of securities involved in such transactions was €8,585 million (December 31, 2019: €11,754 million).

The receivables arising from these reverse repo transactions and reported under financial assets held for trading and under investments amounted to €8,580 million as at the balance sheet date (December 31, 2019: €11,687 million). As part of the collateral management requirements, the original seller provides the DZ BANK Group with additional collateral for reverse repo transactions in which the fair value of the securities purchased is less than the amounts receivable from the seller.

Securities lending

Securities lending transactions are undertaken on the basis of the Global Master Securities Lending Agreement (GMSLA) or on the basis of individual contractual arrangements. Under these agreements, the borrower of the securities is permitted to make use of the securities without restriction and return securities of the same type. If the fair value of the securities received or transferred in such transactions increases or decreases, the entity concerned may be required to furnish additional collateral or may demand additional collateral.

Securities lending

In securities lending transactions, shares and other variable-yield securities and/or bonds and other fixed-income securities classified as financial assets measured at fair value and financial assets measured at amortized cost are temporarily transferred to another party. As at the balance sheet date, the carrying amounts of securities lent under securities lending arrangements were as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
FINANCIAL ASSETS MEASURED AT FAIR VALUE	**2,336**	3,049
Financial assets measured at fair value through profit or loss	**897**	614
Financial assets mandatorily measured at fair value through profit or loss	***897***	*614*
Financial assets held for trading	897	614
Financial assets measured at fair value through other comprehensive income	**1,439**	2,435
Financial assets mandatorily measured at fair value through other comprehensive income	***1,439***	*2,084*
Investments held by insurance companies	1,439	2,084
Financial assets designated as at fair value through other comprehensive income	-	*351*
Investments held by insurance companies	-	351
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**3**	-
Investments held by insurance companies	3	-
Total	**2,339**	**3,049**

Collateral is provided or received as part of collateral management arrangements in connection with financial assets held for trading and investments held by insurance companies that are lent under securities lending agreements. In this process, all positions with the counterparty concerned are netted to determine the collateral to be provided or received.

As at the balance sheet date, additional collateral with a carrying amount of €19 million had been furnished in connection with securities lending (December 31, 2019: €6 million). This collateral is recognized under financial assets held for trading and may be sold or repledged by the recipient even if the provider is not in default.

Securities borrowing

The fair value of borrowed securities as at the balance sheet date was as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
Bonds and other fixed-income securities	1,916	1,955
Shares and other variable-yield securities	27	26
Total	**1,943**	**1,981**

In addition to securities subject to sale and repurchase agreements or that have been borrowed, bonds and other fixed-income securities and shares and other variable-yield securities are accepted as additional collateral. These may be sold or repledged as collateral by the recipient, even if there is no default. As at December 31, 2020, the fair value of the additional collateral received was €36 million (December 31, 2019: €75 million).

Securities subject to a sale and repurchase or lending agreement that the recipient may sell or repledge as collateral with no requirement for a prior counterparty default

All securities transferred to another party by entities in the DZ BANK Group under sale and repurchase agreements or securities lending agreements may be sold or repledged as collateral by the recipient without restriction.

The carrying amounts of the individual balance sheet items concerned are as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
Financial assets held for trading	1,297	1,559
Investments	1,410	980
Investments held by insurance companies	1,442	2,435
Total	**4,149**	**4,974**

>> 81 Collateral

The breakdown of the carrying amount of financial assets pledged as collateral for liabilities is as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
Loans and advances to banks	65,692	57,278[1]
Loans and advances to customers	247	202[1]
Financial assets held for trading	14,811	12,677
Investments	14,851	11
Investments held by insurance companies	1,311	1,099
Total	**96,912**	**71,267**

1 Amount restated (see note 2).

Of the total financial assets pledged as collateral for liabilities, financial assets held for trading and investments with a carrying amount of €5,229 million (December 31, 2019: €4,667 million) may be sold or repledged as collateral by the recipient, even if the relevant entity in the DZ BANK Group is not in default.

Funds received from German federal and state development banks that are to be specifically used for the purposes of development program loans are mainly passed on to affiliated banks. The corresponding loans and advances to affiliated banks serve as collateral with the German federal and state development banks.

The loans and advances to customers pledged as collateral predominantly consist of building loans issued as part of KfW development program loans. The amounts due to Germany's KfW development bank are secured by assigning to KfW the receivables arising from the forwarding of the development loans together with the collateral furnished by the borrowers.

Securities and money market placements recognized as financial assets held for trading are pledged as collateral for exchange-traded forward transactions, non-exchange-traded derivatives and for forward forex transactions. These arrangements are governed by standard industry collateral agreements.

The investments pledged as collateral comprise securities furnished as collateral for open-market operations with Deutsche Bundesbank.

The investments held by insurance companies are predominantly securities pledged as collateral as part of the reinsurance business; this collateral may only be sold or pledged by the recipient in the event of default by the provider.

>> 82 Items of income, expense, gains, and losses

Net gains and losses

The breakdown of net gains or net losses on financial instruments by IFRS 9 category for financial assets and financial liabilities is as follows:

€ million	2020	2019
Financial instruments measured at fair value through profit or loss	**1,378**	3,159
Financial instruments mandatorily measured at fair value through profit or loss	1,327	3,172
Financial instruments designated as at fair value through profit or loss	51	-13
Financial assets measured at fair value through other comprehensive income	**3,573**	4,673
Financial assets mandatorily measured at fair value through other comprehensive income	3,517	4,005
of which gains and losses recognized in profit or loss	1,878	1,869
of which gains and losses recognized in other comprehensive income	1,391	1,918[1]
of which gains and losses reclassified on derecognition from cumulative other comprehensive income to profit or loss	248	218
Financial assets designated as at fair value through other comprehensive income	56	668[1]
Financial assets measured at amortized cost	**4,438**	5,510
Financial liabilities measured at amortized cost	**-2,247**	-3,135

1 Amount restated (see note 2).

Net gains or net losses comprise gains and losses on fair value measurement, impairment losses and reversals of impairment losses, and gains and losses on the sale or early repayment of the financial instruments concerned. These items also include interest income and interest expense, current income, income from profit-pooling, profit-transfer agreements, partial profit-transfer agreements, and expenses from the transfer of losses.

In connection with financial liabilities designated as at fair value through profit or loss, a loss of €60 million (2019: loss of €96 million) was recognized in other comprehensive income/loss and a loss of €475 million (2019: loss of €849 million) in profit or loss, which predominantly related to interest expense.

Interest income and expense

The following total interest income and expense arose in connection with financial assets and financial liabilities that are not measured at fair value through profit or loss:

€ million	2020	2019
Interest income	**6,419**	7,248
From financial assets measured at amortized cost including finance leases	5,121	5,868
From financial assets measured at fair value through other comprehensive income	1,298	1,380
Interest expense	**-2,251**	-3,139

Fee and commission income and expenses

The table below shows the changes in fee and commission income and expenses:

€ million	2020	2019
Fee and commission income		
From financial assets and financial liabilities not at fair value through profit or loss	169	178
From trust and other fiduciary activities	3,618	3,308
Fee and commission expenses		
For financial assets and financial liabilities not at fair value through profit or loss	-240	-251
For trust and other fiduciary activities	-1,647	-1,528

>> 83 Derivatives

Derivatives are used primarily to hedge against market risk as well as for trading purposes. As at the balance sheet date, the breakdown of the portfolio of derivatives was as follows:

	Nominal amount					Fair value			
	Time to maturity			Total amount		Positive		Negative	
€ million	≤ 1 year	> 1 year – 5 years	> 5 years	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
INTEREST-LINKED CONTRACTS	169,885	391,020	549,435	1,110,340	1,027,509	20,043	17,508	19,142	17,074
OTC products									
Forward rate agreements	22,515	-	-	22,515	5,624	-	-	-	-
Interest-rate swaps	127,413	350,800	520,287	998,500	927,952	17,973	15,457	15,850	14,133
Interest-rate options – bought	7,273	18,112	13,374	38,758	40,881	1,462	1,531	77	105
Interest-rate options – written	7,686	21,710	15,774	45,170	48,581	235	293	3,214	2,836
Other interest-rate contracts	1,230	61	-	1,291	1,503	374	227	1	-
Exchange-traded products									
Interest-rate futures	3,768	338	-	4,105	2,968	-	-	-	-
CURRENCY-LINKED CONTRACTS	91,786	26,201	8,610	126,597	151,659	1,891	1,326	1,822	1,785
OTC products									
Cross-currency swaps (excl. portfolio hedging)	6,430	17,741	8,544	32,714	40,484	653	321	666	928
Forward forex transactions	68,793	6,832	32	75,657	101,937	1,024	963	1,003	808
Forex options – bought	7,813	331	-	8,144	3,601	68	8	42	16
Forex options – written	8,540	1,297	8	9,845	5,313	146	33	106	25
Exchange-traded products									
Forex futures	138	-	-	138	132	-	-	-	-
Forex options	73	-	27	100	192	-	1	4	8
SHARE-/INDEX-LINKED CONTRACTS	16,859	13,051	2,553	32,464	33,496	744	671	1,553	1,188
OTC products									
Share/index options – bought	3,259	42	8	3,309	3,162	29	122	-	-
Share/index options – written	124	195	-	319	339	-	-	18	10
Other share/index contracts	477	3,567	2,052	6,096	6,497	56	66	378	208
Exchange-traded products									
Share/index futures	1,906	109	-	2,016	1,019	-	-	-	-
Share/index options	11,093	9,138	493	20,724	22,479	660	483	1,157	970
OTHER CONTRACTS	2,927	3,013	11,159	17,099	17,043	1	30	188	105
OTC products									
Commodities contracts	9	-	-	9	26	-	-	1	-
Other contracts	2,714	3,010	11,146	16,870	16,636	-	28	180	97
Exchange-traded products									
Futures	107	1	-	108	120	-	-	-	-
Options	96	3	13	112	261	1	2	7	8
CREDIT DERIVATIVES	2,394	10,157	4,923	17,474	17,587	337	374	94	75
Protection buyer									
Credit default swaps	523	2,562	282	3,366	3,205	6	1	63	72
Protection seller									
Credit default swaps	1,871	7,563	4,635	14,069	14,334	331	373	28	3
Total return swaps	-	32	6	38	48	-	-	3	-
Total	283,851	443,444	576,679	1,303,973	1,247,294	23,017	19,909	22,799	20,227

The derivatives held at the balance sheet date involved the following counterparties:

	Fair value			
	Positive		Negative	
€ million	**Dec. 31, 2020**	Dec. 31, 2019	**Dec. 31, 2020**	Dec. 31, 2019
OECD central governments	60	63	13	19
OECD banks	19,290	16,636	18,897	17,247
OECD financial services institutions	392	258	917	680
Other companies, private individuals	3,218	2,946	2,862	2,152
Non-OECD banks	57	6	110	129
Total	**23,017**	**19,909**	**22,799**	**20,227**

The Union Investment Group has capital preservation commitments under section 1 (1) no. 3 of the German Personal Pension Plan Certification Act (AltZertG) amounting to €16,113 million (December 31, 2019: €15,013 million). These commitments are the total amount of the pension contributions paid by investors into the individual variants of the *UniProfiRente* and *UniProfiRente Select* products, which represent the minimum amount that must be made available at the start of the payout phase under statutory provisions, and the guaranteed payout amounts for existing contracts that are already in the portfolio payout phase. The group also has minimum payment commitments of €757 million (December 31, 2019: €1,584 million) in connection with genuine guarantee funds launched by fund management companies in the group.

>> 84 Hedge accounting

Risk management strategy

Fair value hedges are used as part of the risk management strategy to eliminate or reduce accounting mismatches.

Hedged items

Fair value hedges are used in the hedging of interest-rate risk. In this context, interest-rate risk refers to the risk of an adverse change in the fair value of fixed-income financial instruments caused by a change in market interest rates. The hedged financial assets are loans and advances to banks, loans and advances to customers, and investments that are categorized as ‘financial assets measured at amortized cost’ or ‘financial assets measured at fair value through other comprehensive income’. Hedged financial liabilities are deposits from banks and customers, debt certificates issued including bonds, and subordinated liabilities, all of which are measured at amortized cost. Interest-rate risk portfolios under both assets and liabilities are identified and designated as hedged items in portfolio hedges.

Hedging instruments

Swaps and swaptions are designated as hedging instruments in fair value hedges of financial assets and financial liabilities. In the DZ BANK Group, hedging instruments are reported under hedging instruments (positive fair values) and hedging instruments (negative fair values).

Assessment of hedge effectiveness

The prerequisite for recognizing a hedge is that the hedge must be highly effective on both a prospective and retrospective basis. Highly effective in this case means that the changes in fair value or expected cash flows for the hedged items must be almost fully offset by the changes in fair value or expected cash flows for the hedging instruments. In the case of the individual hedges entered into by the DZ BANK Group, this is achieved by ensuring that the main features of hedged items that influence their value match those of the hedging instruments and that there is a hedging ratio of 100 percent (1:1 hedging). In portfolio hedges, there is no direct economic relationship between hedged item and hedging instrument. An individual hedging ratio based on the sensitivities of the hedged items and hedging instruments is used to ensure that the respective changes in fair value more or less balance each other out. Hedge effectiveness must be assessed and documented at every balance sheet date as a minimum.

For individual hedges accounted for in application of the rules under IFRS 9, any hedge ineffectiveness is quantified retrospectively and recognized in profit or loss. IFRS 9 does not define effectiveness in terms of a mandatory range of values. If a hedge no longer satisfies the effectiveness criterion in relation to the hedge ratio, the hedge ratio must be adjusted (recalibration). If it is no longer possible to adjust the hedge ratio or if the risk management objective for the hedge has changed, the hedge must be de-designated.

Portfolio hedges that continue to be accounted for in application of the rules under IAS 39 are deemed to be highly effective if the changes in the fair value of the hedged items are offset by the changes in the fair value of the hedging instruments within the range of 80 percent to 125 percent specified by IAS 39. If this assessment identifies that a hedge has not achieved the required effectiveness, the hedge must be reversed retrospectively to the balance sheet date of the last assessment in which the hedge was found to be effective.

In the case of fair value hedges, prospective effectiveness is assessed by using sensitivity analyses (based on the basis point value method) and linear regression analyses; it is also assessed qualitatively with the critical-terms-match method. Retrospective effectiveness is assessed primarily by using the dollar offset method, a noise threshold value, and regression analysis. In these methods, the cumulative changes in the fair value of the hedged items attributable to the hedged risk are compared with the changes in the fair value of the hedging instruments.

Gains and losses and hedge ineffectiveness from hedge accounting

In hedge accounting, hedge ineffectiveness arises when the changes in the fair value of hedging instruments do not fully offset the changes in the fair value of the hedged items. The ineffective portions of hedges are recognized in profit or loss under other gains and losses on valuation of financial instruments.

Hedge ineffectiveness can arise in fair value hedges of interest-rate risk. Some of the ways in which this can occur are where the changes in the fair values of hedged items and hedging instruments do not balance each other out in full because of differences in maturities, cash flows, and/or discount rates.

Extent of risks managed by the use of hedges

The table below presents information on the volume of hedged items and hedging instruments designated as hedges for the purposes of hedging interest-rate risk:

AS AT DECEMBER 31, 2020

€ million	Carrying amount	Nominal amount of hedging instruments	Fair value hedge adjustments included in carrying amount of hedged items		Fair value changes as basis for measuring hedge ineffectiveness for the period
			Existing hedges	Terminated hedges	
Assets	**53,390**	**8,628**	**2,079**	**917**	**1,552**
Loans and advances to banks	41		-	-	-1
Loans and advances to customers	1,855		176	80	105
Investments	2,485		71	30	14
Non-current assets and disposal groups classified as held for sale	4		-	-	-
Portfolio hedges of interest-rate risk	48,844		1,832	807	1,429
Hedging instruments (positive fair values)	161	8,628			5
Liabilities	**10,622**	**51,769**	**264**	**324**	**-1,511**
Deposits from banks	509		22	10	-4
Deposits from customers	3,351		171	14	31
Debt certificates issued including bonds	371		49	7	-10
Subordinated capital	10		-	-	-
Portfolio hedges of interest-rate risk	3,743		22	293	-122
Hedging instruments (negative fair values)	2,638	51,769			-1,406

AS AT DECEMBER 31, 2019

€ million	Carrying amount	Nominal amount of hedging instruments	Fair value hedge adjustments included in carrying amount of hedged items		Fair value changes as basis for measuring hedge ineffectiveness for the period
			Existing hedges	Terminated hedges	
Assets	**50,367**	**12,511**	**1,378**	**526**	**1,027**
Loans and advances to banks	55		1	-	-1
Loans and advances to customers	1,526		74	85	219
Investments	2,875		59	32	30
Non-current assets and disposal groups classified as held for sale	197		-	-	11
Portfolio hedges of interest-rate risk	45,503		1,244	409	1,382
Hedging instruments (positive fair values)	211[1]	12,511			-614
Liabilities	**11,309**	**45,802**	**247**	**277**	**-1,029**
Deposits from banks	615		16	7	-26
Deposits from customers	3,828		222	21	-50
Debt certificates issued including bonds	368		13	9	-9
Subordinated capital	9		-	-	-
Portfolio hedges of interest-rate risk	4,471		-4	240	-114
Hedging instruments (negative fair values)	2,018[1]	45,802			-830

1 Amount restated (see note 2).

Effects of hedging instruments on cash flows

The residual maturities of the hedging instruments entered into by the DZ BANK Group to hedge interest-rate risk are as follows:

AS AT DECEMBER 31, 2020

	≤ 1 month	> 1 month – 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years
Nominal amount (€ million)	170	354	3,567	28,913	27,391
Average hedged interest rate (%)	1.42	1.48	1.48	0.81	1.24

AS AT DECEMBER 31, 2019

	≤ 1 month	> 1 month – 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years
Nominal amount (€ million)	72	192	5,892	25,003	27,154
Average hedged interest rate (%)	1.94	1.70	1.88	1.14	1.19

Reconciliation of hedge accounting effects to equity components by type of risk

The following table shows a reconciliation of the effects from hedge accounting to corresponding components of equity. The relevant effects were those from hedges of net investments in foreign operations. These types of hedge were used only in connection with hedging the exposure to currency risk.

€ million	2020	2019
Reserve from hedges of net investments in foreign operations as at Jan. 1	-7	-13
Gains (+)/losses (-) arising during the reporting period	4	3
Income taxes	-1	3
Reserve from hedges of net investments in foreign operations as at Dec. 31	**-4**	**-7**

As at the reporting date, there were no hedges of net investments in foreign operations. The relevant reserves resulted solely from hedges that have expired.

Uncertainties resulting from the reform of interest-rate benchmarks

The entities in the DZ BANK Group that are affected by the reform of interest-rate benchmarks set up projects to ensure a smooth transition to alternative interest-rate benchmarks. During these projects, they assessed the extent to which fair value hedges of financial instruments were subject to uncertainties as a result of the IBOR reform. Hedges may be exposed to ineffectiveness that is attributable to market participants' expectations when the transition from the existing IBOR rate to an alternative interest-rate benchmark takes place. This transition takes place unilaterally for the hedging instrument and not for the (fixed-rate) hedged item, which may result in hedge ineffectiveness.

Some of the hedging instruments of the entities in the DZ BANK Group continue to be linked to Libor. They are due to mature after the likely date on which Libor will cease to apply. The current assumption is that the change of interest-rate benchmark will not lead to dedesignation of existing hedges.

The Libor-related risk attaching to the hedges can be seen from the nominal amounts of the hedging instruments shown below:

AS AT DECEMBER 31, 2020

	CHF Libor 3M	CHF Libor 6M	USD Libor 1M	USD Libor 3M	USD Libor 6M
Nominal amount (€ million)	185	10	954	4,558	19
Weighted average maturity (years)	1.5	7.0	2.4	5.4	3.8

>> 85 Nature and extent of risks arising from financial instruments and insurance contracts

With the exception of the qualitative and quantitative disclosures pursuant to IFRS 7.35F(a)-36(b), the disclosures on the nature and extent of risks arising from financial instruments (IFRS 7.31-42) and insurance contracts (IFRS 4.38-39A) are included in the opportunity and risk report within the group management report. The disclosures pursuant to IFRS 7.35F(a)-36(b) can be found in this note in the notes to the consolidated financial statements. Disclosures on the maturity analysis in accordance with IFRS 7.39(a) and (b) and IFRS 4.39(d)(i), together with disclosures on the claims rate trend for direct non-life insurance business and for the inward reinsurance business in accordance with IFRS 4.39(c)(iii), can be found within the notes to the consolidated financial statements in notes 42 and 86.

Credit risk management practices

The rules for recognizing loss allowances are based on the calculation of expected losses in the lending business, on investments, on investments held by insurance companies, and on other assets. The impairment rules are applied only to those financial assets that are not measured at fair value through profit or loss. These are:

- Financial assets measured at amortized cost and
- Debt instruments held as financial assets measured at fair value through other comprehensive income.

The impairment rules are also applied to:

- Financial guarantee contracts and loan commitments that fall within the scope of IFRS 9 and are not recognized at fair value through profit or loss,
- Lease receivables, and
- Trade receivables and contract assets pursuant to IFRS 15.

In accordance with IFRS 9, the three-stage approach is used, additionally taking POCI assets into account, to determine the expected losses:

- Stage 1: For financial assets whose credit risk has not increased significantly since initial recognition that were not impaired upon initial recognition, the 12-month credit loss is recognized. Interest is recognized on the basis of the gross carrying amount.
- Stage 2: For financial assets whose credit risk has increased significantly since initial recognition, the loss allowances are determined in the amount of the assets' lifetime expected credit losses. Interest is recognized on the basis of the gross carrying amount.
- Stage 3: Financial assets are classified as impaired if they are deemed to be in default pursuant to article 178 of the Capital Requirements Regulation (CRR) as operationalized in the DZ BANK Group's definition of default. Here too, loss allowances are recognized in the amount of the lifetime expected credit losses. Interest income is calculated on the amortized cost after loss allowances using the effective interest method.
- POCI assets: Financial assets that are already deemed impaired upon initial recognition are not assigned to the 3-stage model and are reported separately. Credit-impaired financial assets are initially recognized at fair value rather than at their gross carrying amount. Consequently, interest is recognized for these assets using a risk-adjusted effective interest rate.

The review of whether the credit risk of financial assets, financial guarantee contracts, and loan commitments has increased significantly since initial recognition is carried out on an ongoing basis. The assessment is conducted both for individual financial assets and for portfolios of assets using quantitative and qualitative analysis. As a rule, quantitative analysis looks at the expected credit risk over the entire residual life of the financial instruments in question. Macroeconomic information is also factored in by transferring these inputs to shift factors for determining the default probability. To this end, the credit risk as at the balance sheet date for the residual life is compared with the assets' credit risk over the same maturity period estimated at the time of initial recognition. The thresholds that indicate a significant increase in credit risk are determined for each portfolio separately relative to the portfolio's past migrations of default probability. Internal risk measurement systems, external credit ratings, and risk forecasts are also used to assess the credit risk of financial assets. This test is extended to look at qualitative criteria that increase credit risk. Furthermore, allocation to stage 2 is generally assumed no later than when payments become more than 30 days past due. Depending on the business line, this criterion has been defined as an additional backstop. As a rule, however, the other transfer criteria mean that financial assets are allocated to stage 2 well before payments become more than 30 days past due.

Securities with low credit risk are not tested to ascertain whether credit risk has increased significantly. Investment-grade securities are thus assigned to stage 1. This exemption does not apply to loans and receivables.

If, on the balance sheet date, it is found that there is no longer a significant increase in credit risk compared with previous balance sheet dates, the financial assets in question are transferred back to stage 1 and the loss allowances are brought back down to the level of the 12-month expected credit loss. If a financial instrument in stage 3 recovers, the difference between the interest income determined for the period of credit impairment on the basis of amortized cost and the actual interest income recognized in respect of the financial instrument for the period concerned is reported as a reversal of an impairment loss or a reversal of loss allowances. In the case of a transfer back from stage 3, the default status (as defined in the regulatory requirements) is only revoked after the necessary cure period, which is thereby taken into account in the transfer criterion.

Expected losses are calculated as the probability-weighted present value of the expected defaults over the estimated lifetime from default events within the next 12 months for assets assigned to stage 1 of the impairment model and from default events over the entire residual life for assets assigned to stage 2. The expected losses are discounted with their original effective interest rate. This calculation uses the regulatory model (probability of default, loss given default, and expected loan amount at the time of default), with adjustments to satisfy the requirements of IFRS 9. The estimated probability of default incorporates both historical and forward-looking default information. This is applied when loss allowances are determined, in the form of shifts in the default probabilities calculated using statistical methods (known as shift factors). Depending on the portfolio, the calculation of the expected loss for specific exposures in stage 3 also uses this type of parameter-based approach or draws on individual expert appraisals of the achievable cash flows and probability-weighted scenarios at individual transaction level.

Loss histories, adjusted to reflect forecast future defaults, serve as the basis for determining expected losses. Two macroeconomic scenarios based on empirical estimates are factored in. These scenarios specifically look at future trends in the labor market, interest rates in the money market, changes in gross domestic product, inflation, and real estate prices. To ensure that the expected loss is not distorted, the DZ BANK Group uses a number of scenarios when determining the risk parameters, which are then factored into the level of the loss allowance with a probability weighting. The methods and assumptions, including the forecasts, are validated regularly.

For the purpose of calculating loss allowances for portfolios, the portfolios are grouped according to shared credit risk characteristics, e.g. credit rating, date of origination, residual life, industry and origin of the borrower, and type of asset.

Directly recognized impairment losses reduce the carrying amounts of assets directly. Unlike loss allowances, which are estimates, directly recognized impairment losses are specified in an exact amount if this is justified because the receivable is not collectible (e.g. as a result of the notification of an insolvency ratio). Impairment losses can be recognized directly by writing down the asset value and/or by using existing loss allowances. As a rule, asset values are written down directly after all recovery and enforcement measures have been completed. Directly recognized impairment losses are also applied to insignificant amounts.

Impact of COVID-19

During the COVID-19 pandemic, the established models and processes for calculating expected losses in accordance with IFRS 9 have generally been retained.

Current economic conditions against the backdrop of COVID-19 are mainly taken into consideration by updating the shift factors. For the portfolio segments affected by the pandemic, the shift factors determined using statistical methods were overridden in consultation with experts because of the extreme macroeconomic changes, which have not been seen on this scale before, and because of the extensive government support measures. This ensures that the shift factors used are in line both with experts' expectations and with the forecast changes in macroeconomic factors for the calculation of expected losses.

The expected macroeconomic conditions are thus taken into account, primarily by adjusting the model-based default probability profiles used in economic and regulatory risk management (known as shift factors). The shift factors are used to include current economic conditions (known as a point-in-time focus) and forecasts of future economic conditions for the years covered by the macroeconomic forecast period in the determination of loss allowances. These shift factors are derived from macroeconomic inputs for various levels of default probability using stress test models that already existed or that were developed for IFRS 9. The basis for the shift factors applied as at the balance sheet date are the macroeconomic forecasts provided by the Economic Roundtable in November 2020. As at the balance sheet date, two macroeconomic scenarios (baseline scenario and risk scenario) were taken into account with a weighting of 80 percent (baseline scenario) and 20 percent (risk scenario). The baseline scenario was given a higher weighting in light of the progress that has been made with the development of vaccines.

The baseline scenario is based on the assumption of a further recession in the winter months of 2020/2021 that will give way to an increasingly rapid recovery over the course of 2021. This presupposes that, as has happened, an effective vaccine is developed very quickly and can be rolled out on a broad basis in 2021. The resulting rebound of consumer spending, capital expenditure, and foreign trade will continue to fuel strong growth in 2022 before national economies then return to their trend growth rates. The baseline scenario, with a weighting of 80 percent, reflects the forecasts of the Economic Roundtable in November 2020, which are almost identical to the ECB scenarios from December 2020.

The risk scenario is based on the assumption that significant problems arise with the vaccines that have been developed, thus casting doubt on their effectiveness. Such problems might include unforeseen side-effects from the vaccines or new mutations of the virus against which the available vaccines are not effective. This will result in a 'disappointment shock' for the economy and consumers in 2021 and will significantly hold back the recovery of the economy as a whole. In this scenario, sharp rises in unemployment and huge falls in income make it unlikely that the economy will bounce back in 2021 and 2022. Instead, the economy will probably recover gradually over a period of several years. This scenario will also see further sharp rises in indebtedness.

The main macroeconomic forecasts for 2020 to 2024 used to calculate the expected loss as at the balance sheet date were as follows.

		2020		2021		2022		2023		2024	
		Baseline	Risk	Baseline	Risk	Baseline	Risk	Baseline	Risk	Baseline	Risk
DAX 30, Germany	Index	13,400	13,400	13,800	11,390	14,210	11,960	14,640	12,320	14,930	12,690
EURO STOXX 50, EU	Index	3,400	3,400	3,500	2,890	3,600	3,040	3,700	3,130	3,770	3,220
Unemployment rate, Germany	%	6.00	6.00	7.00	7.25	6.50	7.25	6.00	7.00	5.50	6.75
Harmonized unemployment rates, EU	%	7.25	7.25	8.50	8.75	8.00	9.25	7.50	9.00	7.25	8.75
Real GDP growth, Germany (seasonally and calendar-adjusted)	Compared with prior year (%)	-5.00	-5.00	3.00	1.00	4.50	1.25	1.75	1.50	1.25	2.00
Real GDP growth, EU (seasonally and calendar-adjusted)	Compared with prior year (%)	-8.00	-8.00	3.50	0.50	5.00	1.25	2.00	1.50	1.25	2.50

The need to override the shift factors was evaluated in consultation with experts. Different group entities are responsible for this task depending on the shift segment, which constitutes the aggregation of the rating segments. The need to override the shift factors for the shift segments particularly affected by the COVID-19 pandemic was ascertained in groupwide consultation because the models cannot fully take account of government support measures or the current market situation.

In the second half of the year, the methodology for the process of overriding the model shift factors was adjusted again at group level. The override process was implemented in 3 steps for the segments in the group:

Evaluation of the need to override the shift factors

The first step is to evaluate the general need to override the shift factors in light of the current macroeconomic situation and the existing model shift factors. The override is carried out only if actually needed.

1-year shift factor override at sectoral level

Based on the evaluation of need, the initial task is to review the shift factors for the first year. This involves using exposure weighting to translate the shift factors from the shift segment level to sectoral level so that they can be evaluated at this level. The degree to which the sector is affected by COVID-19 is then taken into account on the basis of a 4-stage assessment by the center of excellence for the sector. The resulting point-in-time probability of default (PD) of the individual sectors is then critically examined again by the experts from the center of excellence for the sector and, if necessary, adjusted to achieve plausible point-in-time PDs. The final step is to translate the PDs back into sectoral shift factors and use exposure weighting to determine the resulting segment shift factors for the production systems.

2 to 4-year shift factor determination

In the last step, the shift factors for subsequent years 2 to 4 (2022 to 2024) are determined. The new shift factor for year 1 (after the override, if applicable) is used as the starting value. The original model shift factor is used as the target value for the cumulative shift factor after 4 years. For some segments, this cumulative model shift was adjusted in consultation with experts in order to reflect the latest macroeconomic outlook. Once these starting and target values have been determined, the cumulative shift factors for years 2 and 3 are calculated using interpolation based on the percentage change in a suitable macroeconomic factor (e.g. Germany’s gross domestic product). In year 5 (2025), a return to the original, unadjusted rating level is assumed and no further adjustments will be made in subsequent years.

Furthermore, the crisis led to qualitative stage 2 transfers being carried out at sectoral level for the first time as at December 31, 2020. These affected commercial real estate finance transactions in which the main asset is in the hotel or department store sector.

To mitigate the impact of COVID-19, borrowers and the entities in the DZ BANK Group reached agreement on individual support measures, including the temporary deferral of capital repayments. Besides these individual measures, other measures were taken in the context of legislative and non-legislative moratoria on repayments. In the DZ BANK Group, repayments under consumer loans were deferred due to legislative moratoria in Germany (only until the end of June 2020), Hungary (extended until June 30, 2021), and other countries (on an insignificant scale). Repayments under consumer loans were also deferred due to the moratorium of Verband der Privaten Bausparkassen e.V. [Association of Private Bausparkassen]. Deferrals could be requested until September 30, 2020 for a maximum of 6 months. In accordance with the EBA Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis, the general legislative and non-legislative moratoria are, as a rule, not classified as forbearance measures and therefore do not lead to a forbearance-related transfer between stages within the impairment model. A transfer between stages does take place if other transfer criteria are met. This exemption does not apply to individual support measures.

Government support measures in the form of support loans specifically in connection with the COVID-19 pandemic helped to mitigate the impact of the crisis.

No material deterioration in the value of collateral held in the form of mortgages on real estate is currently observable in connection with the COVID-19 pandemic. The COVID-19 pandemic is particularly affecting real estate in the hotel sector and the non-food segment of the retail sector (e.g. department stores) because they have been hit disproportionately hard as a result of having to close during the lockdowns. The impact of the pandemic on the value of the real estate held as collateral can currently be offset by, for example, low interest rates, low vacancy rates, and a conservative finance structure. Any potential write-down of the value of real estate held as collateral by the DZ BANK Group is monitored on an ongoing basis, taking account of how the pandemic continues to unfold. By contrast, the pandemic has a direct impact on the collateral held in connection with the financing of aircraft and ships. The value of these types of collateral was validated using stress data and market data so that any write-down caused by the pandemic could be determined. These updated collateral values were incorporated into the calculation of loss allowances for expected losses in the reporting period.

The COVID-19 pandemic resulted in transfers between the stages of the impairment model in the case of the gross carrying amounts of the financial instruments in the classes ‘financial assets measured at fair value’, ‘financial assets measured at amortized cost’, and ‘finance leases’ and in the case of the nominal amounts in the class ‘financial guarantee contracts and loan commitments’. The transfers were largely the result of taking account of expected macroeconomic conditions, primarily by adjusting the model-based default probability profiles.

The addition to loss allowances for the classes ‘financial assets measured at fair value’, ‘financial assets measured at amortized cost’, ‘finance leases’, and ‘financial guarantee contracts and loan commitments’ in connection with the COVID-19 pandemic was the result of taking account of expected macroeconomic conditions, primarily by adjusting the model-based default probability profiles. This updating has a direct effect on the probability of default of the financial instruments, which affects both the transfer between stages and the addition to loss allowances within the stages. Loss allowances in stage 3 also went up due to a significant addition that was not solely attributable to the pandemic.

Because of the COVID-19 pandemic, the DZ BANK Group’s credit risk relating to financial instruments increased in the corporates sector (as defined by the Deutsche Bundesbank industry codes). In this sector, finance in the aviation, shipping, hotel, and retail (non-food) segments is deemed a concentration. The DZ BANK Group has not identified a geographical concentration of credit risk attaching to financial instruments as a result of COVID-19.

Loss allowances and gross carrying amounts

In the DZ BANK Group, loss allowances are recognized for the classes ‘financial assets measured at fair value’, ‘financial assets measured at amortized cost’, ‘finance leases’, and ‘financial guarantee contracts and loan commitments’ in the amount of the expected credit losses. Trade receivables and contract assets that fall within the scope of IFRS 15 are assigned to the ‘financial assets measured at amortized cost’ class.

Financial assets measured at fair value

€ million	Stage 1 Loss allowances	Stage 1 Fair value	Stage 2 Loss allowances	Stage 2 Fair value	Stage 3 Loss allowances	Stage 3 Fair value
Balance as at Jan. 1, 2019	8	80,068	3	182	29	25
Addition/increase in loan drawdowns	8	26,216	-	-	-	4
Change to financial assets due to transfer between stages	1	93	-1	-93	-	-
Transfer from stage 2	1	93	-1	-93	-	-
Use of loss allowances/directly recognized impairment losses	-1	-	-	-	-	-
Derecognitions and repayments	-5	-15,375	-	-35	-1	-7
Changes to models/risk parameters	-2	-	-1	-	3	-
Additions	4	-	-	-	3	-
Reversals	-6	-	-1	-	-	-
Amortization, fair value changes, and other changes in measurement	-	4,773	-	5	-	-3
Exchange differences and other changes	-	4	-	-	-	-
Deferred taxes	-	-	-	-	-1	-
Balance as at Dec. 31, 2019	9	95,779	1	59	30	19
Addition/increase in loan drawdowns	4	21,832	-	32	-	-
Change to financial assets due to transfer between stages	1	-641	-1	641	-	-
Transfer from stage 1	-	-759	-	759	-	-
Transfer from stage 2	1	118	-1	-118	-	-
Use of loss allowances/directly recognized impairment losses	-1	-	-	-	-8	-
Derecognitions and repayments	-2	-13,222	-	-45	-	-10
Changes to models/risk parameters	10	-	3	-	-	-
Additions	15	-	5	-	-	-
Reversals	-5	-	-2	-	-	-
Amortization, fair value changes, and other changes in measurement	-	2,546	-	14	-	9
Exchange differences and other changes	-	-78	-	-	-1	-
Deferred taxes	-2	-	-	-	3	-
Balance as at Dec. 31, 2020	**19**	**106,216**	**3**	**701**	**24**	**18**

Financial assets measured at amortized cost

	Stage 1		Stage 2		Stage 3		POCI assets	
€ million	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount
Balance as at Jan. 1, 2019	231	330,226	196	7,864	1,972	4,349	3	22
Addition/increase in loan drawdowns	168	10,429,453	29	20,979	393	1,898	-	14
Change to financial assets due to transfer between stages	128	1,005	-210	-2,041	87	1,036	-	-
Transfer from stage 1	-72	-5,886	64	5,487	8	399	-	-
Transfer from stage 2	184	6,829	-313	-7,818	134	989	-	-
Transfer from stage 3	16	62	39	290	-55	-352	-	-
Use of loss allowances/directly recognized impairment losses	-	-	-1	-	-559	-27	-1	-2
Derecognitions and repayments	-129	-10,411,693	-55	-18,511	-286	-2,866	-1	-31
Changes to models/risk parameters	-180	-	265	-	167	-	-	-
Additions	149	-	422	-	752	-	11	-
Reversals	-329	-	-157	-	-585	-	-11	-
Amortization, fair value changes, and other changes in measurement	-	-83	-	33	-	-277	-	-
Positive change in fair value of POCI assets								27
Exchange differences and other changes	-	-691	-	-95	49	-228	-	1
Balance as at Dec. 31, 2019	218	348,217	224	8,229	1,823	3,885	1	31
Addition/increase in loan drawdowns	180	7,541,364	92	14,385	618	1,989	7	70
Change to financial assets due to transfer between stages	155	-7,833	-254	6,588	103	1,239	-	-
Transfer from stage 1	-71	-12,762	68	12,140	3	622	-	-
Transfer from stage 2	211	4,810	-357	-5,707	146	891	-	-
Transfer from stage 3	15	119	35	155	-46	-274	-	-
Use of loss allowances/directly recognized impairment losses	-	-1	-1	-	-604	-37	-1	-4
Reclassifications to liabilities included in disposal groups classified as held for sale	-	-51	-	-	-	-	-	-
Derecognitions and repayments	-141	-7,511,144	-120	-15,324	-557	-3,013	-11	-56
Changes to models/risk parameters	-122	-	423	-	309	-	4	-
Additions	185	-	656	-	729	-	9	-
Reversals	-307	-	-233	-	-420	-	-5	-
Modifications	-	-6	-1	-2	-	-	-	-
Modification gains	-	-	-1	-	-	-	-	-
Modification losses	-	-6	-	-2	-	-	-	-
Amortization, fair value changes, and other changes in measurement	-	-1,347	-	-92	-	-297	-	-
Positive change in fair value of POCI assets								26
Exchange differences and other changes	-4	-1,559	-4	430	-20	-19	7	2
Changes in scope of consolidation	-	37	-	3	-	-	-	-
Addition of subsidiaries	1	186	-	3	5	5	-	-
Derecognition of subsidiaries	-1	-149	-	-	-5	-5	-	-
Balance as at Dec. 31, 2020	**286**	**367,677**	**359**	**14,217**	**1,672**	**3,747**	**7**	**69**

The undiscounted expected credit losses on purchased or originated credit-impaired assets that were recognized for the first time during the reporting period totaled €99 million (2019: €84 million).

Non-current assets and disposal groups classified as held for sale that were previously recognized as financial assets measured at amortized cost

€ million	Stage 1		Stage 2		Stage 3	
	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount
Balance as at Jan. 1, 2019	5	5,853	-	105	13	40
Addition/increase in loan drawdowns	1	1,334	-	-	-	-
Change to financial assets due to transfer between stages	-1	-194	-1	92	2	102
Transfer from stage 1	-1	-232	1	210	-	22
Transfer from stage 2	-	16	-2	-118	2	102
Transfer from stage 3	-	22	-	-	-	-22
Derecognitions and repayments	-9	-6,785	-4	-206	-24	-138
Changes to models/risk parameters	4	-	5	-	10	-
Additions	6	-	6	-	13	-
Reversals	-2	-	-1	-	-3	-
Amortization, fair value changes, and other changes in measurement	-	21	-	1	-	-
Exchange differences and other changes	-	133	-	11	2	3
Changes in scope of consolidation	-	-168	-	-3	-	-
Balance as at Dec. 31, 2019	-	194	-	-	3	7
Addition/increase in loan drawdowns	-	24	-	-	-	16
Derecognitions and repayments	-	-215	-	-	-	-11
Changes to models/risk parameters	-	-	-	-	-	-
Additions	-	-	-	-	1	-
Reversals	-	-	-	-	-1	-
Amortization, fair value changes, and other changes in measurement	-	-	-	-	-	-204
Exchange differences and other changes	-	1	-	-	-3	192
Balance as at Dec. 31, 2020	-	4	-	-	-	-

Finance leases

€ million	Stage 1		Stage 2		Stage 3	
	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount
Balance as at Jan. 1, 2019	4	1,811	8	186	8	23
Addition/increase in loan drawdowns	2	290	13	3	9	2
Change to finance leases due to transfer between stages	5	-43	-9	21	-1	22
Transfer from stage 1	-1	-151	1	141	-	10
Transfer from stage 2	5	99	-12	-127	2	28
Transfer from stage 3	1	9	2	7	-3	-16
Use of loss allowances/directly recognized impairment losses	-	-	-	-	-1	-
Derecognitions and repayments	-8	-684	-7	-62	-7	-22
Balance as at Dec. 31, 2019	3	1,374	5	148	8	25
Addition/increase in loan drawdowns	2	133	13	6	15	2
Change to finance leases due to transfer between stages	3	-234	-3	204	-4	36
Transfer from stage 1	-2	-398	2	382	-	16
Transfer from stage 2	4	159	-9	-192	5	39
Transfer from stage 3	1	5	4	14	-9	-19
Derecognitions and repayments	-6	-471	-10	-97	-7	-29
Changes to models/risk parameters	-	-	1	-	-	-
Additions	-	-	1	-	-	-
Balance as at Dec. 31, 2020	**2**	**802**	**6**	**261**	**12**	**34**

Financial guarantee contracts and loan commitments

	Stage 1		Stage 2		Stage 3		POCI assets	
€ million	Loss allowances	Nominal amount	Loss allowances	Nominal amount	Loss allowances	Nominal amount	Loss allowances	Nominal amount
Balance as at Jan. 1, 2019	35	60,787	9	834	118	250	-	-
Addition/increase in loan drawdowns	103	67,567	9	637	33	206	-	-
Change to financial guarantee contracts and loan commitments due to transfer between stages	3	-158	-7	45	4	113	-	-
Transfer from stage 1	-2	-615	2	553	-	62	-	-
Transfer from stage 2	4	450	-10	-511	6	61	-	-
Transfer from stage 3	1	7	1	3	-2	-10	-	-
Derecognitions and repayments	-56	-63,803	-11	-937	-36	-282	-	-
Changes to models/risk parameters	-40	-	11	-	22	-	-	-
Additions	32	-	20	-	85	-	-	-
Reversals	-72	-	-9	-	-63	-	-	-
Amortization, fair value changes, and other changes in measurement	-	69	-	-1	-	1	-	-
Exchange differences and other changes	-	475	-1	-3	-1	-6	-	-
Balance as at Dec. 31, 2019	45	64,937	10	575	140	282	-	-
Addition/increase in loan drawdowns	92	78,042	25	2,175	54	279	4	27
Change to financial guarantee contracts and loan commitments due to transfer between stages	-2	-1,993	-	1,853	2	140	-	-
Transfer from stage 1	-10	-2,257	10	2,139	-	118	-	-
Transfer from stage 2	8	262	-11	-294	3	32	-	-
Transfer from stage 3	-	2	1	8	-1	-10	-	-
Derecognitions and repayments	-65	-65,755	-30	-2,539	-73	-443	-3	-18
Changes to models/risk parameters	-8	-	33	-	10	-	-	-
Additions	42	-	54	-	73	-	-	-
Reversals	-50	-	-21	-	-63	-	-	-
Amortization, fair value changes, and other changes in measurement	-	-179	-	-1	-	-	-	-
Exchange differences and other changes	-	-493	-	382	-4	2	-	-
Balance as at Dec. 31, 2020	**62**	**74,559**	**38**	**2,445**	**129**	**260**	**1**	**9**

Liabilities included in disposal groups classified as held for sale that were previously recognized as financial guarantee contracts and loan commitments

	Stage 1	
€ million	Loss allowances	Nominal amount
Balance as at Jan. 1, 2019	-	549
Addition/increase in loan drawdowns	-	75
Derecognitions and repayments	-2	-530
Changes to models/risk parameters	2	-
Additions	2	-
Exchange differences and other changes	-	-19
Balance as at Dec. 31, 2019	-	75
Derecognitions and repayments	-	-75
Balance as at Dec. 31, 2020	-	-

Contractual modifications and derecognitions

The negotiation or modification of contractually agreed cash flows relating to a financial asset leads to a modified asset. The modification of contractually agreed cash flows can lead to the derecognition of the existing financial asset and the recognition of a new one. In the case of modifications that do not lead to the derecognition of the financial asset (non-substantial contractual modifications), the modifications of the contractually agreed cash flows are recognized as a modification gain or loss in the amount of the difference between the originally agreed cash flows and the modified cash flows discounted with the original effective interest rate. If substantial modifications are made to the contract for a financial asset, the asset is derecognized and then recognized as a new asset. The POCI asset rules apply to impaired assets (stage 3). If contractual modifications for a financial asset do not have a substantial impact, the asset is reviewed to ascertain whether credit risk has increased significantly since initial recognition. The assessment to determine whether there has been a significant deterioration in the credit quality of modified assets compares the probability of default based on the modified cash flows and on the residual maturity as at the reporting date against the probability of default based on the original cash flows and residual maturity on initial recognition.

In 2020, contractually agreed payments in relation to financial assets allocated to stages 2 and 3 of the impairment model with an amortized cost of €323 million (December 31, 2019: €245 million) were modified to take account of changes in contractual cash flows. The modifications resulted in a modification loss of €2 million (2019: €0 million).

The gross carrying amount of financial assets whose contractually agreed cash flows were modified and that had been allocated to stage 2 in the impairment model but were transferred to stage 1 during the reporting period amounted to €1 million (2019: €0 million).

Maximum exposure to credit risk

The DZ BANK Group is exposed to credit risk from financial instruments. The maximum exposure to credit risk is represented by the fair value, amortized cost, or nominal amount of financial instruments. The following collateral is held to reduce the exposure to this maximum credit risk:

AS AT DECEMBER 31, 2020

€ million	Maximum exposure to credit risk	
FINANCIAL ASSETS MEASURED AT FAIR VALUE	172,220	
Financial assets measured at fair value through profit or loss	65,285	
Financial assets mandatorily measured at fair value through profit or loss	55,815	
Financial assets designated as at fair value through profit or loss	9,470	
Financial assets measured at fair value through other comprehensive income	106,935	
Financial assets mandatorily measured at fair value through other comprehensive income	106,935	
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	385,366	
of which credit-impaired		
FINANCE LEASES	1,076	
of which credit-impaired		
FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS	77,747	
of which credit-impaired		

AS AT DECEMBER 31, 2020

€ million	Maximum exposure to credit risk	
Non-current assets and disposal groups classified as held for sale from financial assets measured at fair value	95	
Non-current assets and disposal groups classified as held for sale from financial assets measured at amortized cost	4	

	of which secured with:					
	Guarantees, indemnities, risk subparticipations	Credit insurance	Land charges, mortgages, registered ship and aircraft mortgages	Pledged loans and advances, assignments, other pledged assets	Financial collateral	Other collateral
	834	**2**	**206**	**331**	**2,756**	**825**
	566	**2**	**24**	**26**	**1,297**	**79**
	364	2	23	26	1,296	39
	202	-	1	-	1	40
	268	**-**	**182**	**305**	**1,459**	**746**
	268	-	182	305	1,459	746
	6,894	**2,729**	**113,950**	**2,343**	**8,265**	**6,283**
	71	265	1,344	126	151	398
	10	**-**	**-**	**5**	**-**	**1**
	-	-	-	4	-	1
	389	**1,450**	**5,972**	**786**	**2**	**56**
	3	6	2	11	-	12

	of which secured with:					
	Guarantees, indemnities, risk subparticipations	Credit insurance	Land charges, mortgages, registered ship and aircraft mortgages	Pledged loans and advances, assignments, other pledged assets	Financial collateral	Other collateral
	-	-	-	-	-	55
	-	-	-	-	-	-

AS AT DECEMBER 31, 2019

€ million	Maximum exposure to credit risk	
FINANCIAL ASSETS MEASURED AT FAIR VALUE	**163,287**	
Financial assets measured at fair value through profit or loss	**67,429**	
Financial assets mandatorily measured at fair value through profit or loss	57,099	
Financial assets designated as at fair value through profit or loss	10,330	
Financial assets measured at fair value through other comprehensive income	**95,858**	
Financial assets mandatorily measured at fair value through other comprehensive income	95,858	
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**359,464**[1]	
of which credit-impaired		
FINANCE LEASES	**1,531**	
of which credit-impaired		
FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS	**66,202**	
of which credit-impaired		

1 Amount restated (see note 2).

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€ million	Maximum exposure to credit risk	
Non-current assets and disposal groups classified as held for sale from financial assets measured at fair value	38	
Non-current assets and disposal groups classified as held for sale from financial assets measured at amortized cost	198	
Liabilities included in disposal groups classified as held for sale from financial guarantee contracts and loan commitments	74	

	of which secured with:					
	Guarantees, indemnities, risk subparticipations	Credit insurance	Land charges, mortgages, registered ship and aircraft mortgages	Pledged loans and advances, assignments, other pledged assets	Financial collateral	Other collateral
	1,001	**-**	**199**	**316**	**3,138**	**623**
	697	**-**	**29**	**25**	**926**	**76**
	289[1]	-	29	25	926[1]	51
	408[1]	-	-	-	-	25[1]
	304	**-**	**170**	**291**	**2,212**	**547**
	304	-	170	291[1]	2,212	547[1]
	5,311[1]	**2,720**	**106,044**[1]	**2,385**[1]	**7,383**[1]	**10,219**[1]
	34[1]	134	481[1]	208	3	335
	11	**-**	**-**	**7**	**-**	**5**
	-	-	-	6	-	1
	374	**852**	**6,064**	**693**	**6**	**49**
	-	2	5	9	-	32

	of which secured with:					
	Guarantees, indemnities, risk subparticipations	Credit insurance	Land charges, mortgages, registered ship and aircraft mortgages	Pledged loans and advances, assignments, other pledged assets	Financial collateral	Other collateral
	-	-	-	-	-	-
	-	-	-	-	-	14
	8	-	-	-	2	10

A range of different collateral is held in the traditional lending business to reduce the exposure to the maximum credit risk. Specifically, this collateral includes mortgages on residential and commercial real estate, registered ship and aircraft mortgages, guarantees (including indemnities and credit insurance), financial security (e.g. certain fixed-income securities, shares, and investment fund units), blanket and individual assignments of trade receivables, and various types of physical collateral. Generally, cash collateral, high-quality government bonds, and Pfandbriefe are held in the trading business in accordance with the collateral policy to reduce the risk attaching to OTC derivatives. Some financial instruments in stage 3 are not written down because they are fully covered by collateral.

Changes in the credit risk did not result in changes to the fair value of financial assets designated as at fair value through profit or loss in 2020 (December 31, 2019: increase of €4 million). As at the balance sheet date, the cumulative amount by which the fair value had increased owing to changes in the credit risk was €42 million (December 31, 2019: €129 million).

The credit risk associated with financial assets designated as at fair value through profit or loss was mitigated as at the reporting date by financial guarantee contracts with a value of €163 million (December 31, 2019: €332 million) furnished by affiliated banks.

Credit risk concentrations

The credit risk from financial instruments to which the DZ BANK Group is exposed is broken down by sector using the Deutsche Bundesbank industry codes and by geographic region using the annually updated country groups published by the International Monetary Fund (IMF). Volumes, measured on the basis of fair values and gross carrying amounts of financial assets and the credit risk from financial guarantee contracts and loan commitments, are broken down using the following credit rating classes:

- Investment grade: equates to internal rating classes 1A–3A
- Non-investment grade: equates to internal rating classes 3B–4E
- Default: equates to internal rating classes 5A–5E
- Not rated: no rating necessary or not classified

'Not rated' comprises counterparties for which a rating classification is not required.

AS AT DECEMBER 31, 2020

€ million		Financial sector	Public sector	Corporates	Retail	Industry conglo-merates	Other
Investment grade							
Fair value	Stage 1	52,952	33,115	15,413	-	1,682	267
	Stage 2	169	-	423	-	-	-
Gross carrying amount	Stage 1	172,263	19,976	60,356	36,695	7,188	480
	Stage 2	105	13	282	467	3,744	-
Nominal amount	Stage 1	27,495	186	21,958	8,133	2,501	-
	Stage 2	5	-	331	-	100	-
Non-investment grade							
Fair value	Stage 1	176	262	94	-	-	-
	Stage 2	18	73	17	-	1	-
Gross carrying amount	Stage 1	7,894	120	12,465	36,190	57	-
	Stage 2	298	139	3,361	3,830	22	-
	Stage 3	-	-	784	5	-	-
Nominal amount	Stage 1	452	255	7,853	176	-	-
	Stage 2	95	-	1,749	2	53	-

AS AT DECEMBER 31, 2019

€ million		Financial sector	Public sector	Corporates	Retail	Industry conglo-merates	Other
Investment grade							
Fair value	Stage 1	48,971	30,089	14,127	-	257	-
Gross carrying amount	Stage 1	149,404	22,031	61,507	33,598	7,437	-
	Stage 2	25	8	135	467	297	-
Nominal amount	Stage 1	21,815	401	20,233	7,641	2,133	-
	Stage 2	77	-	23	-	37	-
Non-investment grade							
Fair value	Stage 1	401	345	230	-	1	-
	Stage 2	28	30	-	-	1	-
Gross carrying amount	Stage 1	8,954	171	19,102	32,692	82	-
	Stage 2	35	197	1,536	3,643	35	-
	Stage 3	-	-	994	15	-	-
Nominal amount	Stage 1	606	23	7,153	138	56	-
	Stage 2	3	-	357	1	-	-

AS AT DECEMBER 31, 2020

€ million		Financial sector	Public sector	Corporates	Retail	Industry conglo-merates	Other
Default							
Fair value	Stage 3	17	-	-	-	-	-
Gross carrying amount	Stage 2	-	-	1	-	-	-
	Stage 3	234	7	1,476	737	119	-
	POCI assets	-	-	38	-	-	-
Nominal amount	Stage 3	-	-	257	2	-	-
	POCI assets	-	-	8	-	-	-
Not rated							
Fair value	Stage 1	850	1,117	70	-	217	-
Gross carrying amount	Stage 1	2,046	619	2,532	8,090	1,508	-
	Stage 2	447	42	738	713	245	30
	Stage 3	1	-	99	319	-	-
	POCI assets	-	-	3	29	-	-
Nominal amount	Stage 1	1,116	9	1,136	2,290	998	-
	Stage 2	3	-	58	22	27	-

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€ million		Financial sector	Public sector	Corporates	Retail	Industry conglo-merates	Other
Default							
Fair value	Stage 3	19	-	-	-	-	-
Gross carrying amount	Stage 2	-	-	4	-	-	-
	Stage 3	125	-	1,620	708	144	-
	POCI assets	-	-	13	-	-	-
Nominal amount	Stage 3	3	-	279	-	-	-
Not rated							
Fair value	Stage 1	333	718	80	-	227	-
Gross carrying amount	Stage 1	2,351	870	1,416	8,540	1,436	-
	Stage 2	891	41	234	608	194	27
	Stage 3	-	-	3	301	-	-
	POCI assets	-	-	-	18	-	-
Nominal amount	Stage 1	955	9	944	2,027	803	-
	Stage 2	10	-	57	9	1	-

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€ million		Germany	Other industrialized countries	Advanced economies	Emerging markets	Supranational institutions
Investment grade						
Fair value	Stage 1	32,823	61,883	1,398	3,061	4,264
	Stage 2	98	325	169	-	-
Gross carrying amount	Stage 1	267,321	26,474	861	1,441	861
	Stage 2	4,401	178	1	31	-
Nominal amount	Stage 1	53,706	6,068	118	381	-
	Stage 2	338	88	-	10	-
Non-investment grade						
Fair value	Stage 1	88	281	-	163	-
	Stage 2	3	106	-	-	-
Gross carrying amount	Stage 1	49,671	2,593	352	4,110	-
	Stage 2	6,179	628	73	770	-
	Stage 3	1	385	109	294	-
Nominal amount	Stage 1	6,494	1,035	47	1,160	-
	Stage 2	1,427	373	23	76	-

AS AT DECEMBER 31, 2019

€ million		Germany	Other industrialized countries	Advanced economies	Emerging markets	Supranational institutions
Investment grade						
Fair value	Stage 1	29,276	56,414	1,457	2,748	3,549
Gross carrying amount	Stage 1	242,384	28,455	1,005	1,602	531
	Stage 2	903	28	1	-	-
Nominal amount	Stage 1	45,766	6,021	45	391	-
	Stage 2	73	64	-	-	-
Non-investment grade						
Fair value	Stage 1	183	491	-	303	-
	Stage 2	-	59	-	-	-
Gross carrying amount	Stage 1	50,071	3,960	1,049	5,921	-
	Stage 2	4,504	536	17	389	-
	Stage 3	4	549	217	239	-
Nominal amount	Stage 1	6,121	1,069	99	687	-
	Stage 2	295	54	2	10	-

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€ million		Germany	Other industrialized countries	Advanced economies	Emerging markets	Supranational institutions
Default						
Fair value	Stage 3	-	17	-	-	-
Gross carrying amount	Stage 2	1	-	-	-	-
	Stage 3	1,882	322	39	330	-
	POCI assets	38	-	-	-	-
Nominal amount	Stage 3	154	83	-	22	-
	POCI assets	8	-	-	-	-
Not rated						
Fair value	Stage 1	736	1,235	2	-	281
Gross carrying amount	Stage 1	12,537	1,852	3	267	136
	Stage 2	1,603	503	1	108	-
	Stage 3	358	61	-	-	-
	POCI assets	30	2	-	-	-
Nominal amount	Stage 1	4,598	772	-	179	-
	Stage 2	99	11	-	-	-

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€ million		Germany	Other industrialized countries	Advanced economies	Emerging markets	Supranational institutions
Default						
Fair value	Stage 3	-	19	-	-	-
Gross carrying amount	Stage 2	4	-	-	-	-
	Stage 3	2,092	245	53	207	-
	POCI assets	13	-	-	-	-
Nominal amount	Stage 3	156	76	17	33	-
Not rated						
Fair value	Stage 1	516	684	-	-	158
Gross carrying amount	Stage 1	11,987	2,189	8	293	136
	Stage 2	1,479	471	7	38	-
	Stage 3	278	26	-	-	-
	POCI assets	17	1	-	-	-
Nominal amount	Stage 1	4,239	450	-	49	-
	Stage 2	66	11	-	-	-

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AS AT DECEMBER 31, 2020

€ million	≤ 1 month	> 1 month – 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years	Indefinite
Financial assets	**105,984**	**16,115**	**40,108**	**164,118**	**250,857**	**22,194**
Cash and cash equivalents	68,148	-	-	-	-	-
Loans and advances to banks	13,517	4,189	11,761	39,315	35,476	-
Loans and advances to customers	16,018	6,675	17,796	73,898	92,052	18
Derivatives used for hedging (positive fair values)	1	5	19	94	38	-
Financial assets held for trading	4,564	2,833	3,203	9,097	22,871	1,964
of which non-derivative financial assets held for trading	4,258	2,247	1,808	3,626	6,644	1,964
of which derivatives (positive fair values)	306	586	1,395	5,471	16,227	-
Investments	996	1,240	4,459	21,757	31,338	2,375
Investments held by insurance companies	631	1,147	2,799	19,853	69,081	17,802
of which non-derivative investments held by insurance companies	350	1,070	2,791	19,829	69,068	17,787
of which derivatives (positive fair values)	281	77	8	24	13	15
Other assets	2,109	26	71	104	1	35
Financial liabilities	**-117,376**	**-11,869**	**-24,899**	**-113,999**	**-114,873**	**-69,878**
Deposits from banks	-72,724	-3,556	-9,824	-56,314	-35,823	-1,576
Deposits from customers	-37,829	-2,172	-3,134	-7,523	-22,823	-64,761
Debt certificates issued including bonds	-2,524	-3,628	-6,753	-26,359	-32,180	-
Derivatives used for hedging (negative fair values)	-10	-32	-152	-883	-1,542	-
Financial liabilities held for trading	-2,982	-1,926	-4,622	-19,009	-20,770	-931
of which non-derivative financial liabilities held for trading	-2,801	-1,001	-2,413	-13,100	-10,020	-931
of which derivatives (negative fair values)	-181	-925	-2,209	-5,909	-10,750	-
Other liabilities	-1,207	-530	-235	-1,402	-1,094	-2,585
of which non-derivative other liabilities	-1,188	-504	-230	-1,300	-953	-2,579
of which derivatives (negative fair values)	-19	-26	-5	-102	-141	-6
Subordinated capital	-100	-25	-179	-2,509	-641	-25
Financial guarantee contracts and loan commitments	**-74,528**	**-85**	**-333**	**-241**	**-35**	**-2,050**
Financial guarantee contracts	-8,233	-53	-3	-146	-10	-52
Loan commitments	-66,295	-32	-330	-95	-25	-1,998

AS AT DECEMBER 31, 2019

€ million	≤ 1 month	> 1 month – 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years	Indefinite
Financial assets	**92,427**	**14,815**	**42,241**	**162,214**	**241,372**	**20,985**
Cash and cash equivalents	52,167	-	-	-	-	-
Loans and advances to banks	10,845	4,213	13,098	37,610	35,522	-
Loans and advances to customers	16,754	6,598	17,124	73,270	91,693	-
Derivatives used for hedging (positive fair values)	-	3	19	121	66	-
Financial assets held for trading	8,313	1,831	4,755	8,805	20,996	1,667
of which non-derivative financial assets held for trading	7,968	1,346	3,283	4,095	7,153	1,667
of which derivatives (positive fair values)	345	485	1,472	4,710	13,843	-
Investments	1,079	1,233	4,227	22,269	29,329	2,173
Investments held by insurance companies	665	907	2,974	20,037	63,765	17,119
of which non-derivative investments held by insurance companies	481[1]	879[1]	2,959	20,014[1]	63,732[1]	17,112[1]
of which derivatives (positive fair values)	184	28	15	23	33	7
Other assets	2,604[1]	30[1]	44	102[1]	1[1]	26[1]
Financial liabilities	**-105,297**	**-27,558**	**-32,895**	**-90,139**	**-105,318**	**-68,427**
Deposits from banks	-55,086	-3,621	-10,018	-39,397	-33,962	-1,652
Deposits from customers	-33,188	-2,287	-4,217	-8,768	-25,151	-63,789
Debt certificates issued including bonds	-9,290	-19,660	-12,809	-20,651	-24,108	-
Derivatives used for hedging (negative fair values)	-4	-18	-122	-436	-723	-
Financial liabilities held for trading	-6,813	-1,378	-5,243	-18,186	-19,686	-552
of which non-derivative financial liabilities held for trading	-6,263	-862	-3,393	-12,229	-9,562	-552
of which derivatives (negative fair values)	-550	-516	-1,850	-5,957	-10,124	-
Other liabilities	-916	-434	-93	-1,368	-1,143	-2,409
of which non-derivative other liabilities	-906	-412	-85	-1,275	-927	-2,402
of which derivatives (negative fair values)	-10	-22	-8	-93	-216	-7
Subordinated capital	-	-160	-393	-1,333	-545	-25
Financial guarantee contracts and loan commitments	**-63,140**	**-277**	**-405**	**-312**	**-30**	**-1,630**
Financial guarantee contracts	-7,494	-58	-36	-168	-30	-56
Loan commitments	-55,646	-219	-369	-144	-	-1,574

1 Amount restated (see note 2).

The maturity analysis shows contractually agreed cash inflows with a plus sign and contractually agreed cash outflows with a minus sign. In the case of financial guarantee contracts and loan commitments, the potential cash outflows are shown.

The contractual maturities do not match the estimated actual cash inflows and cash outflows, especially in the case of financial guarantee contracts and loan commitments. The management of liquidity risk based on expected and unexpected cash flows is described in section 4.2.5 of the risk report in the group management report.

The maturity analysis for lease liabilities in accordance with IFRS 16.58 is presented in note 92.

>> 87 Exposures to countries particularly affected by the sovereign debt crisis

The table below shows the carrying amounts of the DZ BANK Group's exposures to bonds issued by governments and public authorities in countries particularly affected by the sovereign debt crisis, broken down into the categories applied to financial instruments under IFRS 9.

	Dec. 31, 2020		Dec. 31, 2019	
€ million	Carrying amount	Fair value	Carrying amount	Fair value
Portugal	**846**	**863**	**814**	**831**
Financial assets measured at fair value through profit or loss	447	447	423	423
Financial assets measured at fair value through other comprehensive income	349	349	342	342
Financial assets measured at amortized cost	50	67	49	66
Italy	**4,965**	**5,069**	**4,973**	**5,058**
Financial assets measured at fair value through profit or loss	1,978	1,978	1,915	1,915
Financial assets measured at fair value through other comprehensive income	2,449	2,449	2,538	2,538
Financial assets measured at amortized cost	538	642	520	605
Spain	**2,272**	**2,337**	**2,123**	**2,170**
Financial assets measured at fair value through profit or loss	1,287	1,287	1,253	1,253
Financial assets measured at fair value through other comprehensive income	728	728	630	630
Financial assets measured at amortized cost	257	322	240	287
Total	**8,083**	**8,269**	**7,910**	**8,059**

Bonds issued by countries particularly affected by the sovereign debt crisis and held as part of the insurance business are only recognized in the proportion attributable to the shareholders of the DZ BANK Group.

Fair value hierarchy

The recurring fair value measurements as measured and recognized on the balance sheet are assigned to the levels of the fair value hierarchy as follows:

	Level 1		Level 2		Level 3	
€ million	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2020	Dec. 31, 2019
Portugal	**796**	**765**	**-**	**-**	**-**	**-**
Financial assets measured at fair value through profit or loss	447	423	-	-	-	-
Financial assets measured at fair value through other comprehensive income	349	342	-	-	-	-
Italy	**4,316**	**4,382**	**80**	**41**	**31**	**30**
Financial assets measured at fair value through profit or loss	1,953	1,897	25	18	-	-
Financial assets measured at fair value through other comprehensive income	2,363	2,485	55	23	31	30
Spain	**1,811**	**1,659**	**193**	**158**	**11**	**66**
Financial assets measured at fair value through profit or loss	1,120	1,029	156	158	11	66
Financial assets measured at fair value through other comprehensive income	691	630	37	-	-	-
Total	**6,923**	**6,806**	**273**	**199**	**42**	**96**

Maturity analysis

AS AT DECEMBER 31, 2020

€ million	≤ 1 month	> 1 month – 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years
Portugal	-	-	25	102	764
Italy	7	157	403	1,090	3,846
Spain	1	3	162	426	1,969
Total	**8**	**160**	**590**	**1,618**	**6,579**

AS AT DECEMBER 31, 2019

€ million	≤ 1 month	> 1 month – 3 months	> 3 months – 1 year	> 1 year – 5 years	> 5 years
Portugal	-	-	25	102	783
Italy	7	95	237	1,521	4,091
Spain	4	9	64	555	1,876
Total	**11**	**104**	**326**	**2,178**	**6,750**

The maturity analysis shows the contractually agreed cash inflows.

F Other disclosures

>> 88 Contingent liabilities

€ million	Dec. 31, 2020	Dec. 31, 2019
Contingent liabilities from placement and underwriting obligations	41	-
Contingent liabilities arising from contributions to the resolution fund for CRR credit institutions	88	37
Contingent liabilities in respect of litigation risk	39	9
Total	**168**	**46**

The contingent liabilities from placement and underwriting obligations relate to the signing of an undertaking by DZ BANK AG in connection with its involvement in the funding of a power plant project as part of an initiative to support economic growth in less developed regions of Saudi Arabia.

The contingent liabilities arising from contributions to the resolution fund for CRR credit institutions consist of irrevocable payment commitments that were made after the applications to furnish collateral in partial settlement of the contribution to the European bank levy were approved by the Single Resolution Board (SRB).

The contingent liabilities in respect of litigation risk in the direct health business of the R+V subgroup essentially relate to the not improbable risk of an outflow of resources embodying economic benefits as a result of certain premium adjustments potentially being ineffective. In addition, the contingent liabilities in respect of litigation risk comprise a small number of court proceedings relating to different cases. Where provisions have been recognized for particular claims, no contingent liabilities are recognized.

>> 89 Financial guarantee contracts and loan commitments

€ million	Dec. 31, 2020	Dec. 31, 2019
Financial guarantee contracts	**8,497**	**7,842**
Loan guarantees	4,681	4,187
Letters of credit	636	562
Other guarantees and warranties	3,180	3,093
Loan commitments	**68,775**	**57,952**
Credit facilities to banks	22,290	17,163
Credit facilities to customers	19,259	18,690
Guarantee credits	712	464
Letters of credit	6	1
Global limits	26,508	21,634
Total	**77,272**	**65,794**

The amounts shown for financial guarantee contracts and loan commitments are the nominal values of the commitment in each case.

>> 90 Trust activities

Assets held and liabilities entered into as part of trust activities do not satisfy the criteria for recognition on the balance sheet. The following table shows the breakdown for trust activities:

€ million	Dec. 31, 2020	Dec. 31, 2019
Trust assets	**2,094**	761
Loans and advances to banks	1,570	140
Loans and advances to customers	12	12
Investments	512	609
Trust liabilities	**2,094**	761
Deposits from banks	1,530	57
Deposits from customers	564	704

Trust assets and trust liabilities each include trust loans amounting to €1,530 million (December 31, 2019: €57 million).

>> 91 Business combinations

ZBI Partnerschafts-Holding GmbH, Erlangen, (ZBI) was established by the UMH subgroup together with the majority shareholder CI Central Immobilien Holding AG, Erlangen, as part of a strategic partnership. ZBI was held as an associate with a shareholding of 49.9 percent. On October 29, 2020, the UMH subgroup acquired a further 45.0 percent of the shares in ZBI, bringing the total shareholding to 94.9 percent. ZBI and 3 of its subsidiaries have been fully consolidated since the purchase of the additional shares owing to the existence of control. Until the purchase of the additional shares, ZBI was accounted for using the equity method.

ZBI and its subsidiaries are regarded as one of the leading specialists for investment in German residential real estate funds and have been serving retail and institutional investors since 2002. The business combination represents the completion of the UMH subgroup's ambition to establish itself in the market for residential real estate. The option to purchase further shares had been agreed with the majority shareholder at the time of ZBI's establishment and was structured using call and put options. The fair values of the options were included in the consideration transferred for the purchase.

The consideration transferred for ZBI totaled €199 million and comprised the remeasured existing shareholding of €98 million resulting from the business combination achieved in stages, the purchase consideration of €85 million for the newly acquired tranche, which was paid in cash, and the netting of the fair values of the call and put options held. The net gain of €48 million resulting from transitional accounting for the existing shareholding was recognized in gains and losses on investments. The fair value of the net assets stood at €105 million on the acquisition date, of which €5 million was attributable to non-controlling interests. The difference of €99 million between the consideration transferred and the share of the remeasured net assets was recognized as goodwill. This essentially represents the expected growth of ZBI, synergies from the business combination, and the workforce, which constitutes an unrecognizable asset.

The breakdown of net assets was as follows:

€ million	Oct. 31, 2020
Loans and advances to banks	37
Loans and advances to customers	2
Investments	32
Property, plant and equipment, investment property, and right-of-use assets	21
Income tax assets	7
Other assets	67
Total assets acquired	166
Provisions	2
Income tax liabilities	21
Other liabilities	38
Total liabilities assumed	61
Net assets acquired	**105**

Goodwill is allocated to the DZ BANK Group's operating segments, each of which constitutes a cash-generating unit. As at the balance sheet date, goodwill of €138 million was allocated to the UMH subgroup operating segment (December 31, 2019: €39 million) and €2 million to the TeamBank operating segment (December 31, 2019: €2 million).

Goodwill is regularly tested for possible impairment in the last quarter of the financial year. If there are any indications of possible impairment, more frequent impairment tests are also carried out. In an impairment test, the carrying amount of the goodwill-bearing units is compared with the relevant recoverable amount. The carrying amount is equivalent to the equity attributable to the goodwill-bearing entity. For the purposes of the test, the goodwill is notionally increased by the amount attributable to non-controlling interests. If the recoverable amount exceeds the carrying amount, no impairment of the goodwill is recognized. The recoverable amount is determined as the value in use of the goodwill-bearing entity. Value in use is based on the DZ BANK Group's 4-year plan, from which estimated future cash flows can be derived.

The basic assumptions are determined using an overall assessment based on past experience, current market and economic conditions, and estimates of future market trends. The macroeconomic scenario used as the basis for the 4-year plan assumes that the COVID-19-related lockdown in Germany has a severe adverse impact on the economy as a whole. Overall, the negative effects in other eurozone countries will be slightly more pronounced than in Germany because Italy and Spain are hardest hit by the recession. In the United States, the macroeconomic effects are even greater than in the eurozone. A recovery is expected to begin in 2021. The scenario also assumes that both the euro area and the US dollar area will initially be hit by rising inflation, although the ECB's target for the euro area of 2.0 percent is unlikely to be exceeded for very long. The US inflation rate will temporarily rise above the 2.0 percent mark but will not accelerate any further. The ECB is expected to adjust key interest rates only in the medium term, with the US central bank following suit a little later. The scenario anticipates a narrowing of spreads on government bonds issued by the peripheral countries of the eurozone, with the exception of Italy.

Cash flows beyond the end of the 4-year period were estimated using a constant rate of growth of 0.75 percent (2019: 0.75 percent) for the following operating segments: UMH subgroup and TeamBank. The value in use for a goodwill-bearing entity is produced by discounting these cash flows back to the date of the impairment test. The discount rate (before taxes) used for the UMH subgroup operating segment in 2020, which was determined on the basis of the capital asset pricing model, was 13.53 percent (2019: 13.09 percent). A discount rate (before taxes) of 14.10 percent was used for the TeamBank operating segment (2019: 13.09 percent).

Sensitivity analyses are also carried out in which parameters relevant to the calculation of value in use are modified within a plausible range of values. The parameters that are particularly relevant to the DZ BANK Group are the forecast cash flows and the discount rates. No impairment requirement would result in the UMH subgroup in any of the scenarios. There would be an impairment requirement for the TeamBank operating segment if the forecast cash flows fell by more than 3.98 percent or the discount rates rose by more than 0.31 percent.

>> 92 Leases

DZ BANK Group as lessor

The underlying assets in leases in which the DZ BANK Group is the lessor can be subdivided into the following classes: land and buildings, office furniture and equipment, and intangible assets.

For the most part, the land and buildings asset class consists of commercial real estate, including parking areas. A smaller proportion is accounted for by residential real estate. Lease assets in the office furniture and equipment asset class are motor vehicles and, in a small volume, aircraft and ships. Medical technology devices as well as IT and office equipment are also leased out. In addition, production machinery and photovoltaic installations account for a significant proportion of this asset class. Software is the most significant item under intangible assets.

Finance leases

Within the DZ BANK Group, the VR Smart Finanz subgroup is active as a lessor. The companies in the VR Smart Finanz subgroup enter into leases with customers for production machinery and photovoltaic installations. Medical technology devices, vehicles, and software are leased in addition to office equipment. Some of the leases include purchase, extension, or termination options; they have terms of 1 to 21 years for office furniture and equipment, and 2 to 7 years for intangible assets.

In addition to the actual underlying assets financed by the leases, further items of collateral such as guarantees, repurchase agreements, and residual value guarantees are contractually agreed in order to reduce the risk. Lease assets are also monitored, for example by means of on-site inspections.

€ million	Dec. 31, 2020	Dec. 31, 2019
Gross investment	**1,154**	**1,641**
Up to 1 year	431	576
More than 1 year and up to 2 years	308	420
More than 2 years and up to 3 years	195	295
More than 3 years and up to 4 years	110	177
More than 4 years and up to 5 years	53	91
More than 5 years	57	82
less unearned finance income	**-58**	**-94**
Net investment	1,096	1,547
less present value of unguaranteed residual values	**-30**	**-9**
Present value of minimum lease payment receivables	**1,066**	**1,538**

The change in the present value of the minimum lease payment receivables was largely attributable to expiring finance leases and partial repayments at the request of customers.

Only an immaterial volume of gains on disposals were recognized in 2020. In 2019, losses on disposal had amounted to €1 million. They are reported together with the financial income derived from the net investment in the lease under interest income in note 34.

Operating leases

Leases are in place for commercial and residential real estate, including parking areas. The leases normally include extension options. A small number of leases are also entered into for office furniture and equipment.

The following table shows a breakdown by asset class of the carrying amounts of the underlying assets in the leases, comprising investment property and items of property, plant and equipment, as at the reporting date:

€ million	Dec. 31, 2020	Dec. 31, 2019
Land and buildings	3,790	3,574[1]
Office furniture and equipment	8	25
Total	**3,798**	**3,599**

1 Amount changed (see note 2).

Income from operating leases amounted to €275 million in the financial year (2019: €273 million), the bulk of which comprised rental income from investment property held by the insurance companies.

As at the reporting date, the breakdown of the total amount of minimum lease payments expected to be received from operating leases in the future was as follows:

€ million	Dec. 31, 2020	Dec. 31, 2019
Total future minimum lease payments under non-cancelable leases	**1,099**	**1,001**
Up to 1 year	241	173
More than 1 year and up to 2 years	141	135
More than 2 years and up to 3 years	123	118
More than 3 years and up to 4 years	108	108
More than 4 years and up to 5 years	96	96
More than 5 years	390	371

DZ BANK Group as lessee

The underlying assets in leases in which the DZ BANK Group is the lessee can be subdivided into the following classes: land and buildings, and office furniture and equipment.

Leases involving the land and buildings asset class in which the DZ BANK Group is the lessee relate to the leasing of offices and business premises (including parking) for the group's own business operations. Some of these leases include extension and termination options. The lease terms are up to 20 years. There are also a small number of leases for office furniture and equipment. These include leases for motor vehicles and workplace equipment. The lease terms are up to 5 years.

Rights to use underlying assets in leases are included under property, plant and equipment, investment property, and right-of-use assets, and under other assets. The following table shows the changes in the carrying amounts of the right-of-use assets, broken down by class of underlying asset:

€ million	Land and buildings	Office furniture and equipment
Carrying amounts as at Jan. 1, 2019	336	32
Additions	42	9
Revaluation	3	-
Depreciation	-70	-14
Impairment losses	-2	-
Disposals	-2	-
Carrying amounts as at Dec. 31, 2019	307	27
Additions	208	24
Revaluation	41	-
Depreciation	-75	-17
Disposals	-18	-3
Changes attributable to currency translation	-1	-
Changes in scope of consolidation	19	-
Carrying amounts as at Dec. 31, 2020	**481**	**31**

Lease liabilities of €522 million were recognized under other liabilities and insurance companies' other liabilities (December 31, 2019: €342 million).

The interest expense for lease liabilities is disclosed in notes 34 and 41.

The following table shows a breakdown of the contractual maturities for lease liabilities:

€ million	**Dec. 31, 2020**	Dec. 31, 2019
Up to 1 year	80	74
More than 1 year and up to 3 years	133	115
More than 3 years and up to 5 years	115	76
More than 5 years	215	96

The total cash outflows for lease liabilities in 2020 amounted to €129 million (2019: €119 million).

The following income and expenses have been recognized in the income statement for rights to use underlying assets in leases:

€ million	2020	2019
Expenses relating to short-term leases	-5	-11
Expenses relating to leases for low-value assets	-18	-16
Expenses relating to variable lease payments not included in the lease liability	-5	-5
Income from subleasing right-of-use assets	10	9
Gains and losses on sale and leaseback transactions	4	-

The expenses relating to short-term leases relate primarily to leases for motor vehicles and other mobile assets, such as bicycles for employees, as well as real estate with lease terms between 2 and 12 months. Expenses relating to leases for low-value assets mainly relate to the office furniture and equipment asset class.

As at the reporting date, there were no lease commitments (December 31, 2019: commitments of €1 million) for short-term leases that are not included in the portfolio of short-term leases to which the disclosed expense from short-term leases relates.

The lease commitments could give rise to potential future cash outflows as a result of variable lease payments, extension or termination options, or residual value guarantees. These potential cash outflows have not been included in the measurement of the lease liability because, under current assessments, it is not possible to determine with a sufficient degree of reliability whether, and to what extent, the variable components will materialize or will be used. Within the DZ BANK Group, there are variable lease payments of this nature in connection with utilities related to real estate leases. The entities in the DZ BANK Group estimate that variable lease payments, extension options, and termination rights contractually provided for in leases could give rise to future cash outflows of €392 million (2019: €342 million).

As at the reporting date, there were also future commitments amounting to €189 million (2019: €270 million) arising from leases that had been signed by the entities in the DZ BANK Group but that had not yet commenced. Most of these leases are real estate leases for offices and ATM sites, for example.

In 2020, a sale-and-leaseback transaction was entered into for offices and business premises. The term of the sale-and-leaseback transaction is 10.5 years and the contract includes an extension option.

Taking account of the contractual term, the incremental borrowing rate of interest is mainly determined on the basis of observable risk-free yield curves, supplemented by liquidity spreads, credit spreads and, if applicable, a currency markup. The term to maturity of the lease liabilities is based on the initial contractual term of the lease. If leases contain termination or extension options, the probability of these options being exercised is assessed using objective criteria or on the basis of expert opinion.

>> 93 Disclosures on revenue from contracts with customers

Effects in the income statement

Disclosures on revenue from contracts with customers, broken down by operating segment

2020

€ million	BSH	R+V	TeamBank
Income type			
Fee and commission income from securities business	-	-	-
Fee and commission income from asset management	-	-	-
Fee and commission income from payments processing including card processing	-	-	-
Fee and commission income from lending business and trust activities	-	-	4
Fee and commission income from financial guarantee contracts and loan commitments	-	-	-
Fee and commission income from international business	-	-	-
Fee and commission income from building society operations	39	-	-
Other fee and commission income	64	-	116
Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	39	-
Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	65	-
Other operating income	-	-	10
Total	**103**	**104**	**130**
Main geographical markets			
Germany	94	104	130
Rest of Europe	9	-	-
Rest of World	-	-	-
Total	**103**	**104**	**130**
Type of revenue recognition			
At a point in time	103	2	130
Over a period of time	-	102	-
Total	**103**	**104**	**130**

	UMH	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	Other/ Consolidation	Total
	2,768	427	-	194	-	-	-83	3,306
	12	-	-	280	-	-	-5	287
	-	232	-	1	-	1	47	281
	-	69	8	-	-	22	22	125
	-	54	8	-	-	2	-4	60
	-	12	-	-	-	-	-	12
	-	-	-	-	-	-	-	39
	-	55	-	3	15	3	-108	148
	-	-	-	-	-	-	-	39
	-	-	-	-	-	-	-	65
	8	-	-	-	-	-	34	52
	2,788	**849**	**16**	**478**	**15**	**28**	**-97**	**4,414**
	2,147	849	16	143	15	3	-111	3,390
	641	-	-	333	-	23	14	1,020
	-	-	-	2	-	2	-	4
	2,788	**849**	**16**	**478**	**15**	**28**	**-97**	**4,414**
	448	306	12	186	15	5	-262	945
	2,340	543	4	292	-	23	165	3,469
	2,788	**849**	**16**	**478**	**15**	**28**	**-97**	**4,414**

2019

€ million	BSH	R+V	TeamBank	
Income type				
Fee and commission income from securities business	-	-	-	
Fee and commission income from asset management	-	-	-	
Fee and commission income from payments processing including card processing	-	-	-	
Fee and commission income from lending business and trust activities	-	-	4	
Fee and commission income from financial guarantee contracts and loan commitments	-	-	-	
Fee and commission income from international business	-	-	-	
Fee and commission income from building society operations	34	-	-	
Other fee and commission income	60	-	136	
Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	64	-	
Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	67	-	
Other operating income	-	-	12	
Total	**94**	**131**	**152**	
Main geographical markets				
Germany	84	131	152	
Rest of Europe	10	-	-	
Rest of World	-	-	-	
Total	**94**	**131**	**152**	
Type of revenue recognition				
At a point in time	94	22	152	
Over a period of time	-	109	-	
Total	**94**	**131**	**152**	

	UMH	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	Other/ Consolidation	**Total**
	2,614	350	-	166	-	-	-79	3,051
	15	-	-	241	-	-	-5	251
	-	230	-	1	-	1	55	287
	-	67	7	-	-	45	26	149
	-	52	7	-	-	2	-3	58
	-	10	-	-	-	-	-	10
	-	-	-	-	-	-	-	34
	-	60	1	21	27	5	-118	192
	-	-	-	-	-	-	-	64
	-	-	-	-	-	-	-	67
	6	-	-	-	-	-	14	32
	2,635	**769**	**15**	**429**	**27**	**53**	**-110**	**4,195**
	2,054	769	15	134	27	6	-122	3,250
	581	-	-	293	-	32	12	928
	-	-	-	2	-	15	-	17
	2,635	**769**	**15**	**429**	**27**	**53**	**-110**	**4,195**
	429	277	11	175	27	7	-230	964
	2,206	492	4	254	-	46	120	3,231
	2,635	**769**	**15**	**429**	**27**	**53**	**-110**	**4,195**

In the financial year, the DZ BANK Group recognized revenue from contracts with customers in an amount of €4 million that had been included in contract liabilities at the beginning of the year (2019: €24 million).

Effects on the balance sheet

Receivables, contract assets, and contract liabilities

Receivables from contracts with customers in which the recognized income is not subject to calculation using the effective interest method are accounted for in application of the rules in IFRS 15. Contract assets and contract liabilities are also recognized as a result of circumstances in which the fulfilment of the counter-performance is conditional on something other than the passage of time.

As at the reporting date, contract liabilities amounted to €3 million (December 31, 2019: €19 million). These arose from the service business.

Changes in receivables, contract assets, and contract liabilities from contracts with customers

€ million	Loans and advances to banks	Loans and advances to customers	Other receivables (other assets)	Contract liabilities
Balance as at Jan. 1, 2019	5	109	139	38
Additions	42	438	2,253	5
Derecognitions	-43	-410	-2,224	-24
Balance as at Dec. 31, 2019	4	137	168	19
Additions	48	427	2,358	3
Derecognitions	-46	-453	-2,349	-19
Other	-	1	1	-
Balance as at Dec. 31, 2020	**6**	**112**	**178**	**3**

Other disclosures on revenue from contracts with customers

Performance obligations

Performance obligations are satisfied predominantly over a period of time. Within any year, performance obligations over time are billed mainly on a monthly or quarterly basis. Performance obligations related to a point in time are satisfied when the service in question has been performed. The related fees are normally due after the service has been provided. In the property development business, the performance obligation is satisfied gradually with the completion of the individual stages of construction. The consideration does not vary for the most part.

If advance payments are received, this leads to the recognition of contract liabilities, which are then reversed again over the maturity of the contract.

>> 94 Government grants

The ECB made additional liquidity available under the TLTRO III program in order to support lending to households and companies during the COVID-19 pandemic. The DZ BANK Group participated in the program with a total drawdown amount of €17,837 million. Of this sum, €14,837 million was attributable to the joint bidder group of DZ BANK AG and TeamBank and €3,000 million to DZ HYP. The total volume of €17,837 million was recognized under deposits from banks on the balance sheet. The term for each tranche is a maximum of 3 years. Early, voluntary partial or full repayment is possible at quarterly intervals from 12 months after disbursement, but not before September 2021.

In accordance with the rules of the TLTRO III program, the interest on the liquidity provided depends on the net lending volume in the specified comparative periods. The interest rate in the reporting-relevant months of 2020 was in any case minus 0.5 percent and was recognized pro rata in net interest income in an amount of €41 million. In the best case, a 0.5 percentage point lower interest rate is achievable in the period June 24, 2020 to June 23, 2021 if the net lending volume of the eligible loans (loans to the non-financial sector in the eurozone, excluding consumer home finance) remains at least constant in the period March 1, 2020 to March 31, 2021. Provided this condition is met, the interest rate will be minus 1.0 percent. In accordance with the ECB's decision on December 10, 2020, the more favorable funding conditions will also apply in the period June 24, 2021 to June 23, 2022 if the net lending volume in respect of the eligible loans remains at least constant in the period October 1, 2020 to December 31, 2021. The possible interest-rate advantage is thus 0.5 percentage points below the market interest rate for the DZ BANK Group and will therefore be accounted for as a government grant in accordance with IAS 20. Under IAS 20, however, it cannot be recognized until there is reasonable assurance that the DZ BANK Group will comply with the condition attaching to it regarding the net lending volume. Based on the information available at the reporting date, there was not reasonable assurance that the joint bidder group of DZ BANK AG and TeamBank met the aforementioned condition for recognition as a government grant. Consequently, the government grants were not recognized for these entities in 2020. By contrast, there is reasonable assurance that DZ HYP meets the condition. The interest-rate advantage will therefore be deferred and recognized over the term of the loan. As a result, an additional €8 million was recognized as a government grant in net interest income in 2020.

Government grants of €17 million were deducted from the carrying amount of investment property held by insurance companies (December 31, 2019: €18 million). The grants are non-interest-bearing, low-interest or forgivable loans.

>> 95 Letters of comfort

Except in the event of political risk, DZ BANK has undertaken to ensure, in proportion to its shareholding for the consolidated entity DZ PRIVATBANK S.A., and in total for DZ HYP, that these companies are able to meet their contractual obligations. These entities are identified in the list of DZ BANK Group's shareholdings (note 105) as being covered by a letter of comfort. DZ BANK has also issued subordinated letters of comfort in respect of DZ BANK Capital Funding LLC I, DZ BANK Capital Funding LLC II, and DZ BANK Capital Funding LLC III, all based in Wilmington. In addition, DZ BANK has issued 5 subordinated letters of comfort in respect of DZ BANK Perpetual Funding (Jersey) Limited, St. Helier, Jersey, each relating to different classes of preferred shares.

>> 96 Employees

Average number of employees by employee group:

	2020	2019
Female employees	**14,282**	**14,033**
Full-time employees	8,750	8,588
Part-time employees	5,532	5,445
Male employees	**17,128**	**16,792**
Full-time employees	15,962	15,707
Part-time employees	1,166	1,085
Total	**31,410**	**30,825**

>> 97 Auditor fees

The total fees charged for 2020 by the independent auditors of the consolidated financial statements, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart, broken down by type of service are as follows:

€ million	2020	2019
Auditing services	12.3	12.2
Other attestation services	0.8	1.0
Tax consultancy services	0.6	0.2
Other services	0.6	1.9
Total	**14.3**	**15.3**

The fees for auditing services comprise expenses relating to the audit of the consolidated financial statements and group management report of DZ BANK as well as the audits of the annual financial statements and management reports of DZ BANK and consolidated subsidiaries carried out by the auditors of the consolidated financial statements. The fees for auditing services also comprise expenses relating to the review by the auditor of the condensed interim consolidated financial statements and interim group management report. The fees for other attestation services comprise the fees charged for the audit in accordance with section 89 of the German Securities Trading Act (WpHG) and services for which the auditors' professional seal must or can be applied. The fees for other services resulted from the auditing of funds of UMH and from consulting services.

>> 98 Remuneration for the Board of Managing Directors and Supervisory Board of DZ BANK

In 2020, overall remuneration for DZ BANK's Board of Managing Directors from the group in accordance with IAS 24.17 amounted to €14.1 million (2019: €12.9 million). This total is broken down into short-term employee benefits of €8.8 million (2019: €8.4 million), post-employment benefits of €3.6 million (2019: €2.9 million), and share-based payments of €1.7 million (2019: €1.6 million). The remuneration for the Board of Managing Directors in 2020 and 2019 included the total bonus awarded to the Board of Managing Directors for the year in question. Supervisory Board remuneration amounted to €1.1 million (2019: €1.1 million) and consisted of payments due in the short term.

The remuneration for the Board of Managing Directors included contributions of €0.3 million (2019: €0.3 million) to defined contribution pension plans. DZ BANK has defined benefit obligations for the members of the Board of Managing Directors amounting to €38.2 million (December 31, 2019: €35.6 million).

In 2020, the total remuneration for the Board of Managing Directors of DZ BANK for the performance of their duties in DZ BANK and its subsidiaries pursuant to section 314 (1) no. 6a HGB was €10.7 million (2019: €10.2 million), while the total remuneration for the Supervisory Board for the performance of these duties amounted to €1.1 million (2019: €1.1 million).

The total remuneration paid to former members of the Board of Managing Directors or their surviving dependants pursuant to section 314 (1) no. 6b HGB amounted to €9.9 million in 2020 (2019: €10.2 million). DZ BANK has defined benefit obligations for former members of the Board of Managing Directors or their surviving dependants amounting to €176.4 million (2019: €181.4 million).

>> 99 Share-based payment transactions

The entities in the DZ BANK Group have entered into share-based payment agreements with the members of the Board of Managing Directors and with certain other salaried employees.

BSH has entered into agreements governing variable remuneration paid over several years with the members of its Board of Managing Directors, the managing directors of Schwäbisch Hall Kreditservice GmbH, the heads of division, and a group of selected managers (risk takers). The amount of variable remuneration depends on the achievement of agreed targets. All of the targets are measured over a period of several years and include the main targets in the corporate strategy. The parameters factored into the remuneration are management-related KPIs that are important to a building society. If the variable remuneration amounts to €50,000 or more, 20 percent of it is paid immediately in the following year and 20 percent after a one-year retention period. 60 percent of the bonus is deferred over a period of up to 5 years, with each payment made after a subsequent retention period of one year. All amounts earmarked for deferred payment are pegged to the change in the enterprise value of the building society. The enterprise value is determined each year by means of a business valuation. If the enterprise value falls, then the retained variable remuneration components are reduced according to specified bands. A rise in the value does not lead to an increase in the deferred remuneration. Negative contributions to profits are taken into account when setting bonuses and pro-rata deferrals and at the end of the retention period, which may cause the variable remuneration to be reduced or not be paid.

The following table shows the changes in unpaid remuneration components at BSH:

€ million	Board of Managing Directors	Risk takers
Unpaid share-based payments as at Jan. 1, 2019	1.7	0.5
Remuneration granted	0.7	0.1
Payment of remuneration granted in 2018	-0.2	-0.1
Payment of remuneration granted in previous years	-0.5	-0.1
Unpaid share-based payments as at Dec. 31, 2019	1.7	0.4
Remuneration granted	0.7	0.1
Payment of remuneration granted in 2019	-0.2	-
Payment of remuneration granted in previous years	-0.5	-0.2
Unpaid share-based payments as at Dec. 31, 2020	**1.7**	**0.3**

R+V has entered into agreements governing variable remuneration paid over several years with the members of its Board of Managing Directors and a group of selected salaried employees (risk takers). The amount of variable remuneration depends on the achievement of agreed targets. A proportion of 60 percent of the variable remuneration for members of the Board of Managing Directors, and 40 percent of that for the selected salaried employees, depends on the change in value of the shares in R+V Versicherung AG. In these arrangements, the share value equates to the fair market value of the unlisted shares in R+V Versicherung AG as at December 31 of the year in question. The portion of the bonus subject to payout restrictions will be paid out after 3 years without any reduction if the share value equates to more than 85 percent of the value at the end of the baseline year. If the share value is between 75 percent and 85 percent of this figure, the bonus portion subject to payout restrictions is reduced by half. If the share value falls below 75 percent, payment of the part of the bonus subject to payout restrictions is canceled in full.

The following table shows the changes in unpaid remuneration components at R+V:

€ million	Board of Managing Directors	Risk takers
Unpaid share-based payments as at Jan. 1, 2019	1.3	0.2
Remuneration granted	0.8	0.1
Unpaid share-based payments as at Dec. 31, 2019	2.1	0.3
Remuneration granted	0.9	0.1
Payment of remuneration granted in previous years	-0.6	-0.1
Unpaid share-based payments as at Dec. 31, 2020	**2.4**	**0.3**

TeamBank has entered into agreements governing variable remuneration paid over several years with the members of its Board of Managing Directors. The amount of variable remuneration depends on the achievement of agreed targets. 20 percent of the variable remuneration is paid immediately in the following year after it has been set. Another 20 percent is subject to a retention period of one calendar year. 50 percent of both tranches depends on the long-term changes in the enterprise value of TeamBank. The remaining 60 percent is paid in 5 tranches, each of 12 percent, within 5 calendar years. The change in the enterprise value of TeamBank is used to measure long-term performance. The value is determined using the income capitalization approach.

The following table shows the changes in unpaid remuneration components at TeamBank:

€ million	Board of Managing Directors
Unpaid share-based payments as at Jan. 1, 2019	1.3
Remuneration granted	0.5
Payment of remuneration granted in 2018	-0.1
Payment of remuneration granted in previous years	-0.3
Unpaid share-based payments as at Dec. 31, 2019	1.4
Remuneration granted	0.4
Payment of remuneration granted in 2019	-0.1
Payment of remuneration granted in previous years	-0.4
Unpaid share-based payments as at Dec. 31, 2020	**1.3**

DZ BANK has entered into agreements governing variable remuneration paid over several years with the members of its Board of Managing Directors, heads of division, and a group of selected salaried employees (risk takers). The amount of variable remuneration depends on the achievement of agreed targets. In the case of members of the Board of Managing Directors and heads of division, 80 percent of the total variable remuneration is deferred over a period of up to 6 years from when the bonus is determined. For risk takers below the level of head of division with variable remuneration of more than €130,000, 80 percent of the total variable remuneration is deferred over a period of up to 4 years from when the bonus is determined. For risk takers below the level of head of division with variable remuneration of more than €50,000 and up to €130,000, 70 percent of the total variable remuneration is deferred over a period of up to 4 years from when the bonus is determined. Amounts are paid out after taking into account deferral or retention periods. The deferred portion of the variable remuneration may be reduced or even fully withdrawn if there is an adverse change in the value of DZ BANK shares or if there are negative contributions to profits from DZ BANK, individual divisions, or individual activities. A rise in the value of DZ BANK shares does not lead to an increase in the deferred remuneration. The value of the shares is determined each year by means of an independent business valuation. The deferred portion of the variable remuneration for members of the Board of Managing Directors is reduced by 50 percent if the share price falls by between 7.5 percent and 12.5 percent. If the share price drops by more than 12.5 percent, the deferred portion of the variable remuneration is canceled. In the case of heads of division and risk takers below the level of head of division, the deferred portion of the variable remuneration is reduced by 25 percent if the share price falls by between 15 percent and 20 percent. If the share price drops by between 20 percent and 25 percent, the deferred portion of the variable remuneration is reduced by 50 percent. If the share price drops by more than 25 percent, the deferred portion of the variable remuneration is canceled in full. If the change in the share price does not reach the specified threshold values, the deferred portion of the variable remuneration is not reduced as a result of the change in the share price. Based on a value per DZ BANK share of €9.15 as at December 31, 2016, a value per share of €8.65 as at December 31, 2017 (adjusted share value following the merger), a value per share of €8.65 as at December 31, 2018, a value per share of €8.35 as at December 31, 2019, and a value per share of €8.05 as at December 31, 2020, it can currently be assumed that the deferred remuneration will be paid in full. No options have been granted for these groups of employees. Share-based payments are granted in the year after they have been earned.

The following summary shows the change in unpaid share-based payment components at DZ BANK:

€ million	Board of Managing Directors	Risk takers
Unpaid share-based payments as at Jan. 1, 2019	3.2	20.5
Remuneration granted	1.5	6.1
Payment of remuneration granted in 2018	-0.5	-3.5
Payment of remuneration granted in previous years	-1.3	-4.6
Unpaid share-based payments as at Dec. 31, 2019	2.9	18.5
Remuneration granted	1.6	5.8
Payment of remuneration granted in 2019	-0.4	-2.2
Payment of remuneration granted in previous years	-1.3	-5.3
Unpaid share-based payments as at Dec. 31, 2020	**2.8**	**16.8**

DZ HYP has entered into agreements governing variable remuneration paid over several years with the members of its Board of Managing Directors and a group of selected salaried employees (risk takers). The level of variable performance-based remuneration is based on the achievement of quantitative and qualitative targets derived from the corporate strategy in the form of group, bank, area of board responsibility, and individual targets. 20 percent of the variable remuneration is paid immediately in the following year after the annual financial statements have been adopted and the variable remuneration has been set by the Supervisory Board. Payment of the remaining 80 percent of the bonus set for the previous year is spread out over a period of up to 6 years in total, taking into account deferral and retention periods. All amounts earmarked for deferred payment are linked to the long-term performance of DZ HYP because they are pegged to the value of its shares. Negative contributions to profits are taken into account when setting bonuses and pro-rata deferrals, which may cause the variable remuneration to be reduced or cancelled.

The heads of division are classified as risk takers. Individual contractual agreements on variable performance-based remuneration have been reached with the heads of division. The variable performance-based remuneration is set with reference to a contractually agreed target bonus. Quantitative and qualitative targets derived from the corporate strategy in the form of group, overall bank, divisional, and individual targets are assessed and used to determine the actual bonus level. If the variable performance-based remuneration amounts to €50,000 or more, 20 percent of it is paid immediately in the following year. The other 80 percent of the calculated bonus is deferred over a period of up to 6 years. Of this deferred amount, 50 percent is pegged to the long-term performance of DZ HYP, which is calculated on the basis of the enterprise value. Negative contributions to profits are taken into account when setting bonuses and pro-rata deferrals.

The following table shows the changes in unpaid remuneration components at DZ HYP:

€ million	Board of Managing Directors	Risk takers
Unpaid share-based payments as at Jan. 1, 2019	1.1	0.4
Remuneration granted	0.6	0.2
Payment of remuneration granted in 2018	-0.2	-
Payment of remuneration granted in previous years	-0.3	-0.1
Unpaid share-based payments as at Dec. 31, 2019	1.2	0.5
Remuneration granted	0.4	0.2
Payment of remuneration granted in 2019	-0.2	-0.1
Payment of remuneration granted in previous years	-0.3	-0.1
Unpaid share-based payments as at Dec. 31, 2020	**1.1**	**0.5**

DZ PRIVATBANK has entered into an agreement on variable remuneration components with the members of its Board of Managing Directors. The level of variable remuneration is based on quantitative and qualitative targets derived from the corporate strategy in the form of group, bank, area of board responsibility, and individual targets. The variable remuneration is paid out over 6 years. The initial payout amount of 20 percent is paid out immediately after the variable remuneration amount has been set. A further 20 percent is subject to a retention period of one year. The remaining 60 percent is spread out over a period of 5 years. To this end, the retained component is subdivided into 5 equal portions. All deferred payouts are linked to the long-term change in the enterprise value of DZ PRIVATBANK. The enterprise value is determined each year by means of an independent business valuation. If the enterprise value falls, then the retained variable remuneration components are reduced according to specified bands.

The following table shows the changes in unpaid remuneration components at DZ PRIVATBANK:

€ million	Board of Managing Directors
Unpaid share-based payments as at Jan. 1, 2019	2.7
Remuneration granted	0.4
Payment of remuneration granted in 2018	-0.1
Payment of remuneration granted in previous years	-0.4
Reduction of share-based payments	-0.9
Unpaid share-based payments as at Dec. 31, 2019	1.7
Remuneration granted	0.4
Payment of remuneration granted in 2019	-0.1
Payment of remuneration granted in previous years	-0.3
Reduction of share-based payments	-0.1
Unpaid share-based payments as at Dec. 31, 2020	**1.6**

In addition to a basic salary, the remuneration system for the Board of Managing Directors of VR Smart Finanz includes a variable remuneration component. It is determined on the basis of quantitative and qualitative targets derived from the corporate strategy in the form of group, bank, area of board responsibility, and individual targets. A three-year period is applied as the basis for calculating target achievement. The maximum variable remuneration is set in the event of full achievement of each individual target. All amounts earmarked for deferred payment are linked to the long-term performance of VR Smart Finanz because they are pegged to its enterprise value. Negative contributions to profits are taken into account when setting the amount of variable remuneration and pro-rata deferrals, which may cause the variable remuneration to be reduced or cancelled.

The following table shows the changes in unpaid remuneration components at VR Smart Finanz:

€ million	Board of Managing Directors
Unpaid share-based payments as at Jan. 1, 2019	1.8
Remuneration granted	0.7
Payment of remuneration granted in 2018	-0.1
Payment of remuneration granted in previous years	-0.5
Unpaid share-based payments as at Dec. 31, 2019	1.9
Remuneration granted	0.3
Payment of remuneration granted in 2019	-0.1
Payment of remuneration granted in previous years	-0.5
Reduction of share-based payments	-0.1
Unpaid share-based payments as at Dec. 31, 2020	**1.5**

In 2020, the agreements described above gave rise to expenses for share-based payment transactions in the DZ BANK Group of €10.9 million (2019: €13.6 million (amount restated; see note 2)). As at December 31, 2020, the provisions recognized for share-based payment transactions in the DZ BANK Group amounted to €49.3 million (December 31, 2019: €51.9 million (amount restated; see note 2)).

>> 100 Related party disclosures

DZ BANK enters into transactions with related parties (persons or entities) as part of its ordinary business activities. All of this business is transacted on an arm's length basis. Most of these transactions involve typical banking products and financial services.

Transactions with related parties (entities)

€ million	Dec. 31, 2020	Dec. 31, 2019
Loans and advances to banks	**60**	**34**
to joint ventures	60	34
Loans and advances to customers	**193**	**126**
to subsidiaries	47	41
to joint ventures	9	12
to associates	81	73
to other related parties (entities)	56	-
Investments	**5**	**5**
of joint ventures	5	5
Investments held by insurance companies	**104**	**98**
of subsidiaries	104	98
Property, plant and equipment, and investment property	**1**	**-**
of subsidiaries	1	-
Other assets	**78**	**43**
of subsidiaries	26	27
of pension plans for the benefit of employees	52	16
Deposits from banks	**169**	**166**
owed to joint ventures	169	166
Deposits from customers	**203**	**232**
owed to subsidiaries	161	230
owed to associates	4	2
owed to other related parties (entities)	38	-
Financial liabilities held for trading	**7**	**-**
of other related parties (entities)	7	-
Other liabilities	**17**	**18**
of subsidiaries	10	10
of joint ventures	2	3
of pension plans for the benefit of employees	5	5
Subordinated capital	**19**	**22**
of pension plans for the benefit of employees	18	22
of other related parties (entities)	1	-

€ million	Dec. 31, 2020	Dec. 31, 2019
Financial guarantee contracts	**7**	**6**
for subsidiaries	7	6
Loan commitments	**58**	**322**
to subsidiaries	46	54
to joint ventures	10	266
to associates	2	2

Income of €10 million (2019: income of €8 million) in the total reported net interest income, expenses of €3 million (2019: income of €22 million) in the total reported net fee and commission income, and expenses of €28 million (2019: expenses of €35 million) in the total reported net income from insurance business were attributable to transactions with related parties (entities).

Transactions with related parties (persons)

Related parties (persons) are key management personnel who are directly or indirectly responsible for the planning, management, and supervision of the activities of DZ BANK, as well as their close family members. For the purposes of IAS 24, the DZ BANK Group considers the members of the Board of Managing Directors and the members of the Supervisory Board to be key management personnel. As at December 31, 2020, the DZ BANK Group's loans and loan commitments to related parties (persons) amounted to €0.7 million (December 31, 2019: €0.8 million).

Like unrelated parties, key management personnel and their close family members also have the option of obtaining further financial services from the DZ BANK Group, for example in the form of insurance contracts, home savings contracts, and leases. Where they made use of this option, the transactions were carried out on an arm's-length basis.

>> 101 Events after the balance sheet date

In a press release dated January 12, 2021, it was announced that, in the first half of 2021, DZ BANK intends to call and fully repay the bonds issued by DZ BANK Perpetual Funding Issuer (Jersey) Limited. Also in a press release dated January 12, 2021, it was announced that, in the first half of 2021, DZ BANK intends to call and fully repay the non-cumulative trust preferred securities issued by DZ BANK Capital Funding Trust I, DZ BANK Capital Funding Trust II, and DZ BANK Capital Funding Trust III. The carrying amount of the securities to be called is €1,410 million.

As a result of their being called, the securities no longer fulfill the definition of an equity instrument. From this date, the securities can no longer be reported under non-controlling interests within equity. Instead, they have to be reclassified to liabilities until the date on which they are repaid. On the date on which the issued bonds and issued non-cumulative trust preferred securities are repaid in full in the first half of 2021, the aforementioned companies and the associated companies DZ BANK Capital Funding LLC I, DZ BANK Capital Funding LLC II, and DZ BANK Capital Funding LLC III, all Wilmington, Delaware, and DZ BANK Perpetual Funding (Jersey) Limited, St. Helier, Jersey, will be deconsolidated.

>> 102 Board of Managing Directors

Uwe Fröhlich
(Co-Chief Executive Officer)
Responsibilities: Cooperative Banks/Verbund; Communications & Marketing; Research and Economics; Strategy & Group Development; Structured Finance

Dr. Cornelius Riese
(Co-Chief Executive Officer)
Responsibilities: Group Audit; Legal; Strategy & Group Development

Uwe Berghaus
Responsibilities: Corporate Banking Baden-Württemberg; Corporate Banking Bavaria; Corporate Banking North and East; Corporate Banking West/Central; Investment Promotion; Central Corporate Banking

Dr. Christian Brauckmann
Responsibilities: IT; Services & Organisation

Ulrike Brouzi
Responsibilities: Bank Finance; Compliance; Group Finance; Group Financial Services

Wolfgang Köhler
Responsibilities: Capital Markets Trading; Capital Markets Institutional Clients; Capital Markets Retail Clients; Group Treasury

Michael Speth
Responsibilities: Group Risk Controlling; Credit; Credit Services

Thomas Ullrich
Responsibilities: Group Human Resources; Operations; Payments & Accounts; Transaction Management

>> 103 Supervisory Board

Henning Deneke-Jöhrens
(Chairman of the Supervisory Board)
Chief Executive Officer
Volksbank eG Hildesheim-Lehrte-Pattensen

Ulrich Birkenstock
(Deputy Chairman of the Supervisory Board)
Employee
R+V Allgemeine Versicherung AG

Martin Eul
(Deputy Chairman of the Supervisory Board)
Chief Executive Officer
Dortmunder Volksbank eG

Heiner Beckmann
Senior manager
R+V Allgemeine Versicherung AG

Hermann Buerstedde
Employee
Union Asset Management Holding AG
(Member of the Supervisory Board until May 27, 2020)

Uwe Goldstein
Bank director (ret.)
(Member of the Supervisory Board until May 27, 2020)

Timm Häberle
Chief Executive Officer
VR-Bank Neckar-Enz eG

Dr. Peter Hanker
Spokesman of the Board of Managing Directors
Volksbank Mittelhessen eG

Andrea Hartmann
Employee
Bausparkasse Schwäbisch Hall AG

Pilar Herrero Lerma
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank

Dr. Dierk Hirschel
Head of the Economic Policy Division
ver.di Bundesverwaltung

Marija Kolak
President
Bundesverband der Deutschen Volksbanken
und Raiffeisenbanken e.V. (BVR)

Renate Mack
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank

Rainer Mangels
Employee
R+V Rechtsschutz-
Schadenregulierungs-GmbH

Sascha Monschauer
Chief Executive Officer
Volksbank RheinAhrEifel eG
(Member of the Supervisory Board since May 27, 2020)

Rolf Dieter Pogacar
Employee
R+V Allgemeine Versicherung AG
(Member of the Supervisory Board since May 27, 2020)

Stephan Schack
Chief Executive Officer
Volksbank Raiffeisenbank eG, Itzehoe

Gregor Scheller
Chief Executive Officer
VR Bank Bamberg-Forchheim eG

Uwe Spitzbarth
Departmental coordinator
ver.di Bundesverwaltung

Sigrid Stenzel
Labor union secretary
Social security department
ver.di Niedersachsen-Bremen

Ingo Stockhausen
Chief Executive Officer
Volksbank Oberberg eG

Dr. Wolfgang Thomasberger
Chief Executive Officer
VR Bank Rhein-Neckar eG

>> 104 Supervisory mandates held by members of the Board of Managing Directors and employees

Within DZ BANK

As at December 31, 2020, members of the Board of Managing Directors and employees also held mandates on the statutory supervisory bodies of major companies. These and other notable mandates are listed below. Companies included in the consolidation are indicated with an asterisk (*).

Members of the Board of Managing Directors

Uwe Fröhlich (Co-Chief Executive Officer)	DZ HYP AG, Hamburg and Münster (*) Chairman of the Supervisory Board
	DZ PRIVATBANK S.A., Strassen (*) Chairman of the Supervisory Board
	VR Smart Finanz AG, Eschborn (*) Chairman of the Supervisory Board
Dr. Cornelius Riese (Co-Chief Executive Officer)	Bausparkasse Schwäbisch Hall AG, Schwäbisch Hall (*) Chairman of the Supervisory Board
	R+V Versicherung AG, Wiesbaden (*) Chairman of the Supervisory Board
	TeamBank AG Nürnberg, Nuremberg (*) Chairman of the Supervisory Board
	Union Asset Management Holding AG, Frankfurt am Main (*) Chairman of the Supervisory Board
Uwe Berghaus	DZ HYP AG, Hamburg and Münster (*) Member of the Supervisory Board
	EDEKABANK AG, Hamburg Member of the Supervisory Board

Dr. Christian Brauckmann	Deutsche WertpapierService Bank AG, Frankfurt am Main Member of the Supervisory Board
	DZ PRIVATBANK S.A., Strassen (*) Deputy Chairman of the Supervisory Board
	Fiducia & GAD IT AG, Frankfurt am Main Member of the Supervisory Board
Ulrike Brouzi	Bausparkasse Schwäbisch Hall AG, Schwäbisch Hall (*) Member of the Supervisory Board
	R+V Allgemeine Versicherung AG, Wiesbaden (*) Member of the Supervisory Board
	R+V Lebensversicherung AG, Wiesbaden (*) Member of the Supervisory Board
	Salzgitter AG, Salzgitter Member of the Supervisory Board
	Union Asset Management Holding AG, Frankfurt am Main (*) Member of the Supervisory Board
Wolfgang Köhler	DVB Bank SE, Frankfurt am Main (*) Chairman of the Supervisory Board
	R+V Lebensversicherung AG, Wiesbaden (*) Member of the Supervisory Board
Michael Speth	BAG Bankaktiengesellschaft, Hamm Member of the Supervisory Board
	DVB Bank SE, Frankfurt am Main (*) Deputy Chairman of the Supervisory Board
	DZ HYP AG, Hamburg and Münster (*) Member of the Supervisory Board
	R+V Versicherung AG, Wiesbaden (*) Member of the Supervisory Board
	VR Smart Finanz AG, Eschborn (*) Deputy Chairman of the Supervisory Board

Thomas Ullrich	Deutsche WertpapierService Bank AG, Frankfurt am Main Deputy Chairman of the Supervisory Board TeamBank AG Nürnberg, Nuremberg (*) Deputy Chairman of the Supervisory Board VR Payment GmbH, Frankfurt am Main (*) Chairman of the Supervisory Board

DZ BANK employees

Arnd Volker Bernbeck	DVB Bank SE, Frankfurt am Main (*) Member of the Supervisory Board
Rolf Büscher	DVB Bank SE, Frankfurt am Main (*) Member of the Supervisory Board ReiseBank AG, Frankfurt am Main (*) Member of the Supervisory Board
Johannes Koch	Deutsche WertpapierService Bank AG, Frankfurt am Main Member of the Supervisory Board (since January 1, 2021)
Winfried Münch	AKA Ausfuhrkredit-Gesellschaft mbH, Frankfurt am Main Member of the Supervisory Board
Claudio Ramsperger	Cassa Centrale Banca – Credito Cooperativo Italiano S.p.A., Trento Member of the Board of Directors
Gregor Roth	ReiseBank AG, Frankfurt am Main (*) Chairman of the Supervisory Board VR Payment GmbH, Frankfurt am Main (*) Member of the Supervisory Board

Peter Tenbohlen	Deutsche WertpapierService Bank AG, Frankfurt am Main Member of the Supervisory Board
Dr. Ulrich Walter	Deutsche WertpapierService Bank AG, Frankfurt am Main Member of the Supervisory Board
Dagmar Werner	Banco Cooperativo Español S.A., Madrid Member of the Board of Directors

In the DZ BANK Group

As at December 31, 2020, members of the Boards of Managing Directors and employees also held mandates on the statutory supervisory bodies of the following major companies in Germany. Companies included in the consolidation are indicated with an asterisk (*).

Reinhard Klein Chief Executive Officer Bausparkasse Schwäbisch Hall AG	Schwäbisch Hall Kreditservice GmbH, Schwäbisch Hall (*) Chairman of the Supervisory Board
Peter Magel Member of the Board of Managing Directors Bausparkasse Schwäbisch Hall AG	Schwäbisch Hall Kreditservice GmbH, Schwäbisch Hall (*) Member of the Supervisory Board
Claudia Klug General Executive Manager Bausparkasse Schwäbisch Hall AG	Schwäbisch Hall Facility Management GmbH, Schwäbisch Hall Chairwoman of the Supervisory Board

Dr. Norbert Rollinger Chief Executive Officer R+V Versicherung AG	Condor Lebensversicherungs-AG, Hamburg (*) Chairman of the Supervisory Board
	KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*) Chairman of the Supervisory Board
	KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*) Chairman of the Supervisory Board
	Raiffeisendruckerei GmbH, Neuwied Member of the Supervisory Board
	R+V Allgemeine Versicherung AG, Wiesbaden (*) Chairman of the Supervisory Board
	R+V Krankenversicherung AG, Wiesbaden (*) Chairman of the Supervisory Board
	R+V Lebensversicherung AG, Wiesbaden (*) Chairman of the Supervisory Board
	R+V Pensionsfonds AG, Wiesbaden (*) Chairman of the Supervisory Board
	R+V Service Center GmbH, Wiesbaden Chairman of the Supervisory Board
	SECURITAS HOLDING GmbH, Berlin Member of the Supervisory Board
	Union Asset Management Holding AG, Frankfurt am Main (*) Member of the Supervisory Board
Claudia Andersch Member of the Board of Managing Directors R+V Versicherung AG	CHEMIE Pensionsfonds AG, Munich (*) Member of the Supervisory Board
	Condor Lebensversicherungs-AG, Hamburg (*) Member of the Supervisory Board
	R+V Pensionsfonds AG, Wiesbaden (*) Deputy Chairwoman of the Supervisory Board
	R+V Pensionskasse AG, Wiesbaden (*) Chairwoman of the Supervisory Board

Jens Hasselbächer Member of the Board of Managing Directors R+V Versicherung AG	R+V Direktversicherung AG, Wiesbaden (*) Deputy Chairman of the Supervisory Board R+V Krankenversicherung AG, Wiesbaden (*) Deputy Chairman of the Supervisory Board
Dr. Christoph Lamby Member of the Board of Managing Directors R+V Versicherung AG	Condor Allgemeine Versicherungs-AG, Hamburg (*) Chairman of the Supervisory Board Extremus Versicherungs-AG, Cologne Member of the Supervisory Board KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*) Member of the Supervisory Board KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*) Member of the Supervisory Board R+V Pensionskasse AG, Wiesbaden (*) Member of the Supervisory Board
Tillmann Lukosch Member of the Board of Managing Directors R+V Versicherung AG	Condor Allgemeine Versicherungs-AG, Hamburg (*) Member of the Supervisory Board KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*) Member of the Supervisory Board KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*) Member of the Supervisory Board R+V Direktversicherung AG, Wiesbaden (*) Member of the Supervisory Board
Dr. Edgar Martin Member of the Board of Managing Directors R+V Versicherung AG	GDV Dienstleistungs-GmbH, Hamburg Member of the Supervisory Board R+V Direktversicherung AG, Wiesbaden (*) Chairman of the Supervisory Board Sprint Sanierung GmbH, Cologne (*) Chairman of the Supervisory Board

Julia Merkel Member of the Board of Managing Directors R+V Versicherung AG	KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*) Member of the Supervisory Board R+V Pensionskasse AG, Wiesbaden (*) Member of the Supervisory Board Südzucker AG, Mannheim Member of the Supervisory Board
Marc René Michallet Member of the Board of Managing Directors R+V Versicherung AG	CHEMIE Pensionsfonds AG, Munich (*) Member of the Supervisory Board Condor Allgemeine Versicherungs-AG, Hamburg (*) Deputy Chairman of the Supervisory Board Condor Lebensversicherungs-AG, Hamburg (*) Deputy Chairman of the Supervisory Board GWG Gesellschaft für Wohnungs- und Gewerbebau Baden-Württemberg AG, Stuttgart (*) Chairman of the Supervisory Board KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*) Member of the Supervisory Board KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*) Member of the Supervisory Board R+V Pensionsfonds AG, Wiesbaden (*) Member of the Supervisory Board
Christian Polenz Deputy Chief Executive Officer TeamBank AG Nürnberg	SCHUFA Holding AG, Wiesbaden Chairman of the Supervisory Board

Hans Joachim Reinke Chief Executive Officer Union Asset Management Holding AG	Union Investment Institutional GmbH, Frankfurt am Main (*) Deputy Chairman of the Supervisory Board Union Investment Privatfonds GmbH, Frankfurt am Main (*) Chairman of the Supervisory Board Union Investment Real Estate GmbH, Hamburg (*) Deputy Chairman of the Supervisory Board
Alexander Lichtenberg Member of the Board of Managing Directors Union Asset Management Holding AG	Union Investment Service Bank AG, Frankfurt am Main (*) Chairman of the Supervisory Board
Alexander Schindler Member of the Board of Managing Directors Union Asset Management Holding AG	Quoniam Asset Management GmbH, Frankfurt am Main (*) Chairman of the Supervisory Board Union Investment Institutional GmbH, Frankfurt am Main (*) Chairman of the Supervisory Board Union Investment Institutional Property GmbH, Hamburg (*) Deputy Chairman of the Supervisory Board
Jens Wilhelm Member of the Board of Managing Directors Union Asset Management Holding AG	Union Investment Institutional Property GmbH, Hamburg (*) Chairman of the Supervisory Board Union Investment Privatfonds GmbH, Frankfurt am Main (*) Deputy Chairman of the Supervisory Board Union Investment Real Estate GmbH, Hamburg (*) Chairman of the Supervisory Board Union Investment Service Bank AG, Hamburg (*) Deputy Chairman of the Supervisory Board
Sonja Albers Employee Union Asset Management Holding AG	Union Investment Service Bank AG, Frankfurt am Main (*) Member of the Supervisory Board

André Haagmann Member of the Board of Managing Directors Union Investment Institutional GmbH	Quoniam Asset Management GmbH, Frankfurt am Main (*) Deputy Chairman of the Supervisory Board
Jörn Stobbe Member of the Board of Managing Directors Union Investment Institutional Property GmbH and Union Investment Real Estate GmbH	1. FC Köln GmbH & Co. KGaA, Cologne Chairman of the Supervisory Board
Jörg Kotzenbauer Chief Executive Officer ZBI Partnerschafts-Holding GmbH	ZBI Fondsmanagement AG, Erlangen (*) Chairman of the Supervisory Board
Dr. Bernd Ital Member of the Board of Managing Directors ZBI Partnerschafts-Holding GmbH	ZBI Fondsmanagement AG, Erlangen (*) Member of the Supervisory Board

>> 105 List of shareholdings

SUBSIDIARIES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
AER Holding N.V. 1)	Willemstad, Curaçao	100.00		19	-
AGIMA Aktiengesellschaft für Immobilien-Anlage 5)	Frankfurt am Main	100.00		84,025	-
APZ Beteiligungs GmbH 1)	Darmstadt	81.70		2,979	342
APZ CarMotion GmbH 1)	Fischamend, Austria	100.00		-82	-92
APZ GmbH 1)	Darmstadt	100.00		7,135	-
APZ Mobilty GmbH 1)	Darmstadt	100.00		n/a	n/a
Aquila Aircraft Leasing Ltd. 1)	Dublin, Ireland	-		-20	-
Assimoco S.p.A. 1)	Milan, Italy	68.94		239,230	28,280
Assimoco Vita S.p.A. 1)	Milan, Italy	82.14		185,884	18,605
attrax S.A. 1)	Luxembourg, Luxembourg	100.00		58,228	25,188
Aufbau und Handelsgesellschaft mbH 1)	Stuttgart	94.90		525	-
AXICA Kongress- und Tagungszentrum Pariser Platz 3 GmbH 5)	Berlin	100.00		26	-
BankingGuide GmbH	Düsseldorf	60.00		n/a	n/a
Bathgate Trading Opco LLC 1)	Majuro, Marshall Islands	-		1	-
BAUFINEX GmbH 1)	Schwäbisch Hall	70.00		1,856	197
BAUFINEX Service GmbH 1)	Berlin	50.00	75.00	n/a	n/a
Bausparkasse Schwäbisch Hall Aktiengesellschaft - Bausparkasse der Volksbanken und Raiffeisenbanken - 5)	Schwäbisch Hall	97.05		1,812,302	-
Berwick Shipping LLC 1)	Majuro, Marshall Islands	-		-97	-1
Beteiligungsgesellschaft Westend 1 mbH & Co. KG 1)	Frankfurt am Main	94.90		18,169	684
BGP Asset Management GmbH i.L. 1)	Berlin	100.00		n/a	n/a
BGP Hausverwaltung GmbH i.L. 1)	Berlin	100.00		n/a	n/a
BGP Immobilienservice GmbH i.L. 1)	Berlin	100.00		n/a	n/a
Braveheart Shipping Holdco LLC 1)	Majuro, Marshall Islands	-		-	-
Braveheart Shipping Opco LLC 1)	Majuro, Marshall Islands	-		-229	-120
BWG Baugesellschaft Württembergischer Genossenschaften mbH 1)	Stuttgart	94.78		9,965	-
Canadian Iron Ore Railcar Leasing LP 1)	Toronto, Canada	-		-4,928	-2,347
Canadian Iron Ore Railcar Partner Ltd 1)	Toronto, Canada	-		-4,928	-2,347
carexpert Kfz-Sachverständigen GmbH 1)	Walluf	60.00		4,485	14
CHEMIE Pensionsfonds AG 1)	Wiesbaden	100.00		30,318	2,000
Chiefs Aircraft Holding (Malta) Limited 1)	Floriana, Malta	-		2,238	-2,696
CI CONDOR Immobilien GmbH 1)	Hamburg	100.00		20,100	-
compertis Beratungsgesellschaft für betriebliches Vorsorgemanagement mbH 1)	Wiesbaden	100.00		4,724	969
COMPLINA GmbH 1)	Wiesbaden	100.00		140	25
Condor Allgemeine Versicherungs-Aktiengesellschaft 1) 5)	Hamburg	100.00		41,762	-
Condor Dienstleistungs GmbH 1)	Hamburg	100.00		405	49
Condor Lebensversicherungs-Aktiengesellschaft 1)	Hamburg	94.98		51,742	-
Container Investment Fund I LLC 1)	Majuro, Marshall Islands	-		-25,093	765
Cruise Ship InvestCo LLC 1)	Majuro, Marshall Islands	-		-	-
DCAL Aircraft Malta Ltd. 1)	Floriana, Malta	-		17,180	2,181
DEGEKONZEPT Grundstücksverwaltungsgesellschaft mbH 1)	Eschborn	100.00		90	14
Deucalion Capital I (UK) Ltd. 1)	London, UK	-		486	517
Deucalion Capital II (MALTA) Limited 1)	Valletta, Malta	-		1	23
Deucalion Capital II (UK) Ltd. 1)	London, UK	-		-	-
Deucalion Capital II Limited 1)	George Town, Cayman Islands	-		-2,128	-189
Deucalion Capital VI Limited 1)	George Town, Cayman Islands	-		-231	-
Deucalion Capital VIII Limited 1)	George Town, Cayman Islands	-		7,477	-2,964
Deucalion Ltd. 1)	George Town, Cayman Islands	-		29,782	6,168
DEVIF-Fonds Nr. 150 Deutsche Gesellschaft für Investmentfonds 1)	Frankfurt am Main	-		n/a	n/a
DEVIF-Fonds Nr. 2 Deutsche Gesellschaft für Investmentfonds 1)	Frankfurt am Main	-		n/a	n/a
DEVIF-Fonds Nr. 250 Deutsche Gesellschaft für Investmentfonds 1)	Frankfurt am Main	-		n/a	n/a
DEVIF-Fonds Nr. 500 Deutsche Gesellschaft für Investmentfonds 1)	Frankfurt am Main	-		n/a	n/a
DEVIF-Fonds Nr. 528 Deutsche Gesellschaft für Investmentfonds 1)	Frankfurt am Main	-		n/a	n/a

SUBSIDIARIES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
DEVIF-Fonds Nr. 60 Deutsche Gesellschaft für Investmentfonds 1)	Frankfurt am Main	-		n/a	n/a
DG Participacoes Ltda. 1)	São Paulo, Brazil	100.00		-	-
Dilax Beteiligungs Verwaltungsgesellschaft mbH 1)	Berlin	100.00		25	-
Dilax Beteiligungsgesellschaft mbH & Co. KG 1)	Berlin	92.39		2,537	-156
Dilax France SAS 1)	Valence, France	100.00		506	174
Dilax Intelcom AG 1)	Ermatingen, Switzerland	100.00		441	137
Dilax Intelcom GmbH 1)	Berlin	72.01		-512	427
Dilax Intelcom Iberica S.L.U. 1)	Madrid, Spain	100.00		317	117
Dilax Management Investment Reserve GmbH 1)	Berlin	100.00		231	-3
Dilax Management Investment Verwaltungsgesellschaft mbH 1)	Berlin	100.00		19	-2
Dilax Management Investmentgesellschaft mbH & Co. KG 1)	Berlin	99.50		186	-9
Dilax Systems Inc. 1)	Saint Lambert, Canada	100.00		720	143
Dilax Systems UK Ltd. 1)	London, UK	100.00		-1,750	-196
DILAX Systems US Inc 1)	Wilmington, USA	100.00		7	2
DVB Bank America N.V. 1)	Willemstad, Curaçao	100.00		111,092	17,100
DVB Bank SE 5)	Frankfurt am Main	100.00		368,199	-
DVB Capital Markets LLC i.L. 1)	New York, USA	100.00		-	-424
DVB Group Merchant Bank (Asia) Ltd. 1)	Singapore, Singapore	100.00		180,009	-7,620
DVB Transport Finance Limited 1)	London, UK	100.00		45,524	553
DVG Deutsche Vermögensverwaltungs-Gesellschaft mit beschränkter Haftung 5)	Frankfurt am Main	100.00		82	-
DZ BANK Capital Funding LLC I 2) 4)	Wilmington, USA	100.00		300,846	6,407
DZ BANK Capital Funding LLC II 2) 4)	Wilmington, USA	100.00		500,584	6,058
DZ BANK Capital Funding LLC III 2) 4)	Wilmington, USA	100.00		350,239	3,796
DZ BANK Capital Funding Trust I	Wilmington, USA	-	100.00	300,001	6,456
DZ BANK Capital Funding Trust II	Wilmington, USA	-	100.00	500,001	6,140
DZ BANK Capital Funding Trust III	Wilmington, USA	-	100.00	350,001	3,840
DZ BANK Perpetual Funding (Jersey) Limited 4)	St. Helier, Jersey	-	100.00	260,300	1,217
DZ BANK Perpetual Funding Issuer (Jersey) Limited	St. Helier, Jersey	-		-	-
DZ BANK Sao Paulo Representacao Ltda. 2)	São Paulo, Brazil	100.00		312	32
DZ Beteiligungsgesellschaft mbH Nr. 11 5)	Frankfurt am Main	100.00		6,620	-
DZ Beteiligungsgesellschaft mbH Nr. 14 5)	Frankfurt am Main	100.00		51	-
DZ Beteiligungsgesellschaft mbH Nr. 18 5)	Frankfurt am Main	100.00		64,726	-
DZ Beteiligungsgesellschaft mbH Nr. 21 5)	Frankfurt am Main	100.00		25	-
DZ Beteiligungsgesellschaft mbH Nr. 22	Frankfurt am Main	100.00		18	-2
DZ Beteiligungsgesellschaft mbH Nr. 23 5)	Frankfurt am Main	100.00		25	-
DZ Beteiligungsgesellschaft mbH Nr. 24	Frankfurt am Main	100.00		18	-2
DZ CompliancePartner GmbH 5)	Neu-Isenburg	100.00		5,548	-
DZ FINANCIAL MARKETS LLC	New York, USA	100.00		3,694	-212
DZ Gesellschaft für Grundstücke und Beteiligungen mbH 5)	Frankfurt am Main	100.00		1,461	-
DZ HYP AG 3) 5)	Hamburg/Münster	96.39		1,762,331	-
DZ Immobilien + Treuhand GmbH 5)	Münster	94.50		4,055	-
DZ PRIVATBANK (Schweiz) AG 1)	Zurich, Switzerland	100.00		164,631	692
DZ PRIVATBANK S.A. 3)	Strassen, Luxembourg	91.69		835,289	29,195
DZ Versicherungsvermittlung Gesellschaft mbH 5)	Frankfurt am Main	100.00		51	-
DZ Vierte Beteiligungsgesellschaft mbH 5)	Frankfurt am Main	100.00		249,687	-
e@syCredit Marketing und Vertriebs GmbH 1)	Nuremberg	100.00		25	-
Englische Strasse 5 GmbH 1)	Wiesbaden	90.00		16,129	469
Evolit Consulting GmbH 1)	Vienna, Austria	100.00		n/a	n/a
FKS-NAVIGIUM GmbH 1)	Eschborn	100.00		-3,167	-2,408
FPAC (Malta) Limited 1)	Floriana, Malta	100.00		3,993	212
fragWILHELM GmbH 1)	Wiesbaden	100.00		206	-1,328
Fundamenta Erteklanc Ingatlanközvetitö es Szolgaltato Kft. 1)	Budapest, Hungary	100.00		-700	-493
Fundamenta-Lakáskassza Lakás-takarékpénztár Zrt. 1)	Budapest, Hungary	51.25		142,735	7,786
Fundamenta-Lakáskassza Pénzügyi Közvetitö Kft. 1)	Budapest, Hungary	100.00		8,353	3,499
GAF Active Life 1 Renditebeteiligungs-GmbH & Co. KG 1)	Nidderau	96.56		65,354	7,616
GAF Active Life 2 Renditebeteiligungs-GmbH & Co. KG 1)	Nidderau	95.03		71,393	-4,377

SUBSIDIARIES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
Gartner, Keil & Co. Klima- und Kältetechnik GmbH 1)	Neulussheim	100.00		n/a	n/a
GENO Broker GmbH 5)	Frankfurt am Main	100.00		10,000	-
GENO-Beteiligungsgesellschaft mbH	Düsseldorf	100.00		1,134	-10
Genossenschaftlicher Informations Service GIS GmbH	Frankfurt am Main	100.00		4,465	89
Glen Campbell Opco LLC 1)	Majuro, Marshall Islands	-		-180	-3
Glencoe Shipping Holdco LLC 1)	Majuro, Marshall Islands	-		-14	-
GMS Development - Gesellschaft für Softwareentwicklung m.b.H 1)	Paderborn	100.00		137	2,755
GMS Holding GmbH 1)	Paderborn	88.89	75.00	15,448	2,455
GMS Management und Service GmbH 1)	Nidderau	100.00		82	32
Günther Kältetechnik GmbH 1)	Plüderhausen	60.00		n/a	n/a
GWG 1. Wohn GmbH & Co. KG 1)	Stuttgart	100.00		2,000	1,076
GWG 2. Wohn GmbH & Co. KG 1)	Stuttgart	100.00		3,000	839
GWG 3. Wohn GmbH & Co. KG 1)	Stuttgart	100.00		7,000	1,504
GWG 4. Wohn GmbH & Co. KG 1)	Stuttgart	100.00		9,000	1,213
GWG Beteiligungsgesellschaft mbH 1)	Stuttgart	100.00		28	1
GWG Gesellschaft für Wohnungs- und Gewerbebau Baden-Württemberg AG 1)	Stuttgart	91.57		362,371	26,203
GWG Hausbau GmbH 1)	Stuttgart	94.48		2,750	-
GWG ImmoInvest GmbH 1)	Stuttgart	94.90		10,817	1,799
GWG Wohnpark Sendling GmbH 1)	Stuttgart	94.00		4,028	-
Hibiscus Aircraft Leasing Limited 1)	Floriana, Malta	-		-41	1
HMDV Hausmeisterservice GmbH i.L. 1)	Berlin	100.00		n/a	n/a
HMV GmbH 1)	Erlangen	100.00		n/a	n/a
Hollandse Scheepshypotheekbank N.V. i.L. 1)	Rotterdam, Netherlands	100.00		707	-
Hudson Services LLC 1)	Majuro, Marshall Islands	-		-97	648
HumanProtect Consulting GmbH 1)	Cologne	100.00		382	116
Ihr Autoputzmeister Service GmbH 1)	Graz, Austria	100.00		n/a	n/a
Immobilien-Gesellschaft 'DG Bank-Turm, Frankfurt am Main, Westend' mbH & Co. KG des genossenschaftlichen Verbundes 2)	Frankfurt am Main	95.97		193,655	22,423
Immobilien-Verwaltungsgesellschaft 'DG BANK-Turm, Frankfurt am Main, Westend' mbH	Frankfurt am Main	100.00		60	25
IMPETUS Bietergesellschaft mbH 5)	Düsseldorf	100.00		54,063	-
INFINDO Development GmbH 1)	Düsseldorf	100.00		n/a	n/a
Intermodal Investment Fund IX LLC 1)	Majuro, Marshall Islands	100.00		-6,621	7,217
IPConcept (Luxemburg) S.A. 1)	Strassen, Luxembourg	100.00		19,364	9,284
IPConcept (Schweiz) AG 1)	Zurich, Switzerland	100.00		6,488	398
Iron Maple Rail Ltd. 1)	Vancouver, Canada	100.00		-173	926
ITF International Transport Finance Suisse AG i.L. 1)	Zurich, Switzerland	100.00		332	-40,847
Ivanhoe Shipping Opco LLC 1)	Majuro, Marshall Islands	-		-	-248
IZD-Beteiligung S.à.r.l. 1)	Senningerberg, Luxembourg	100.00		50	-107
K2 Aircraft Malta Ltd 1)	Floriana, Malta	100.00		44	31
Kalsubai Shipping and Offshore Private Ltd. 1)	Mumbai, India	-		-	13,374
Kälte Eckert GmbH 1)	Markgröningen	70.00		6,958	-68
KBIH Beteiligungsgesellschaft für Industrie und Handel mbH	Frankfurt am Main	100.00		35,325	8,184
KRAVAG Umweltschutz und Sicherheitstechnik GmbH 1)	Hamburg	100.00		323	21
KRAVAG-ALLGEMEINE Versicherungs-Aktiengesellschaft 1)	Hamburg	100.00		159,007	26,396
KRAVAG-LOGISTIC Versicherungs-Aktiengesellschaft 1)	Hamburg	51.00		248,421	10,232
KV MSN 27602 Aircraft Ltd. 1)	Dublin, Ireland	-		-15	-5
Lantana Aircraft Leasing Limited 1)	Floriana, Malta	-		-3,253	13,124
Leith Shipping LLC 1)	Majuro, Marshall Islands	-		-	-207
Linton Shipping LLC 1)	Majuro, Marshall Islands	-		-	78
Maple Leaf Shipping Holdco LLC 1)	Majuro, Marshall Islands	-		-55	2
MD Aviation Capital Pte. Ltd. 1)	Singapore, Singapore	100.00		-24,815	-6,154
MDAC 1 Pte Ltd. 1)	Singapore, Singapore	100.00		1,570	3
MDAC 11 Pte Ltd. 1)	Singapore, Singapore	100.00		74	2,385
MDAC 2 Pte Ltd. 1)	Singapore, Singapore	100.00		336	165
MDAC 3 Pte Ltd. 1)	Singapore, Singapore	100.00		245	4

SUBSIDIARIES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
MDAC 4 Pte Ltd. 1)	Singapore, Singapore	100.00		-60	558
MDAC 5 Pte. Ltd. 1)	Singapore, Singapore	100.00		73	1,996
MDAC 6 Pte Ltd. 1)	Singapore, Singapore	100.00		401	602
MDAC 8 Pte Ltd. 1)	Singapore, Singapore	100.00		-106	3
MDAC 9 Pte Ltd. 1)	Singapore, Singapore	100.00		-42	510
MDAC Malta Ltd. 1)	Floriana, Malta	-		-	-
MI-Fonds 384 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds 388 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds 391 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds 392 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds F 57 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds F 59 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds F44 Metzler Investmtent GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds F45 Metzler Investmtent GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds F46 Metzler Investmtent GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds F47 Metzler Investmtent GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds J01 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MI-Fonds J03 Metzler Investment GmbH 1)	Frankfurt am Main	-		n/a	n/a
MIRADOR Development GmbH 1)	Düsseldorf	100.00		n/a	n/a
Mount Diamir LLC 1)	Majuro, Marshall Islands	-		-	-
Mount Rinjani Shipping Pte. Ltd. 1)	Singapore, Singapore	100.00		-8,882	765
Mount Ulriken LLC 1)	Majuro, Marshall Islands	100.00		-1,734	2,194
MSN1164 Freighter Ltd. 1)	Dublin, Ireland	-		-206	479
MSU Management-, Service- und Unternehmensberatung GmbH 1)	Landau in der Pfalz	74.00		861	154
NTK Immobilien GmbH 1)	Hamburg	100.00		43	-
NTK Immobilien GmbH & Co. Management KG 1)	Hamburg	100.00		648	-598
Ocean Giant LLC 1)	Majuro, Marshall Islands	-		-99	-2
Okoye Beteiligungsverwaltungs GmbH 1)	Vienna, Austria	80.00		n/a	n/a
Pascon GmbH 1)	Wiesbaden	100.00		36	4
PCAM Issuance II SA Issue RV AVL 001 1)	Luxembourg, Luxembourg	-		n/a	n/a
PDZ Personaldienste & Zeitarbeit GmbH 5)	Darmstadt	100.00		60	-
Pension Consult-Beratungsgesellschaft für Altersvorsorge mbH 1)	Wiesbaden	100.00		724	-883
Philip Trading Opco LLC 1)	Majuro, Marshall Islands	-		-78	1
Phoenix Beteiligungsgesellschaft mbH 5)	Düsseldorf	100.00		108,349	-
Quoniam Asset Management GmbH 1)	Frankfurt am Main	93.69	100.00	32,056	16,210
R+V AIFM S.à.r.l. 1)	Luxembourg, Luxembourg	100.00		506	-356
R+V Allgemeine Versicherung Aktiengesellschaft 1) 5)	Wiesbaden	95.00		774,177	-
R+V Deutschland Real (RDR) 1)	Hamburg	-		n/a	n/a
R+V Dienstleistungs GmbH 1)	Wiesbaden	100.00		650	8
R+V Direktversicherung AG 1) 5)	Wiesbaden	100.00		13,320	-
R+V Erste Anlage GmbH i.L. 1)	Wiesbaden	100.00		289	-14
R+V INTERNATIONAL BUSINESS SERVICES Ltd., Dublin 1)	Dublin, Ireland	100.00		1,347	115
R+V KOMPOSIT Holding GmbH 1) 5)	Wiesbaden	100.00		1,826,142	-
R+V Krankenversicherung AG 1)	Wiesbaden	100.00		124,485	20,000
R+V Kureck Immobilien GmbH i.L. 1)	Wiesbaden	100.00		24	-11
R+V Lebensversicherung Aktiengesellschaft 1)	Wiesbaden	100.00		744,981	-
R+V Luxembourg Lebensversicherung S.A. 1)	Strassen, Luxembourg	100.00		484,156	40,762
R+V Mannheim P2 GmbH 1)	Wiesbaden	94.00		57,343	1,855
R+V Pensionsfonds AG 1)	Wiesbaden	100.00		34,613	2,530
R+V Pensionskasse AG 1)	Wiesbaden	100.00		103,233	-
R+V Personen Holding GmbH 1)	Wiesbaden	100.00		1,119,261	179
R+V Rechtsschutz-Schadenregulierungs-GmbH 1)	Wiesbaden	100.00		326	49
R+V Service Center GmbH 1) 5)	Wiesbaden	100.00		2,869	-
R+V Service Holding GmbH 1) 5)	Wiesbaden	100.00		190,800	-
R+V Treuhand GmbH 1)	Wiesbaden	100.00		58	7
R+V Versicherung AG 5)	Wiesbaden	92.17		2,149,774	-
RC II S.a.r.l. 1)	Munsbach, Luxembourg	90.00		8,833	71

SUBSIDIARIES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
ReiseBank Aktiengesellschaft 1)	Frankfurt am Main	100.00		19,267	-
RUV Agenturberatungs GmbH 1)	Wiesbaden	100.00		333	67
RV AIP S.C.S. SICAV-SIF 1)	Luxembourg, Luxembourg	99.00		10	-
RV AIP S.C.S. SICAV-SIF - RV TF 2 Infra Debt 1)	Luxembourg, Luxembourg	100.00		459,266	-4,639
RV AIP S.C.S. SICAV-SIF – RV TF 6 Infra Debt II 1)	Luxembourg, Luxembourg	98.40		30,500	-
RV AIP S.C.S. SICAV-SIF - RV TF Acquisition Financing 1)	Luxembourg, Luxembourg	98.67		180,166	3,730
S2 Shipping and Offshore Ptd Ltd. 1)	Singapore, Singapore	100.00		-21,690	4,563
Scheepvaartmaatschappij Ewout B.V. 1)	Schiphol, Netherlands	100.00		-6,280	258
Schwäbisch Hall Facility Management GmbH 1)	Schwäbisch Hall	51.00		6,820	-1,213
Schwäbisch Hall Kreditservice GmbH 1) 5)	Schwäbisch Hall	100.00		18,775	-
Schwäbisch Hall Wohnen GmbH 1)	Schwäbisch Hall	100.00		5,800	-1,302
Shamrock Trading Opco LLC 1)	Majuro, Marshall Islands	-		-18	-
Shipping and Intermodal Investment Management Fund I LLC 1)	Majuro, Marshall Islands	-		1,797	756
Shipping and Intermodal Investment Management Fund II LLC 1)	Majuro, Marshall Islands	-		22,510	18,398
SHT Schwäbisch Hall Training GmbH 1)	Schwäbisch Hall	100.00		4,671	362
SIIM Marlin Holdings LLC 1)	Majuro, Marshall Islands	72.04		-5,646	-1,777
SINALOA Aircraft Leasing Limited 1)	Floriana, Malta	-		-7	-
SOS Kältetechnik GmbH 1)	Königsdorf	100.00		n/a	n/a
Sprint Sanierung GmbH 1)	Cologne	100.00		29,973	-3,449
SRF I Ltd. 1)	Floriana, Malta	-		-96	-1,998
SRF III Ltd. 1)	Floriana, Malta	-		-1,055	-5,898
Stani Trading Opco LLC 1)	Majuro, Marshall Islands	-		-190	-4
Stephenson Capital Limited 1)	George Town, Cayman Islands	-		-1,043	16,457
TeamBank AG Nürnberg 2) 5)	Nuremberg	92.53		539,699	-
Terra Maris I LLC 1)	Majuro, Marshall Islands	100.00		-5,608	-1,545
Tiger Aircraft Leasing (UK) Limited 1)	London, UK	-		-	-
Twenty Holding Private Limited 1)	Singapore, Singapore	-		-462	-5
UI Infrastruktur Management SARL 1)	Luxembourg, Luxembourg	100.00		28	8
UI Management S.a.r.l. 1)	Luxembourg, Luxembourg	100.00		15	1
UI Vario: 2 issued by Union Investment Luxembourg S.A. 1)	Luxembourg, Luxembourg	-		n/a	n/a
UII Issy 3 Moulins SARL 1)	Paris, France	100.00		7	-
UII PSD KN Immolnvest GP GmbH 1)	Hamburg	100.00		85	17
UII SCE Management GP GmbH 1)	Hamburg	100.00		62	19
UII Verwaltungsgesellschaft mbH 1)	Hamburg	100.00		20	-2
UIN Union Investment Institutional Fonds Nr. 560 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 578 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 635 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 669 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 715 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 716 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 772 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 817 1)	Frankfurt am Main	-		2,222,753	-477
UIN Union Investment Institutional Fonds Nr. 825 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 833 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 834 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 839 1)	Frankfurt am Main	-		n/a	n/a
UIN Union Investment Institutional Fonds Nr. 913 1)	Frankfurt am Main	-		n/a	n/a
UIR FRANCE 1 S.a.r.l. 1)	Paris, France	100.00		-	-7
UIR FRANCE 2 S.a.r.l. 1)	Paris, France	100.00		5	-7
UIR Verwaltungsgesellschaft mbH 1)	Hamburg	100.00		96	-2
UIW Austria Verwaltungs GmbH 1)	Erlangen	100.00		n/a	n/a
UMB Unternehmens-Managementberatungs GmbH 1)	Wiesbaden	100.00		5,055	1,301
UniMultiAsset Chance I Nachhaltig 1)	Frankfurt am Main	-		n/a	n/a
UniMultiAsset Chance II Nachhaltig 1)	Frankfurt am Main	-		n/a	n/a
UniMultiAsset Chance III Nachhaltig 1)	Frankfurt am Main	-		n/a	n/a
UniMultiAsset Exklusiv Nachhaltig 1)	Frankfurt am Main	-		n/a	n/a
Union Asset Management Holding AG 2)	Frankfurt am Main	96.57		1,223,063	298,471

SUBSIDIARIES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
Union Investment Austria GmbH 1)	Vienna, Austria	100.00		17,949	1,399
Union Investment Financial Services S.A. 1)	Luxembourg, Luxembourg	100.00		21,732	1,434
Union Investment Institutional GmbH 1) 5) 6)	Frankfurt am Main	100.00		93,970	-
Union Investment Institutional Property GmbH 1) 6)	Hamburg	90.00		31,297	12,917
Union Investment Luxembourg S.A. 1)	Luxembourg, Luxembourg	100.00		216,991	54,784
Union Investment Privatfonds GmbH 1) 5) 6)	Frankfurt am Main	100.00		660,942	-
Union Investment Real Estate Asia Pacific Pte. Ltd. 1)	Singapore, Singapore	100.00		1,178	-130
Union Investment Real Estate Austria AG 1)	Vienna, Austria	94.50		9,167	2,475
Union Investment Real Estate Digital GmbH 1) 6)	Hamburg	100.00		10,225	-
Union Investment Real Estate France S.A.S. 1)	Paris, France	100.00		3,628	1,425
Union Investment Real Estate GmbH 2) 6)	Hamburg	94.50		183,026	66,931
Union Investment Service Bank AG 1) 5) 6)	Frankfurt am Main	100.00		88,115	-
Union IT-Services GmbH 1) 5) 6)	Frankfurt am Main	100.00		5,170	-
Union Service-Gesellschaft mbH 1) 5) 6)	Frankfurt am Main	100.00		9,554	-
Unterstützungskasse der Condor Versicherungsgesellschaften GmbH 1)	Hamburg	66.67		26	-
URA Verwaltung GmbH 1)	Vienna, Austria	100.00		41	1
VB A330 Leasing Ltd 1)	George Town, Cayman Islands	100.00		4,459	6,305
VisualVest GmbH 1) 5) 6)	Frankfurt am Main	100.00		15,525	-
VR Consultingpartner GmbH 1)	Frankfurt am Main	100.00		1,078	-
VR Equity Gesellschaft für regionale Entwicklung in Bayern mbH 1)	Frankfurt am Main	100.00		5,177	-34
VR Equitypartner Beteiligungskapital GmbH & Co. KG UBG 2)	Frankfurt am Main	100.00		36,021	3,643
VR Equitypartner GmbH 5)	Frankfurt am Main	100.00		69,070	-
VR Equitypartner Management GmbH 1)	Frankfurt am Main	100.00		355	-1
VR Factoring GmbH (VR FACTOREM GmbH until October 28, 2020)	Eschborn	100.00		39,906	521
VR GbR 2)	Frankfurt am Main	100.00		137,493	55,611
VR HYP GmbH 1)	Hamburg	100.00		25	-
VR Kreditservice GmbH 1) 5)	Hamburg	100.00		25	-
VR Makler GmbH 1)	Hannover	100.00		525	-362
VR Mittelstandskapital Unternehmensbeteiligungs GmbH 2)	Düsseldorf	100.00		6,913	592
VR Payment GmbH	Frankfurt am Main	90.00		55,671	4,415
VR Real Estate GmbH 1)	Hamburg	100.00		25	-
VR Smart Finanz AG 5)	Eschborn	100.00		211,070	-
VR Smart Finanz Bank GmbH 1) 5)	Eschborn	100.00		250,147	-
VR Smart Guide GmbH 1)	Eschborn	100.00		983	177
VR WERT Gesellschaft für Immobilienbewertung mbH 1) 5)	Hamburg	100.00		50	-
VR-Leasing Beteiligungs GmbH 1)	Eschborn	100.00		98,654	-14
VR-LEASING Hauptverwaltung GmbH & Co. KG 1) 6)	Eschborn	94.80	76.00	5,000	47,141
Waverley Shipping Opco LLC 1)	Majuro, Marshall Islands	-		14	-229
WBS Wohnwirtschaftliche Baubetreuungs- und Servicegesellschaft mbH 1)	Stuttgart	94.90		19,984	786
ZBI Beteiligungs GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Fondsmanagement AG 1)	Erlangen	100.00		19,401	14,334
ZBI Fondsverwaltungs GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Immobilien AG 1)	Erlangen	100.00		23,619	23,056
ZBI Partnerschafts-Holding GmbH 1)	Erlangen	94.90		15,163	24,174
ZBI Professional Fondsverwaltungs GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Projektentwicklungs GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Regiofonds Wohnen GF GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Regiofonds Wohnen GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Vertriebskoordinations GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Vorsorge - Plan Wohnen GF GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Vorsorge - Plan Wohnen GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI Wohnen Plus Verwaltungs GmbH 1)	Erlangen	100.00		n/a	n/a
ZBI WohnWert Verwaltungs GmbH 1)	Erlangen	100.00		n/a	n/a
ZBVV Zentral Boden Vermietung und Verwaltung GmbH 1)	Erlangen	100.00		61	-705

JOINT VENTURES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
38321 & 38329 Aircraft Leasing (Cayman) Ltd. 1)	Grand Cayman, Cayman Islands	50.00	-	9,443	2,273
BAU + HAUS Management GmbH 1)	Wiesbaden	50.00		10,014	855
BEA Union Investment Management Limited 1)	Hong Kong, Hong Kong	49.00		58,137	12,371
BSP Bürgschaftsservice-Plattform GmbH 1)	Hamburg	50.00		n/a	n/a
D8 Product Tankers I LLC 1)	Majuro, Marshall Islands	50.00		7,593	-299
Deutsche WertpapierService Bank AG	Frankfurt am Main	50.00		211,436	15,656
DZ BANK Galerie im Städel Kunstverwaltungsgesellschaft mbH	Frankfurt am Main	50.00		24	-2
Global Offshore Services B.V. 1)	Shannon, Ireland	50.00		-	-
Hudson Chemical Tankers Ltd 1)	Majuro, Marshall Islands	50.00		n/a	n/a
IZD-Holding S.à.r.l. 1)	Senningerberg, Luxembourg	50.30	50.00	9	-61
KCM Bulkers Ltd. 1)	Majuro, Marshall Islands	50.00		12,220	2,602
Norafin Verwaltungs GmbH 1)	Mildenau	44.72		24,032	401
Prvá stavebná sporitel'na, a.s. 1)	Bratislava, Slovakia	32.50		266,198	8,277
R+V Kureck Immobilien GmbH Grundstücksverwaltung Braunschweig 1)	Wiesbaden	50.00		7,024	168
TrustBills GmbH	Hamburg	25.00		-1,125	-2,572
Versicherungs-Vermittlungsgesellschaft des Sächsischen Landesbauernverbandes mbH 1)	Dresden	50.00		215	-35
Versicherungs-Vermittlungsgesellschaft mbH des Bauernverbandes Mecklenburg-Vorpommern e.V. (VVB) 1)	Neubrandenburg	50.00		204	11
Versicherungs-Vermittlungsgesellschaft mbH des Landesbauernverbandes Brandenburg (VVB) 1)	Teltow	50.00		33	4
Versicherungs-Vermittlungsgesellschaft mbH des Landesbauernverbandes Sachsen-Anhalt e.V. (VVB) 1)	Magdeburg	50.00		70	9
Zhong De Zuh Fang Chu Xu Yin Hang (Sino-German-Bausparkasse) Ltd. 1)	Tianjin, China	24.90		375,019	7,726

ASSOCIATES

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
adorsys GmbH & Co. KG 1)	Nuremberg	25.89		1,741	1,542
adorsys Verwaltungs GmbH 1)	Nuremberg	25.90		28	1
aku.beteiligung GmbH 1)	Frankfurt am Main	46.04		n/a	n/a
Artemis Gas 1 Shipping Inc. 1)	Piraeus, Greece	20.00		61,948	765
Bankenkonsortium der Zenit GmbH, GbR	Düsseldorf	33.30		-	-
bbv-service Versicherungsmakler GmbH 1)	Munich	25.20		2,124	344
Bergina AS 1)	Grimstad, Norway	40.00		10	-926
Bookwire Holding GmbH 1)	Frankfurt am Main	49.00		13,060	-395
Danae Gas Shipping Inc 1)	Majuro, Marshall Islands	5.00		n/a	n/a
DITTRICH + CO Holding GmbH 1)	Frankfurt am Main	49.85		n/a	n/a
Dr. Förster Holding GmbH 1)	Neu-Isenburg	20.06		-12,858	-1,280
Dr. Neuberger Holding GmbH 1)	Wiesbaden	40.00		9,562	437
European Convenience Food GmbH 1)	Garrel	39.77	40.58	4,728	-3,103
GBS Beteiligungsgesellschaft mbH 1)	Bayreuth	42.33		5,037	1,865
GGB-Beratungsgruppe GmbH	Stuttgart	23.13		-1,123	-1,858
GHM Holding GmbH 1)	Erolzheim	40.00		17,182	-18
GHM MPP Reserve GmbH 1)	Regenstauf	50.00		349	-4
GHM MPP Verwaltungs GmbH 1)	Remscheid	50.00		18	-2
Global Asic GmbH 1)	Dresden	30.80		1,083	-35
Global Offshore Services B.V. 1)	Amsterdam, Netherlands	32.13		-	-
Goldeck Zetti Beteiligungsgesellschaft mbH 1)	Leipzig	39.23		19,050	597
Groneweg Verwaltungsgesellschaft mbH 1)	Greven	48.00		26,000	900
Hör Technologie GmbH 1)	Weiden i.d.OPf.	62.78	49.99	23,502	-1,029
Hudson Chemical Tankers Ltd 1)	Middlesex, UK	25.00		n/a	n/a
Informatik Consulting Systems Holding GmbH 1)	Stuttgart	49.83	49.43	n/a	n/a
Kapitalbeteiligungsgesellschaft für die mittelständische Wirtschaft in Nordrhein-Westfalen mbH - KBG -	Neuss	23.60		4,548	520
KCM Bulkers International Limited 1)	Tortola, Virgin Islands	49.00		n/a	n/a
KCM Bulkers Ltd. 1)	Tortola, Virgin Islands	49.00		-	-
KOTANI JV CO. BV 1)	Amsterdam, Netherlands	48.35		71,342	-6,112
KTP Holding GmbH 1)	Bous	37.36		41,573	758
Mandarin Containers Limited 1)	Tortola, Virgin Islands	17.01		58,795	1,741
MSEA Aframax Holdings LLC 1)	Majuro, Marshall Islands	48.00		23,532	-796
MSEA Marlin Holdings LLC 1)	Majuro, Marshall Islands	32.19		n/a	n/a
MSN 1272&1278 Aircraft Leasing 1)	Grand Cayman, Cayman Islands	20.00		n/a	n/a
N3K Informatik Holding GmbH 1)	Frankfurt am Main	25.10		n/a	n/a
Ostertag DeTeWe Group GmbH 1)	Walddorfhäslach	58.52	49.90	85	72
PI-SM GmbH 1)	Ehringshausen	40.80		24,217	369
Sanitärgruppe Stiller GmbH 1)	Cologne	45.00		38,991	49,308
SCL GmbH 1)	Butzbach	49.00		6,554	1,371
Signet Wohnmöbel GmbH 1)	Hochstadt am Main	49.80		n/a	n/a
TAP Ltd. 1)	Hamilton, Bermuda	38.05		41,021	960
Treuhand- und Finanzierungsgesellschaft für Wohnungs- und Bauwirtschaft mit beschränkter Haftung. Treufinanz	Düsseldorf	33.14		1,435	-266
TREVA Entertainment GmbH i. L. 1)	Hamburg	32.70		1,269	-529
United MedTec Holding GmbH 1)	Bückeburg	41.01		1,379	184
Votronic Elektronik-Systeme GmbH 1)	Lauterbach	49.80		2,290	1,496
Weisshaar Holding GmbH 1)	Deisslingen	84.94	49.92	3,668	-582
Wessel-Werk Beteiligungsverwaltung GmbH i.L. 1)	Karlsruhe	45.00		-2,088	-1,527
ZT Finance GmbH i.L. 1)	Weilheim	26.67		2,278	-40

SHAREHOLDINGS OF 20% OR MORE

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
AMP Capital Infrastructure Debt Fund IV (EUR), L.P. 1)	Luxembourg, Luxembourg	39.84		223,130	1,929
Assiconf S.r.l. 1)	Turin, Italy	20.00		88	2
ASSICRA Servizi Assisurativi Banche di Credito Cooperativo Abruzzo e Molise S.r.l. 1)	Pescara, Italy	25.00		516	29
BCC RISPARMIO & PREVIDENZA S.G.R.P.A. 1)	Milan, Italy	25.00		38,226	12,400
BRASIL FLOWERS S.A. 1)	Barbacena, Brazil	45.00		n/a	n/a
BREDS IV Aggregator SCSp 1)	Luxembourg, Luxembourg	90.91		n/a	n/a
Burghofspiele GmbH 1)	Eltville	20.00		-	-21
Bürgschaftsbank Brandenburg GmbH	Potsdam	25.31		31,024	1,188
Bürgschaftsbank Mecklenburg-Vorpommern GmbH	Schwerin	30.38		16,899	262
Bürgschaftsbank Sachsen-Anhalt GmbH	Magdeburg	29.73		16,436	437
Bürgschaftsbank Thüringen GmbH	Erfurt	22.13		27,219	637
Cheyne Real Estate Credit (CRECH) Fund IV Loans SCS SICAV-SIF 1)	Luxembourg, Luxembourg	20.83		314,225	7,255
Cheyne Real Estate Credit Holdings VII 1)	Luxembourg, Luxembourg	96.77		n/a	n/a
CMMT Partners L.P. 1)	Camden, USA	47.07		253,433	18,890
Credit Suisse Global Infrastructure SCA SICAR 1)	Luxembourg, Luxembourg	30.09		23,186	7,544
DEGEPROMO Grundstücksverwaltungsgesellschaft mbH & Co. Immobilien-Vermietungs KG 1)	Eschborn	95.00	33.34	n/a	n/a
DZ BANK Mikrofinanzfonds eG 2)	Frankfurt am Main	30.90	0.45	259	-
EIG Global Project Fund V-A, L.P. 1)	Wilmington, USA	51.28		n/a	n/a
Finatem II GmbH & Co. KG 1)	Frankfurt am Main	20.20		12,519	2,908
FREUNDE DER EINTRACHT FRANKFURT Aktiengesellschaft 1)	Frankfurt am Main	32.05	19.84	6,268	169
GENOPACE GmbH 1) 6)	Berlin	27.49		200	-
Global Energy & Power Infrastructure Fund III E, SCSp 1)	Luxembourg, Luxembourg	35.34		38,416	3,077
Global Infrastructure Partners III-C2, L.P. 1)	New York, USA	27.97		380,881	49,454
Golding Mezzanine SICAV IV 1)	Luxembourg, Luxembourg	49.98		3,342	526
GTIS Brazil II S-Feeder LP 1)	Edinburgh, UK	100.00		27,831	-76
Kreditgarantiegemeinschaft in Baden-Württemberg Verwaltungs-GmbH	Stuttgart	20.00		1,023	-
Macquarie Asia Infrastructure Fund 2 SCSp 1)	Luxembourg, Luxembourg	50.48		147,269	10,042
Macquarie Asia Infrastructure Fund EU Feeder L.P 1)	London, UK	100.00		88,216	9,304
MB Asia Real Estate Feeder (Scot.) L.P. 1)	Edinburgh, UK	34.80		1,193	-312
Medico 12 GmbH & Co. KG 1)	Frankfurt am Main	99.98		648	-178
Nuveen Immobilien GmbH 1)	Frankfurt am Main	50.00		227	86
Nuveen Immobilien GmbH & Co. GB I KG 1)	Frankfurt am Main	73.91	73.21	1,943	-73
Partners Group Direct Infrastructure 2020 (EUR), L.P.S.C.Sp. 1)	Luxembourg, Luxembourg	33.68		n/a	n/a
paydirekt GmbH	Frankfurt am Main	33.33		18,019	-2,684
RV-CVIII Holdings, LLC 1)	Camden, USA	100.00		66,857	-7,255
Schroder Italien Fonds GmbH & Co. KG 1)	Frankfurt am Main	23.08	19.74	728	28
Schroder Property Services B.V. S.à.r.l. 1)	Senningerberg, Luxembourg	30.00		341	25
Sprint Italia S.r.l. 1)	Bolzano, Italy	51.00		n/a	n/a
Swiss Life Health Care Deutschland V S.C.S., SICAV-SIF 1)	Luxembourg, Luxembourg	41.33		n/a	n/a
Swiss Life Health Care III SICAV-FIS 1)	Luxembourg, Luxembourg	33.33		117,445	15,652
Swiss Life Health Care IV SICAV-FIS 1)	Luxembourg, Luxembourg	46.51		53,509	4,337
Technology DZ Venture Capital Fund I GmbH & Co. KG i.L. 1)	Munich	34.33		4,952	-51
TF H III Technologiefonds Hessen Gesellschaft mit beschränkter Haftung	Wiesbaden	25.00		6,618	-2,306
TF H Technologie-Finanzierungsfonds Hessen Gesellschaft mit beschränkter Haftung (TF H GmbH) i.L.	Wiesbaden	33.33		553	10
Tishman Speyer Brazil Feeder (Scots/D), L.P. 1)	Edinburgh, UK	100.00		6,897	-5,977
Tishman Speyer European Real Estate Venture VIII Parallel SCSp 1)	Luxembourg, Luxembourg	55.88		-9,205	-6,708
Tishman Speyer European Strategic Office Fund Feeder, L.P. 1)	London, UK	97.18		1,177	471
TXS GmbH 1)	Hamburg	24.50		200	500
VBI Beteiligungs GmbH 1)	Vienna, Austria	24.50		421	-163
VR-LEASING OPHIR GmbH & Co. Immobilien KG 1)	Eschborn	94.80	16.33	n/a	n/a

MORE THAN 5% OF VOTING RIGHTS (LARGE CORPORATIONS)

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
Banco Cooperativo Español S.A.	Madrid, Spain	12.02		571,612	32,009
EDEKABANK Aktiengesellschaft	Hamburg	8.35		160,869	6,073
EURO Kartensysteme GmbH	Frankfurt am Main	19.60		12,187	151
PANELLINIA BANK SOCIETE ANONYME (under special liquidation)	Athens, Greece	8.42	5.28	50,143	-12,637
Protektor Lebensversicherungs-AG 1)	Berlin	5.27		7,851	7
Raiffeisendruckerei GmbH 1)	Neuwied	7.88		36,656	2,738
SCHUFA Holding AG 1)	Wiesbaden	17.94		118,321	41,120

SHAREHOLDINGS OF LESS THAN 20%

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
'Hotel Wagramerstrasse 8' Errichtungs- und BetriebsgmbH & Co KG 1)	Vienna, Austria	-		21,243	1,533
ABE Clearing S.A.S a Capital Variable	Paris, France	1.92		31,181	3,267
AERS Consortio AG 1)	Stuttgart	16.50		114	-18
AgroRisk Polska Spólka z ograniczona odpowiedzialnoscia 1)	Poznań, Poland	15.00		n/a	n/a
Airport Garden Services and Business Center S.A. 1)	Brussels-Zaventem, Belgium	0.33		273	182
AKA Ausfuhrkredit-Gesellschaft mit beschränkter Haftung	Frankfurt am Main	0.31		253,193	10,621
Akademie Badischer Volksbanken und Raiffeisenbanken GmbH 1)	Karlsruhe	0.03		n/a	-
Anlegerentschädigung von Wertpapierfirmen GmbH 1)	Vienna, Austria	0.57	1.61	n/a	n/a
Architrave GmbH 1)	Berlin	12.04		n/a	n/a
ARDIAN Infrastructure Fund V B S.C.S., SICAV-RAIF 1)	Luxembourg, Luxembourg	13.58		55,128	-10,738
Assicoop-Assicurazioni Cooperative S.r.l. 1)	Catania, Italy	0.41		n/a	n/a
assistance partner GmbH & Co. KG 1)	Munich	5.01		1,102	102
Bank Polskiej Spoldzielczosci Spolka Akcyjna	Warsaw, Poland	1.00		176,142	5,153
Baro Beteiligungs-GmbH & Co. KG 1)	Münster	5.10		82,501	4,749
BayBG Bayerische Beteiligungsgesellschaft mbH	Munich	9.38		242,372	5,160
Bayerische Raiffeisen- Beteiligungs-Aktiengesellschaft 2)	Beilngries	1.85		856,018	35,290
Berliner Volksbank eG 1)	Berlin	-	0.10	1,029,942	19,628
Beteiligungs-Aktiengesellschaft der bayerischen Volksbanken 1)	Pöcking	1.14		232,001	6,569
BFL Gesellschaft des Bürofachhandels mbH & Co. KG i.L. 1)	Eschborn	0.07	0.05	2,364	139
BGG Bayerische Garantiegesellschaft mit beschränkter Haftung für mittelständische Beteiligungen	Munich	13.15		55,374	2,023
Blackrock Renewable Income Europe Fund 1)	Dublin, Ireland	7.69		474,768	34,794
Blackstone Real Estate Partners Europe III L.P. 1)	New York, USA	1.62		579,252	5,229
Blackstone Real Estate Partners International I.E. L.P. 1)	New York, USA	9.77		-26,468	30,572
BLHV Versicherungs-Service GmbH 1)	Freiburg	9.00		124	99
BTG Beteiligungsgesellschaft Hamburg mbH	Hamburg	10.00		5,141	495
Bürgschaftsbank Bremen GmbH	Bremen	4.86		8,258	364
Bürgschaftsbank Hessen GmbH	Wiesbaden	15.87		21,824	985
Bürgschaftsbank Nordrhein-Westfalen GmbH Kreditgarantiegemeinschaft	Neuss	15.75		38,223	1,463
Bürgschaftsbank Rheinland-Pfalz GmbH	Mainz	14.31		17,184	358
Bürgschaftsbank Sachsen GmbH	Dresden	14.66	16.59	44,085	489
Bürgschaftsbank Schleswig-Holstein Gesellschaft mit beschränkter Haftung	Kiel	11.79		41,825	651
Bürgschaftsgemeinschaft Hamburg GmbH	Hamburg	6.36		26,783	505
Caprese S.A. 1)	Brussels-Zaventem, Belgium	-		3,748	-423
Cash Logistik Security AG 1)	Düsseldorf	4.10		5,190	1,064
CASSA CENTRALE BANCA - CREDITO COOPERATIVO ITALIANO S.P.A.	Trento, Italy	3.69		1,133,251	30,896
CLS Group Holdings AG	Lucerne, Switzerland	0.69		375,865	-31,443
Coop System S.p.A. 1)	Rome, Italy	1.97		n/a	n/a
Copenhagen Infrastructure III K/S 1)	Copenhagen K, Denmark	5.77		n/a	n/a
Copenhagen Infrastructure IV K/S 1)	Copenhagen K, Denmark	7.97		n/a	n/a
Crown Secondaries Special Opportunities II S.C.S. 1)	Luxembourg, Luxembourg	9.69		n/a	n/a
Curzon Capital Partners III LP 1)	London, UK	11.99		n/a	n/a
Curzon Capital Partners IV LP 1)	London, UK	10.73		287,011	40,641
Deutsche Bauernsiedlung - Deutsche Gesellschaft für Landentwicklung (DGL) mbH 1)	Frankfurt am Main	16.26		-	-
Deutsche Börse Commodities GmbH	Frankfurt am Main	16.20	14.48	8,915	7,915
Deutscher Genossenschafts-Verlag eG 2)	Wiesbaden	1.54	1.58	67,825	1,927
DG ANLAGE Holland-Fonds 'Nieuwegein, 's-Hertogenbosch' GmbH & Co. KG (DGI 48) i.L.	Frankfurt am Main	0.57		1,030	-253
DG IMMOBILIEN MANAGEMENT Gesellschaft mbH	Frankfurt am Main	5.01		19,389	3,209
DG Immobilien-Anlagegesellschaft Nr. 35 'Berlin, Frankfurt' Prüske & Dr. Neumann KG i.L.	Frankfurt am Main	0.07		3,039	-75
DG IMMOBILIEN-Objektgesellschaft 'Stuttgart, Industriestrasse' Kreft & Dr. Neumann KG (DGI 49) i.L.	Frankfurt am Main	0.98		-	-
DI Rathaus-Center Pankow Nr.35 KG 1)	Düren	3.86		27,574	2,303

SHAREHOLDINGS OF LESS THAN 20%

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
Domus Beteiligungsgesellschaft der Privaten Bausparkassen mbH Berlin 1)	Berlin	14.13		32	-4
EDD AG i.L. 2)	Düsseldorf	9.99		21,601	-
EIG Energy Fund XVI (Scotland) L.P. 1)	Edinburgh, UK	14.02		395,913	6,536
EIG Energy Fund XVII (Scotland) L.P. 1)	Edinburgh, UK	15.61		276,748	25,928
EPI Interim Company SE	Sint-Jans Molenbeek, Belgium	6.25		n/a	n/a
Euro Capital S.A.S. 1)	Metz, France	4.44		23,020	1,663
European Property Investors Special Opportunities, L.P. 1)	London, UK	6.35		136,153	-56,671
European Property Investors, L. P. 1)	London, UK	6.50		5,349	-80
EXTREMUS Versicherungs-Aktiengesellschaft 1)	Cologne	5.00		64,058	118
Fiducia & GAD IT AG 2)	Frankfurt am Main	0.35		431,556	-114
FIDUCIA Mailing Services eG 2)	Karlsruhe	0.13		78	-
Flugplatz Schwäbisch Hall GmbH 1)	Schwäbisch Hall	2.00		49	-
GAD Beteiligungs GmbH & Co. KG 2)	Münster	2.25		119,597	3,008
GBK Holding GmbH & Co. KG 1)	Kassel	0.02		468,549	11,365
GDV Dienstleistungs-GmbH 1)	Hamburg	2.82		28,941	1,511
GI Data Infrastructure Fund-A LP 1)	Wilmington, USA	13.60		n/a	n/a
GIP Capital Solutions Feeder Fund II (EEA) 1)	Luxembourg, Luxembourg	15.00		-1,523	-994
GLADBACHER BANK Aktiengesellschaft von 1922	Mönchengladbach	17.53		39,878	1,498
Global Infrastructure Partners IV-C2, L.P. 1)	Luxembourg, Luxembourg	17.17		-2,715	-44,769
Global Renewable Power Infrastructure Fund III (C), SCSp 1)	Luxembourg, Luxembourg	4.48		n/a	n/a
GMS Mitarbeiter Beteiligungsgesellschaft UG & Co.KG 1)	Paderborn	4.00		986	-8
Golding Mezzanine SICAV III 1)	Luxembourg, Luxembourg	1.30		50,330	6,222
Grand Hotel Heiligendamm GmbH & Co. KG Fundus Fonds Nr. 34 1)	Disternich	1.90		-9,257	-31
Gründerfonds Ruhr GmbH & Co. KG 1)	Essen	7.25		4,882	-783
HANDWERKSBAU NIEDERRHEIN AKTIENGESELLSCHAFT	Düsseldorf	10.15		26,718	1,744
heal.capital I GmbH & Co. KG 1)	Berlin	0.99		-	-1,010
Hines European Value Fund SCSp 1)	Luxembourg, Luxembourg	13.87		488,081	27,341
Immigon portfolioabbau ag i.A.	Vienna, Austria	3.79		722,784	8,897
Immo Feest en Cultuurpaleis Oostende SA 1)	Brussels, Belgium	-		16,641	102
Interessengemeinschaft Frankfurter Kreditinstitute GmbH	Frankfurt am Main	7.01		26,301	9,656
IVS Immobilien GmbH 1)	Schiffweiler	6.00		26	-
K in Kortrijk S.A. 1)	Brussels, Belgium	-		87,440	-3,081
KLAAS MESSTECHNIK GmbH 1)	Seelze-Harenberg	15.00		28	-
KLV BAKO Vermittlungs-GmbH	Karlsruhe	10.00		242	9
Konsortium der Absatzfinanzierungsinstitute plettac-assco GbR	Wuppertal	-	7.08	n/a	n/a
Kreditgarantiegemeinschaft der Freien Berufe Baden-Württemberg Verwaltungs GmbH	Stuttgart	4.76		153	-
Kreditgarantiegemeinschaft der Industrie, des Verkehrsgewerbes und des Gastgewerbes Baden-Württemberg Verwaltungs-GmbH	Stuttgart	15.28		1,300	-
Kreditgarantiegemeinschaft des bayerischen Gartenbaues GmbH	Munich	9.07		649	-
Kredit-Garantiegemeinschaft des bayerischen Handwerks Gesellschaft mit beschränkter Haftung	Munich	12.00		4,846	-
Kreditgarantiegemeinschaft des Gartenbaues Baden-Württemberg Verwaltungs-GmbH	Stuttgart	12.00		138	-
Kreditgarantiegemeinschaft des Handels Baden-Württemberg Verwaltungs-GmbH	Stuttgart	10.05		1,022	-
Kreditgarantiegemeinschaft des Handwerks Baden-Württemberg Verwaltungs-GmbH	Stuttgart	10.05		1,001	-
Kreditgarantiegemeinschaft des Hotel- und Gaststättengewerbes in Bayern GmbH	Munich	9.66		4,359	-
Kreditgarantiegemeinschaft für den Handel in Bayern GmbH	Munich	7.19		6,317	-
Kunststiftung Baden-Württemberg GmbH 1)	Stuttgart	0.50		2,899	-17
Les Grands Pres S.A. 1)	Brussels-Zaventem, Belgium	-	0.11	51,931	4,276
Lucrezia GmbH & Co. KG 1)	Berlin	0.10		5,097	-8
Macquarie European Infrastructure Fund 6 SCSp 1)	Luxembourg, Luxembourg	4.15		-19,959	-19,961
Macquarie European Infrastructure Fund 4 L.P. 1)	St. Peter, Guernsey	5.70		2,765,494	405,131

SHAREHOLDINGS OF LESS THAN 20%

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
MBG H Mittelständische Beteiligungsgesellschaft Hessen GmbH	Wiesbaden	16.26		10,488	-855
MBG Mittelständische Beteiligungsgesellschaft Baden-Württemberg Gesellschaft mit beschränkter Haftung	Stuttgart	9.94	8.33	81,296	4,303
MBG Mittelständische Beteiligungsgesellschaft Rheinland-Pfalz mbH	Mainz	9.80	11.11	15,991	664
MBG Mittelständische Beteiligungsgesellschaft Schleswig-Holstein mbH	Kiel	14.59	15.22	43,486	2,193
Mittelständische Beteiligungsgesellschaft Berlin-Brandenburg mbH	Potsdam	8.89		22,891	1,056
Mittelständische Beteiligungsgesellschaft Mecklenburg-Vorpommern mbH	Schwerin	16.00		16,618	668
Mittelständische Beteiligungsgesellschaft Niedersachsen (MBG) mit beschränkter Haftung	Hannover	19.92		14,731	422
Mittelständische Beteiligungsgesellschaft Sachsen mbH	Dresden	9.38		49,169	1,567
Mittelständische Beteiligungsgesellschaft Sachsen-Anhalt (MBG) mbH	Magdeburg	19.84		24,249	217
Mittelständische Beteiligungsgesellschaft Thüringen mbH	Erfurt	10.28		26,842	928
Münchener Hypothekenbank eG 2)	Munich	1.18		1,428,457	35,697
Munster S.A. 1)	Luxembourg, Luxembourg	0.11		2,428	-236
Niedersächsische Bürgschaftsbank (NBB) Gesellschaft mit beschränkter Haftung	Hannover	17.68		30,102	1,818
Norddeutsche Genossenschaftliche Beteiligungs-Aktiengesellschaft 1)	Hannover	0.55		1,379,444	47,754
North Haven Infrastructure Partners III Feeder A L.P. 1)	Kitchener, Canada	3.05		n/a	n/a
North Haven Infrastructure Partners III SCSp 1)	Luxembourg, Luxembourg	0.61		n/a	n/a
Opción Jamantab S. A. DE C. V. 1)	Mexico City, Mexico	-		9,675	492
Partners Group Global Mezzanine 2007 S.C.A., SICAR 1)	Luxembourg, Luxembourg	2.24		45,799	1,580
PRIVATE EQUITY SCS SICAV-SIF 1)	Luxembourg, Luxembourg	-		n/a	n/a
Prosa Beteiligungs GmbH & Co. KG 1)	Frankfurt am Main	15.63		587	-408
Prosolis GmbH The Solution House i.L. 1)	Fulda	6.00		n/a	n/a
Raiffeisen Waren-Zentrale Rhein-Main eG	Cologne	2.00		123,919	-2,155
Raiffeisen-Kassel A-Beteiligungs GmbH & Co. KG	Kassel	8.22		40,415	-
Raiffeisen-Kassel B-Beteiligungs GmbH & Co. KG	Kassel	8.22		40,415	-
Royale 120 New Building S.A. 1)	Brussels-Zaventem, Belgium	-		43,789	910
Royale 120 S.A. 1)	Brussels-Zaventem, Belgium	0.01		849	-44
RPD Real Property Development GmbH 1)	Langenwang, Austria	10.00		662	120
RREEF Pan-European Infrastructure Feeder GmbH & Co. KG 1)	Eschborn	17.70		348,880	-116
Rund Vier GmbH & Co. KG 1)	Vienna, Austria	-		46,016	3,444
S.W.I.F.T. Society for Worldwide International Financial Telecommunication 2)	La Hulpe, Belgium	0.26		469,588	53,208
Saarländische Wagnisfinanzierungsgesellschaft mbH	Saarbrücken	2.59		8,157	381
SALEG Sachsen-Anhaltinische Landesentwicklungs GmbH 1)	Magdeburg	1.15		13,940	367
Sana Kliniken AG 1)	Ismaning	0.69		1,017,094	66,685
Schulze-Delitzsch-Haus, eingetragene Genossenschaft 1)	Bonn	0.95		541	167
Sechzehnte Gamma Trans Leasing Verwaltungs-GmbH & Co. Finanzierungs-Management KG i.L. 1)	Nidderau	16.51		n/a	n/a
SGB-Bank Spólka Akcyjna	Poznaŋ Poland	0.28		143,324	5,584
SIGNA Development Selection AG 1)	Innsbruck, Austria	5.00		674,359	125,995
SIGNA Prime Selection AG 1)	Innsbruck, Austria	5.00		3,283,737	497,973
SIGNA Sports United GmbH 1)	Munich	11.59		373,800	-33,300
Société de la Bourse de Luxembourg S.A. 1)	Luxembourg, Luxembourg	0.06		129,565	10,630
Strategie Invest SICAV 1)	Zurich, Switzerland	0.09		n/a	n/a
Süddeutsche Zuckerrübenverwertungs-Genossenschaft eG	Ochsenfurt	4.44	4.55	194,143	5,569
Target Partners Capital GmbH & Co. KG 1)	Munich	10.00	10.01	278	-7
Technologiezentrum Schwäbisch Hall GmbH 1)	Schwäbisch Hall	4.17	5.56	569	62
Teko - Technisches Kontor für Versicherungen Gesellschaft mit beschränkter Haftung 1)	Düsseldorf	10.00		111	30
True Sale International GmbH	Frankfurt am Main	7.69		4,864	248
Ufficio Centrale Italiano di Assistenza Assicurativa Automobilisti in Circolazione Internazionale -U.C.I. Societe consortie a R.L. 1)	Milan, Italy	0.09		1,330	16
UIR Belgique 1 S.A. 1)	Brussels, Belgium	0.13		733	-55
UIR Le Président 1 1)	Brussels-Zaventem, Belgium	-	0.06	3,714	-486

SHAREHOLDINGS OF LESS THAN 20%

Name	Location	Shareholding	Voting rights, if different	Equity in € '000	Profit/loss in € '000
UIR MU III S.A. de C.V. 1)	Mexico City, Mexico	-		12,121	678
UniInstitutional Sachwerte SCS SICAV-SIF 1)	Luxembourg, Luxembourg	-		n/a	n/a
Visa Inc.	San Francisco, USA	-		28,251,201	9,839,537
VNT Automotive GmbH 1)	Langenwang, Austria	10.00		11,148	846
VR-Bank Schwäbisch Hall eG 1)	Schwäbisch Hall	0.01		119,256	4,721
VR-IMMOBILIEN-LEASING GmbH 1)	Eschborn	6.00		n/a	n/a
WESTFLEISCH Finanz AG 1)	Münster	0.36		65,691	5,706
WRW Wohnungswirtschaftliche Treuhand Rheinland-Westfalen Gesellschaft mit beschränkter Haftung i.L.	Düsseldorf	2.73		n/a	n/a
ZBI Zentral Boden Immobilien GmbH & Co. KG WohnWert 1 Geschlossene Investmentkommanditgesellschaft 1)	Erlangen	-		n/a	n/a
ZG Raiffeisen eG	Karlsruhe	1.01	0.02	29,005	-3,971

1) Held indirectly.

2) Including shares held indirectly.

3) A letter of comfort exists.

4) A subordinated letter of comfort exists.

5) Profit-and-loss transfer agreement with DZ BANK (direct or indirect).

6) Section 264 (3) HGB and section 264b HGB have been applied.

n/a = no figures available.