# 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, Germany, (DZ BANK) for the 2023 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 [Federal Ministry of Justice] pursuant to section 342q (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 – primarily items relating to insurance contracts – have been aggregated and are explained by additional disclosures in the notes. Unless stated otherwise, all amounts are shown in millions of euros (€ million). 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 21, 2024.

### » 02 Accounting policies and estimates

#### Changes in accounting policies

**First-time application in 2023 of changes in IFRS**
The following new accounting standard and the listed amendments to IFRS have been applied for the first time in DZ BANK’s consolidated financial statements for the 2023 financial year:

- IFRS 17 *Insurance Contracts*
- Amendments to IFRS 17 *Insurance Contracts*
- Amendments to IAS 1 *Presentation of Financial Statements* and IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*
- *Deferred Tax related to Assets and Liabilities arising from a Single Transaction* (Amendments to IAS 12 Income Taxes)
- *International Tax Reform – Pillar Two Model Rules* (Amendments to IAS 12 Income Taxes)

IFRS 17 *Insurance Contracts* superseded the previous standard for accounting for insurance contracts (IFRS 4 *Insurance Contracts*) with effect from January 1, 2023 and is required to be applied to insurance contracts, reinsurance contracts, and investment contracts with discretionary participation features. IFRS 17 establishes the principles for the recognition, measurement, presentation, and disclosure of insurance contracts issued.

The material difference between IFRS 17 and IFRS 4 is the uniform application of accounting policies in areas such as revenue recognition, the measurement of liabilities, and the realization of gains at the start of the contract. Under IFRS 4, entities were permitted to continue with their existing accounting approach. These approaches were shaped by various national accounting principles, making it almost impossible to compare financial statements.

IFRS 17 requires comparative information to be presented in the notes for the period immediately preceding the date of initial application of IFRS 17, i.e. for 2022 if initial application is in 2023. To calculate the comparative information, IFRS 17 requires fully retrospective application of the standard for insurance contract accounting in accordance with IAS 8. The fully retrospective approach stipulates that each group of insurance contracts (GIC) is recognized and measured at the transition date as if the insurance contracts had always been accounted for in accordance with IFRS 17. Any existing line items on the balance sheet that would not exist had IFRS 17 always applied must be derecognized and any resulting net differences must be recognized in equity. The idea is that the difference between balance sheet items under IFRS 4 and IFRS 17 is recognized in retained earnings, i.e. the IFRS 4 balance sheet items are derecognized, and the IFRS 17 balance sheet items recognized, in each case against retained earnings in other comprehensive income. If the fully retrospective approach is impracticable, IFRS 17.C5 in conjunction with IFRS 17.C3 permits use of a modified retrospective approach or a fair value approach at the transition date.

The objective of the modified retrospective approach is to achieve the closest outcome to fully retrospective application possible using reasonable and supportable information available without undue cost or effort. If the entity cannot obtain the reasonable and supportable information necessary to apply the modified retrospective approach, it must apply the fair value approach.

When applying the fair value approach, the entity determines the contractual service margin (CSM) or loss component of the liability for remaining coverage at the transition date as the difference between the fair value of a GIC at that date and the fulfillment cash flows measured at that date. The fair value of the GIC is determined on the basis of the price that would be paid in an orderly transaction between market participants at the measurement date (exit price). In determining that fair value, the entity must not apply the rules on fair value measurement in IFRS 13.47. To measure the market-based fair value of future cash flows, various adjustments are made to calculate a risk premium and the discount factors. Such adjustments might be made, for example, to cover costs that cannot be allocated directly.

For all non-life insurance business except for casualty insurance with premium refund, the premium allocation approach is used. In the context of the transition, this approach is generally applied on a modified retrospective basis, taking account of IFRS 17.C6. The risk part of the casualty insurance with premium refund business is measured using the general measurement model. For measurement at the transition date, the modified retrospective approach is also used, taking account of IFRS 17.C6.

In personal insurance, the modified retrospective approach is used for the past in accordance with IFRS 17.C8 from the time at which the fully retrospective approach is not possible. By taking this approach, the DZ BANK Group is, in accordance with IFRS 17.C6(b), maximizing the use of information that would have been used to apply the fully retrospective approach. This means that the CSM is determined using the modified retrospective approach at a time before the transition date so that it can then be updated to the transition date in accordance with IFRS 17.44 and IFRS 17.45. The measurement modifications here relate to the CSM, the loss component, and the amounts recognized in other comprehensive income and are largely based on information available pursuant to the German Regulation on the Reporting by Insurance Undertakings to the Federal Financial Supervisory Authority (BerVersV). All other measurement components adhere to the requirements for the fully retrospective approach. The fair value approach is generally not used for personal insurance.

For insurance contracts with direct participation features in personal insurance, the CSM and loss components are measured in accordance with IFRS 17.C17. The CSM at the transition date is calculated from the fair value of the underlying item less the fulfillment cash flows at that date, and an adjustment for the following amounts: amounts charged by the entity to the policyholder before that date, amounts paid before that date that would not have varied based on the underlying items, and amounts equal to the changes to the risk adjustment for non-financial risk caused by the release from risk before that date. If this results in a loss component, the loss component is adjusted to nil and the liability for remaining coverage is increased by the same amount. Otherwise, the amount determined is reduced by the estimated amortization of the CSM for services provided.

In accordance with IFRS 17.C12, the future cash flows for personal insurance contracts without direct participation features are estimated at the date of initial recognition as the amount of the future cash flows at the transition date. The cash flows are subsequently adjusted by the cash flows that occurred between initial recognition of the contracts and the transition date. This adjustment also includes cash flows for contracts that ended before the transition date. The discount rates to be applied upon initial recognition of a GIC are determined using an observable yield curve that, for at least 3 years immediately before the transition date, approximates the yield curve estimated applying IFRS 17.36 and IFRS 17.B72 (locked-in yield curve). The risk adjustment at the date of initial recognition of a GIC is determined from the risk adjustment for non-financial risk at the transition date by adjusting this adjustment for the expected release of the risk adjustment before the transition date. This released amount is estimated by reference to the release of the risk adjustment for similar insurance contracts that the insurance company issues at the transition date. The estimate is based on the current release of the risk adjustment at the transition date and is carried out separately for each GIC. The CSM is determined as if interim financial statements had not been prepared before the transition date. If a CSM arises at the date of initial recognition, the CSM is determined at the transition date by applying the aforementioned locked-in yield curve pursuant to IFRS 17.C13(a). In addition, the CSM amounts that would have been recognized in profit or loss for services already provided under the insurance contracts are estimated by comparing the remaining coverage units at the transition date with the coverage units in existence before the transition date. At the transition date, there was no loss component for insurance contracts without direct participation features. In exercise of the option of recognition in other comprehensive income in accordance with IFRS 17.88(b), the amount recognized in other comprehensive income in accordance with IFRS 17.C19(b)(i) is calculated on the basis of the locked-in yield curve.

In the personal insurance business, insurance acquisition cash flows are not allocated to future contract renewals. All insurance acquisition cash flows are allocated to the GICs at the time of initial recognition. This is also implemented for the transition date.

In inward reinsurance, the GICs are generally measured at the transition date using the fully retrospective approach for underwriting years starting with the 2015 financial year. In view of the data available, the modified retrospective approach pursuant to IFRS 17.C6 is used for underwriting years before the 2015 financial year. The modification relates to the locked-in yield curves and approximations of historical data for individual GICs. The fair value approach is not used.

The fully retrospective approach is used for the fire, property, and hail portfolios in the inward reinsurance business and for reinsurance contracts held. The data needed for this, particularly the forecasts for future cash flows for premiums, amortization patterns, and actual cash flows, is available owing to the short coverage periods.

Retrospective initial application resulted in the following adjustments to the income statement, statement of comprehensive income, and balance sheet. As a result of new knowledge gained in the second half of 2023, the amounts on the balance sheet as at January 1, 2022 and thus on the balance sheet as at December 31, 2022 have been changed compared with those published in the interim consolidated financial statements for the period ended June 30, 2023:

## Income statement for the period January 1 to December 31, 2022

| € million | 2022 before restatement | Amount of restatement | 2022 after restatement |
|---|---|---|---|
| (…) | | | |
| Premiums earned | 18,397 | -18,397 | - |
| Insurance service result | - | 2,077 | 2,077 |
| Insurance revenue | - | 12,424 | 12,424 |
| Insurance service expenses | - | -10,225 | -10,225 |
| Net income/expenses from reinsurance contracts held | - | -123 | -123 |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | -3,389 | -370 | -3,759 |
| (…) | | | |
| Insurance benefit payments | -12,127 | 12,127 | - |
| Insurance business operating expenses | -3,068 | 3,068 | - |
| Insurance finance income or expenses | - | 1,951 | 1,951 |
| (…) | | | |
| Profit before taxes | 1,797 | 455 | 2,252 |
| Income taxes | -724 | -188 | -912 |
| **Net profit** | **1,073** | **268** | **1,341** |
| | | | |
| Attributable to: | | | |
| Shareholders of DZ BANK | 1,031 | 238 | 1,269 |
| Non-controlling interests | 42 | 30 | 72 |

## Statement of comprehensive income for the period January 1 to December 31, 2022

| € million | 2022 before restatement | Amount of restatement | 2022 after restatement |
|---|---|---|---|
| Net profit | 1,073 | 268 | 1,341 |
| Other comprehensive income/loss | -6,171 | 3,242 | -2,929 |
| **Items that may be reclassified to the income statement** | **-6,277** | **3,381** | **-2,896** |
| Gains and losses on debt instruments measured at fair value through other comprehensive income | -8,978 | -13,799 | -22,777 |
| Exchange differences on currency translation of foreign operations | - | 13 | 13 |
| Insurance finance income or expenses included in other comprehensive income | - | 18,452 | 18,452 |
| (…) | | | |
| Income taxes | 2,700 | -1,285 | 1,415 |
| **Items that will not be reclassified to the income statement** | **106** | **-139** | **-33** |
| Gains and losses on equity instruments for which the fair value OCI option has been exercised | -327 | -309 | -636 |
| (…) | | | |
| Gains and losses arising from remeasurement of defined benefit plans | 407 | 12 | 419 |
| Income taxes | -145 | 158 | 13 |
| **Total comprehensive income/loss** | **-5,098** | **3,510** | **-1,588** |
| | | | |
| Attributable to: | | | |
| Shareholders of DZ BANK | -4,470 | 3,127 | -1,343 |
| Non-controlling interests | -627 | 382 | -245 |

## Balance sheet as at January 1, 2022

### ASSETS

| € million | Jan. 1, 2022 before restatement | Amount of restatement | Jan. 1, 2022 after restatement |
|---|---|---|---|
| (…) | | | |
| Investments held by insurance companies | 129,119 | -538 | 128,581 |
| (…) | | | |
| Income tax assets | 1,141 | 4,936 | 6,077 |
| Other assets | 6,501 | -630 | 5,871 |
| (…) | | | |
| **Total assets** | **627,273** | **3,768** | **631,041** |

### EQUITY AND LIABILITIES

| € million | Jan. 1, 2022 before restatement | Amount of restatement | Jan. 1, 2022 after restatement |
|---|---|---|---|
| (…) | | | |
| Insurance liabilities | 118,863 | -118,863 | - |
| Insurance contract liabilities | - | 118,119 | 118,119 |
| Income tax liabilities | 1,456 | 5,556 | 7,012 |
| Other liabilities | 10,797 | -2,082 | 8,715 |
| (…) | | | |
| Equity | 28,661 | 1,039 | 29,700 |
| Shareholders' equity | 26,860 | 720 | 27,580 |
| (…) | | | |
| Retained earnings | 12,581 | 542 | 13,123 |
| Reserve from other comprehensive income | 1,651 | 178 | 1,829 |
| (…) | | | |
| Non-controlling interests | 1,801 | 319 | 2,121 |
| **Total equity and liabilities** | **627,273** | **3,768** | **631,041** |

## Balance sheet as at December 31, 2022

### ASSETS

| € million | Dec. 31, 2022 before restatement | Amount of restatement | Dec. 31, 2022 after restatement |
|---|---|---|---|
| (…) | | | |
| Investments held by insurance companies | 105,955 | -407 | 105,548 |
| (…) | | | |
| Income tax assets | 3,428 | 2,349 | 5,777 |
| Other assets | 7,204 | -616 | 6,588 |
| (…) | | | |
| **Total assets** | **627,041** | **1,324** | **628,365** |

### EQUITY AND LIABILITIES

| € million | Dec. 31, 2022 before restatement | Amount of restatement | Dec. 31, 2022 after restatement |
|---|---|---|---|
| (…) | | | |
| Insurance liabilities | 103,795 | -103,795 | - |
| Insurance contract liabilities | - | 98,328 | 98,328 |
| Income tax liabilities | 1,063 | 4,283 | 5,346 |
| Other liabilities | 10,999 | -2,039 | 8,960 |
| (…) | | | |
| Equity | 23,076 | 4,549 | 27,625 |
| Shareholders' equity | 21,967 | 3,852 | 25,819 |
| (…) | | | |
| Retained earnings | 13,482 | 880 | 14,362 |
| Reserve from other comprehensive income | -4,142 | 2,971 | -1,171 |
| (…) | | | |
| Non-controlling interests | 1,109 | 697 | 1,806 |
| **Total equity and liabilities** | **627,041** | **1,324** | **628,365** |

Initial application of IFRS 17 has also resulted in adjustments to the statement of changes in equity and statement of cash flows as well as to the disclosures in the notes to the financial statements listed below. Where relevant, the new balance sheet and income statement structures have been used. The adjustments have been made in note 29 (investments in subsidiaries), note 33 (segment information), note 40 (gains and losses on investments held by insurance companies and other insurance company gains and losses), note 41 (insurance finance income or expenses), note 46 (income taxes), note 47 (items reclassified to the income statement), note 48 (income taxes relating to components of other comprehensive income), note 55 (investments held by insurance companies), note 57 (income tax assets and liabilities), note 58 (other assets), note 68 (insurance contract liabilities), note 69 (other liabilities), note 71 (equity), note 72 (classes, categories, and fair values of financial instruments), note 75 (assets and liabilities measured at fair value on the balance sheet), note 76 (assets and liabilities not measured at fair value on the balance sheet), note 82 (items of income, expense, gains, and losses), note 86 (nature and extent of risks arising from financial instruments), note 87 (maturity analysis), and all notes in chapter F 'Insurance business disclosures'.

The amendments to IAS 1 Presentation of Financial Statements require entities to report their material accounting policies instead of, as previously, their significant accounting policies. The objective of the amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors is to provide clarification in order to help entities to distinguish between changes to accounting policies and changes to accounting estimates.

*Deferred Tax related to Assets and Liabilities arising from a Single Transaction* (Amendments to IAS 12 Income Taxes) provides an exemption in certain circumstances that means that no deferred tax assets or liabilities are recognized at the time of acquisition of an asset or liability. This exemption cannot be applied to the recognition of deferred taxes in conjunction with leases or asset retirement/decommissioning obligations.

*International Tax Reform – Pillar Two Model Rules* (Amendments to IAS 12 Income Taxes) concerns Directive (EU) 2022/2523 of December 14, 2022 and relates to ensuring a global minimum level of taxation for multinational corporate groups and large-scale domestic groups in the EU. For the purposes of this directive, DZ BANK AG is the ultimate parent company and is liable to pay tax. The requirements of the directive were transposed into German national law by means of the Minimum Tax Act (MinStG) and are required to be applied by the entities in the DZ BANK Group from January 1, 2024 onward. As a result of the directive, IAS 12 has been supplemented with rules on recognizing and presenting expenses in connection with collecting top-up taxes in accordance with the directive. In departure from the requirements in the standard that applied in 2023, no deferred taxes in respect of the top-up taxes are to be recognized or disclosed. However, the amendments require certain information to be disclosed, which can be found in note 46.

The amendments to IAS 1, IAS 8, and IAS 12 must be applied for the first time to financial years beginning on or after January 1, 2023. There is no material impact on DZ BANK's consolidated financial statements.

### Changes in IFRS endorsed by the EU but not adopted early

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

- *Lease Liability in a Sale and Leaseback* (Amendments to IFRS 16 Leases)
- *Classification of Liabilities as Current or Non-current* and *Non-current Liabilities with Covenants* (Amendments to IAS 1 Presentation of Financial Statements)

The amendments to IFRS 16 clarify that the leaseback liability arising in a sale and leaseback transaction with variable payments that do not depend on an index or interest rate constitutes a lease liability pursuant to IFRS 16. They also clarify that the initial measurement requirements in IFRS 16.100(a) apply to the recognition of the right-of-use asset and the gain or loss from the sale and leaseback. Finally, the amendments clarify that the seller-lessee subsequently measures the right-of-use asset arising from the leaseback by applying IFRS 16.29-35. These amendments to IFRS 16 do not give rise to any need to change the accounting treatment of the Group's sale-and-leaseback transactions.

The amendments to IAS 1 provide further details on how an entity must recognize debt and other liabilities on its balance sheet where the settlement date is uncertain. Such debt and other liabilities must be classified as either current (due or potentially due to be settled within one year) or non-current. The amendments also aim to improve the information that an entity should provide if its right to postpone settling a debt by 12 months or more is subject to covenants.

The amendments to IAS 1 have no impact on DZ BANK's consolidated financial statements because there is no distinction between current and non-current liabilities on its balance sheet.

The amendments to IFRS 16 and IAS 1 must be applied for the first time to financial years beginning on or after January 1, 2024; early adoption is permitted.

### Changes in IFRS that have not yet been endorsed by the EU

The following amendments to accounting standards have not yet been endorsed by the EU:

- *Supplier Finance Arrangements* (Amendments to IAS 7 Statement of Cash Flows and IFRS 7 Financial Instruments: Disclosures)
- *Lack of Exchangeability* (Amendments to IAS 21 The Effects of Changes In Foreign Exchange Rates)

The impact of the aforementioned amendments to IFRS on DZ BANK's consolidated financial statements is currently being examined.

### Changes in presentation

In accordance with the provisions of IAS 8.41 et seq., the statement of cash flows has been adjusted with effect from 2023, primarily in relation to the assignment of cash and non-cash changes. This resulted in changes to the amounts in the reconciliation of net profit to cash flows from operating activities and in cash flows from investing activities. The adjustment has been made retrospectively.

In accordance with the provisions of IAS 8.41 et seq., financial liabilities that arise from unit-linked insurance contracts are recognized under other liabilities in note 72 (classes, categories, and fair values of financial instruments) from 2023 onward. The adjustment has been made retrospectively.

In accordance with the provisions of IAS 8.41 et seq., other collateral is recognized in note 86 (nature and extent of risks arising from financial instruments) – specifically in the disclosures on the maximum exposure to credit risk – from 2023 onward. The adjustment has been made retrospectively.

In accordance with the provisions of IAS 8.41 et seq., the assignment to the main geographical markets has been amended in note 103 (disclosures on revenue from contracts with customers) – specifically in the disclosures on revenue from contracts with customers, broken down by operating segment – from 2023 onward. The adjustment has been made retrospectively.

## Sources of estimation uncertainty

It is sometimes 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 contract liabilities, other assets held by insurance companies, 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 valuation parameter assumptions and valuation methods used to determine fair values are described in the financial instruments disclosures in notes 75 and 76.

### Impairment of financial assets

When an impairment test (as described in note 05) 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 assessments 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 the basis of judgments 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 assessments 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 101.

### Right-of-use assets

The measurement of right-of-use assets in connection with leases (as described in note 12) involves the use of estimates and assumptions, 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 contract liabilities and other assets held by insurance companies

The measurement of insurance contract liabilities and other assets held by insurance companies involves the exercise of judgment, estimates, and assumptions, especially in relation to mortality, claims, rates of return on investment, lapse, 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 contract 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. Building society simulations are used to determine the present value of the collective building society operations. 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 57 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 assessing details relevant to income tax.

### Climate-related matters

Climate-related matters impact on the familiar assumptions and estimates. No additional estimation uncertainty has arisen with regard to the calculation of the carrying amounts of assets and liabilities and the calculation of income and expenses. Estimation uncertainty and the related judgments in respect of climate-related matters primarily arise when determining the fair value of financial assets and financial liabilities, identifying any impairment of financial assets, and measuring insurance contract liabilities. Climate-related matters did not result in any explicit adjustments being made in the determination of the fair value of financial assets and financial liabilities in the reporting period. To some extent, however, climate-related matters are factored into the pertinent models implicitly. The consideration of climate-related matters when identifying impairment of financial assets during the reporting period is explained in note 86, specifically in the information on the impact of macroeconomic conditions. When measuring insurance contract liabilities, climate-related matters are taken into account by making prudent additions to the liability for incurred claims and maintaining an extensive reinsurance program that comes into effect when a defined claims threshold is exceeded and thus limits financial risk.

## » 03 Scope of consolidation

In addition to DZ BANK as the parent, the consolidated financial statements for the year ended December 31, 2023 include 16 subsidiaries (2022: 17) and 5 subgroups (2022: 5) comprising a total of 90 subsidiaries (2022: 90).

The main change to the scope of consolidation in 2023 was the merger of KBIH Beteiligungsgesellschaft für Industrie und Handel mbH, Frankfurt am Main, into DZ BANK AG.

The consolidated financial statements include 5 joint arrangements in the form of joint ventures with at least one other entity outside the group (2022: 5) and 23 associates (2022: 25) 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.

The shareholdings of the DZ BANK Group are listed in full in note 115.

## » 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.

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. 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. It is sometimes necessary to make judgments, taking all of the relevant facts and circumstances into consideration, when making such a determination. 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, considerable judgments have to be made in order to assess the appropriateness of contractually agreed remuneration and of the level of the variable returns received.

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

The financial statements of the entities consolidated in the DZ BANK Group have been prepared using uniform accounting policies. 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, 2023. With 19 (2022: 18) 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.

Where an entity is controlled without there being an investment in the equity of the controlled entity, the subsidiary’s entire equity is recognized as non-controlling interests under equity. If the subsidiary’s equity does not qualify as equity pursuant to IAS 32, it is recognized under liabilities.

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 recognized in profit or loss.

Entities under joint control with at least one other entity outside the group are accounted for as joint ventures in the consolidated financial statements. 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. Unless it can be proved otherwise, this is assumed to be the case where between 20 and 50 percent of the voting shares are held.

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 investment accounted for under the equity method is recognized in profit or loss.

## » 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 and financial assets that were acquired for the purpose of selling them in the near term. This subcategory also includes financial assets that are 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. Derivatives that are not designated as hedging instruments are included in this subcategory too.

In the category 'financial assets mandatorily measured at fair value through profit or loss', all changes in fair value are recognized in profit or loss.

#### 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.

In the subcategory 'contingent considerations in a business combination', all changes in fair value are recognized in profit or loss.

### 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.

In the subcategory 'financial assets designated as at fair value through profit or loss', all changes in fair value are recognized in profit or loss.

## 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. Any differences between the amortized cost and the fair value that do not result from impairment losses or currency translation 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 (using the effective interest method), loss allowances, and currency translation effects are 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 and financial liabilities that are 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. Derivatives that are not designated as hedging instruments are included in this subcategory too.

In the subcategory 'financial liabilities mandatorily measured at fair value through profit or loss', all changes in fair value are recognized in profit or loss.

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.

In the subcategory 'contingent considerations in a business combination', all changes in fair value are recognized in profit or loss.

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 issued 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 issues of interest-bearing securities with embedded call options and interest-rate cap/floor options, as well as 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’.

The following are not included in this category: 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 considerations 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 in partnerships that has not yet been distributed is recognized under other liabilities, provided that the resulting liability is not of a subordinated nature. The capital and profit of partnerships attributable to non-controlling interests in partnerships are classified as ‘share capital repayable on demand’ under subordinated capital and other liabilities 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 investment contracts that are not designated as unit-linked insurance products. There is no significant transfer of insurance risk in these investment contracts and they do not therefore satisfy the criteria for an insurance contract under IFRS 17. As a consequence, they need to be treated as financial instruments in accordance with IFRS 9.

Interest expense (using the effective interest method) and currency translation effects are recognized in profit or loss.

## 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. 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, other assets and liabilities are held in the context of the insurance business.

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 and liabilities 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 categorization of the financial assets and financial liabilities.

All financial instruments are generally measured at fair value on initial recognition. In the case of financial assets or financial liabilities not subsequently 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 differences between the transaction price and the 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 amortized to profit or loss over the maturity period or at the time that all parameters factored into the valuation models are observable.

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 only some of the risks and rewards are transferred and control is partly retained, the financial asset is derecognized only up to the amount of the continuing involvement. 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. Derivatives and 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’
- 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
- Finance lease receivables
- 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. Loss allowances for financial assets measured at amortized cost and finance lease receivables are presented in the loss allowances line item on the assets side of the balance sheet. For financial assets measured at fair value through other comprehensive income, loss allowances are recognized in the reserve from other comprehensive income on the equity and liabilities side. Loss allowances for loan commitments and financial guarantee contracts are recognized on the equity and liabilities side under provisions.

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, which would require their assignment to stage 3. 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 – for example, on the basis of investment-grade credit ratings – the financial instrument has a low credit risk at the balance sheet date (low credit risk exemption). The low credit risk exemption is applied to securities.

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 86 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' ('contingent considerations'), and 'financial assets designated as at fair value through profit or loss' (fair value option)
- '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, cash and cash equivalents measured at amortized cost, 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 in a business combination' ('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 basis in accordance with IFRS 9 or on a portfolio basis in accordance with IAS 39.

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 (with the exception of the revaluation reserve) 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 9.3 et seq. 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 lending transactions are transactions in which the lender provides the borrower with securities for use over a defined period of time. 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 9.1 et seq. 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 insurance business comprises insurance contracts, investment contracts, and service contracts. It also includes financial guarantee contracts with policyholders.

Under an insurance contract, the issuer accepts significant insurance risk from a policyholder by agreeing to compensate the policyholder if an uncertain future event adversely affects the policyholder. Insurance contracts are recognized in accordance with the requirements of IFRS 17. Investment contracts are mainly pension fund contracts based on defined benefit plans or contracts to protect semi-retirement employment models. Investment contracts are classified as financial instruments within the scope of IFRS 9. Service contracts comprise, in particular, separable components of insurance contracts that contain services other than services pursuant to IFRS 17. 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 is reported under specific insurance items in the income statement and on the 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 05. 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 or in the reserve from other comprehensive income. Loss allowances are presented on a net basis within the two balance sheet items 'investments held by insurance companies' and 'other assets held by insurance companies'. However, in the notes on these balance sheet items, the loss allowances are presented on a gross basis.

Other liabilities of insurance companies include the performance obligations under investment contracts for which no material insurance risk is assumed when the policy is concluded. These are reported under liabilities from investment contracts within payables and residual other liabilities. The underlying financial instruments in these contracts 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. On subsequent measurement, 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.

Advantages gained from low-interest, non-interest-bearing, or forgivable loans, including development 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.

## General measurement methods

IFRS 17 includes 3 measurement methods, the main one being the general measurement model. The others are the premium allocation approach – a simplified approach for short-term business – and the variable fee approach for insurance contracts with direct participation features. All of the measurement models are used. However, the degree to which the measurement models are used in the individual business segments varies due to the differences in the nature of the aggregated business segments.

### General measurement model

For the general measurement model, IFRS 17 specifies that the liability for remaining coverage for a GIC at initial recognition is calculated as the sum of the fulfillment cash flows and the CSM. The fulfillment cash flows comprise the probability-weighted estimate of future cash flows, adjusted for the time value of money and for financial and non-financial risk. All relevant uncertainties arising from financial risk are factored into the estimate of the cash flows. An adjustment for non-financial risk is also made. The CSM is the unearned profit that will be recognized in the future during the coverage period. It is recognized in profit or loss in accordance with an amortization pattern. In the general measurement model, measurement is based on GICs instead of individual contracts. To form the GICs, portfolios are defined that comprise contracts that are subject to similar risks and managed together. These portfolios are divided into GICs based on profitability, measurement approach, and annual cohorts.

On subsequent measurement, the carrying amount of a GIC at the end of each reporting period is the sum of the liability for future coverage and the liability for incurred claims. On subsequent measurement of the liability for remaining coverage, each GIC is remeasured using current assumptions and parameters. As a result, the CSM incorporates changes to non-financial estimates regarding future coverage and new business margins and is updated in line with the provision of services. The liability for remaining coverage is calculated at each balance sheet date from the sum of the present value of the estimated cash outflows, the risk adjustment for non-financial risk, and the CSM.

The general measurement model is used for inward reinsurance and for reinsurance contracts held (with the exception of the fire, property, and hail portfolios in inward reinsurance), the risk part of the casualty insurance with premium refund business in non-life insurance, and credit insurance as part of the personal insurance business.

### Premium allocation approach

The measurement of a GIC may be simplified using the premium allocation approach, provided that certain criteria are met. This simplification can be applied upon initial recognition of a GIC if an entity reasonably expects that use of the premium allocation approach will result in a measurement of the liability for future coverage that is not materially different from its measurement under the general measurement model or if the coverage period of each contract in the GIC is one year or less. When comparing the different possible measurements, the impact of the time value of money and the different amortization patterns of the liability for remaining coverage on profit or loss is taken into account. In view of the nature of the underlying business, no significant variability in the fulfillment cash flows before claims are incurred is expected.

At initial recognition of each group of insurance contracts measured using the premium allocation approach, the carrying amount of the liability for remaining coverage is measured on the basis of the premiums received at initial recognition less any insurance acquisition cash flows that have been allocated to the GIC. The carrying amount is also adjusted for any amounts arising from the derecognition of any assets or liabilities that were previously recognized for cash flows related to the GIC, including any assets for insurance acquisition cash flows.

Reinsurance contracts held are measured on the same basis as the underlying insurance contracts. If a loss is recognized at initial recognition of a group of onerous underlying insurance contracts or if further onerous underlying insurance contracts are added to a GIC, a loss recovery component is calculated, provided that corresponding reinsurance is in place. It is calculated by multiplying the loss recognized for the underlying contracts by the percentage of claims from the reinsurance contracts held.

On subsequent measurement, the carrying amount of the liability for remaining coverage is increased by premiums received and by the amortization of the insurance acquisition cash flows, which are recognized as an expense, and is reduced by the amount recognized as insurance revenue for services provided and by all additional insurance acquisition cash flows allocated after initial recognition. The same applies to subsequent measurement of reinsurance contracts held, with the exception of insurance acquisition cash flows recognized that are not available for these contracts.

The premium allocation approach is used for the non-life insurance business (except for casualty insurance with premium refund), for the fire, property, and hail portfolios in inward reinsurance, for international travel healthcare insurance in personal insurance, and for reinsurance contracts held.

### Variable fee approach

Insurance contracts with direct participation features are measured in accordance with the rules of the variable fee approach. Initial measurement is the same as under the general measurement model, whereas subsequent measurement – particularly regarding the updating of the CSM – takes policyholder participation features into account.

The annual cohort rule under IFRS 17.22 as endorsed by the EU is optional; this option is exercised. The European Commission permits users in the EU to choose whether to apply the requirement under IFRS 17.22 for certain contracts or not. This decision affects the portfolios pursuant to article 2 (2) letter a) of Regulation (EU) 2021/2036. These comprise GICs with direct participation features, groups of investment contracts with discretionary participation features, and insurance contracts with cash flows that affect or are affected by other insurance contracts in accordance with IFRS 17.B67 and IFRS 17.B68 (mutualization). This mutualization takes place across annual cohorts. In the personal insurance business involving contracts with direct participation features and with mutualization, and in casualty insurance business with premium refund involving endowment life insurance, annual cohorts are generally not formed.

On subsequent measurement of a GIC with direct participation features, the fulfillment cash flows for the entirety of the changes to the obligation to pay policyholders are adjusted by an amount corresponding to the fair value of the underlying items. These changes do not relate to future services and are therefore recognized in profit or loss. The CSM is then adjusted by the changes to the entity's share of the fair value of the underlying items that relate to future services.

The variable fee approach is used for the personal insurance business (except for credit insurance and international travel healthcare insurance) and for the savings component in casualty insurance with premium refund in the non-life insurance business.

## Insurance contract assets and liabilities

### Liability for remaining coverage

#### Fulfillment cash flows

For the non-life portfolios, cash flows – calculated using the general measurement model – for estimated future claims and the associated premiums and costs are needed to be able to determine the liability for remaining coverage. The estimated future cash flows are determined using estimated ratios, realization patterns, estimated premiums written, and estimated premiums earned.

The following ratios are modeled:

– Estimated ultimate claims rates in order to model the future claims expenses for compensation payments, recourse, excess proceeds, and loss sharing agreements as well as external claim settlement costs
– Expected ratios for internal claim settlement costs, insurance acquisition cash flows, administration costs, fire protection taxes, premium refunds, and lapse

Various realization patterns are modeled for settlement purposes. The payment pattern for future compensation payments, recourse, excess proceeds, loss sharing agreements and claim settlement costs is derived from the settlement pattern used in the recognition of claims provisions. In addition, various payment patterns for the insurance acquisition cash flows, administration costs, fire protection taxes, and premium refunds are modeled.

In the personal insurance business, the fulfillment cash flows are based on a projection of future cash flows within the contract boundaries. This takes account of all cash inflows and outflows that are needed to settle the insurance liabilities during their term to maturity. These comprise premium payments and related cash flows, all payments to policyholders and beneficiaries (including future policyholder participation), and all expenses incurred in order to fulfill the insurance obligations, where these can be allocated directly.

Premiums, guaranteed benefits, and costs are projected for the main portfolios on an individual contract basis until expiry. The stochastic measurement is primarily based on these deterministic cash flows, with other factors such as dynamic policyholder behavior also taken into account. Business that is not modeled on an individual contract basis is taken into account using an appropriate scaling approach.

In addition to the product and portfolio data at the start of the projection, assumptions about changes in the portfolio over the course of the projection are also incorporated. These are assumptions about biometrics and policyholder behavior, such as second-order mortality probabilities, probabilities for lump-sum payments, and lapse probabilities. Inflation assumptions are taken into account in the cost projection.

To measure the policyholder participation payments, the policyholder participation is allocated for each year of the projection depending on the funds available from the provision for premium refunds under HGB. The HGB provision for premium refunds is updated in accordance with the German Minimum Addition Regulation (MindZV).

The value of the options and guarantees is determined using stochastic simulation.

In inward reinsurance, the fulfillment cash flows – both for the liability for remaining coverage and for the liability for incurred claims – are measured using estimates of future cash flows determined in accordance with IFRS 17.33-35 and taking account of IFRS 17.B65, B66, and B66(a). A distinction is made in the modeling between cash flows related to premiums, cash flows related to benefits, and cash flows related to costs. The costs modeled are the administration costs that can be allocated and other insurance-related costs. IFRS 17.59(a) applies only if insurance acquisition cash flows within the meaning of IFRS 17 exist.

The estimates of future cash flows are determined for each GIC, broken down into items relating to premiums, claims, and costs, using a multi-stage model as a best estimate on the basis of past data and future forecasts. The future cash flows of the outstanding payments are generated using actuarial payment flow patterns. Changes to estimates of future cash flows are predominantly based on information from previous insurers and on historic and current data. Changes to estimates that are based on the exercise of judgment are documented separately. The modeling of the estimated cash flows is based on the 5 biggest currencies in terms of volume (euro, US dollar, pound sterling, Japanese yen, and South African rand).

The outstanding cash flows are then divided into those for coverage already provided (liability for incurred claims) and those for coverage still outstanding (liability for remaining coverage). The future cash flows are determined on an underwriting year basis, although forecasts of future claims and the settlement of claims incurred are combined. It is therefore necessary to allocate the remaining claims provision to future coverage and past coverage. The basis for this distribution draws on the breakdown of the total estimate of premiums at each balance sheet date. Analysis of the settlement year enables the premium payments to be allocated to the actual coverage provided by the previous insurer.

### Risk adjustment for non-financial risks

A confidence level technique is used to determine the risk adjustment for non-financial risk. A confidence level of 75 percent has been set for the Group. The option to not split the change in the risk adjustment into an insurance service component and an insurance finance component is not exercised. When determining the risk adjustment for each GIC, no risk compensation effects are taken into account that go beyond the level of the individual legal entity.

## Discount rates

All cash flows are discounted with a risk-free yield curve that has been adjusted to reflect the liquidity characteristics of the insurance contracts. The liquidity of an insurance contract is determined by the predictability of its cash flows. The amount of the liquidity premium is derived from the liquidity of the reference market. Uncertainties in determining the discount rates and, in particular, the differences between different insurance contracts are taken into account in the measurement of the fulfillment cash flows at another point and are thus not taken into account by adjusting the yield curve. The relevant uncertainties arising from financial risk are factored into the estimate of the cash flows as part of a stochastic measurement that is based on up-to-date market prices of relevant hedging instruments. Non-financial uncertainties are reflected in the risk adjustment for non-financial risks. No further differentiation in terms of liquidity is therefore made in the measurement yield curve. The yield curve is determined for each currency using a bottom-up approach. In a two-step process, the risk-free and liquid basic yield curve is determined and then adjusted for an illiquidity premium.

The risk-free, liquid basic yield curve is determined using the risk-free, liquid swap rates based on 6M Euribor, which are derived from observable market prices and which are extrapolated for maturities for which no observable market prices can be determined. The Nelson Siegel method is used for the extrapolation. If no suitable discount rates are observable in the market, they have to be estimated in accordance with IFRS 17.B78. Market data that is fundamentally observable but cannot be obtained from liquid markets with sufficient transaction volumes is not regarded as reliable. In this case, judgment has to be exercised in order to assess the degree of similarity between the features of the insurance contracts to be measured and the observable market prices.

To reflect the liquidity characteristics of the insurance contracts, the risk-free, liquid basic yield curve is adjusted for an illiquidity premium. As the complete illiquidity of a cash flow is, by definition, not observable in the market, it is determined only approximately from observable market data. This process of determination results in a lower-end barrier for the complete illiquidity premium and thus in an abstract, risk-free, and completely illiquid yield curve pursuant to IFRS 17.B84. Higher illiquidity premiums cannot be established due to a lack of available data and are thus not estimated on the basis of reliable data. To determine the illiquidity premium from market data, the yield differential between German Pfandbriefe and German government securities with 1, 5, and 10-year maturities as at the reporting date are used, with interpolation between these maturities. Estimation uncertainties are also taken into account for longer yield differentials.

In inward reinsurance, there are transactions in foreign currencies for which yield curves for discounting are also provided in the following main currencies: US dollar, pound sterling, Japanese yen, and South African rand. The foreign currency curves are determined using a methodology that involves determining the difference between the risk-free interest rates and the risk-free euro yield curve and adjusting the euro IFRS 17 discount curve by the individual maturity-related interest-rate differentials.

## Investment component

The investment component of a contract is determined by calculating the amount that has to be repaid to the policyholder in all scenarios that have commercial substance, irrespective of the occurrence of an insured event. Investment component payments are not recognized as part of insurance revenue or insurance service expenses.

In personal insurance, the investment component is calculated as the cash surrender value defined in the contract terms and conditions less any fees due. Policyholder participation in the form of the interest-bearing accumulated amount or unit-linked policyholder participation also constitutes an investment component.

In inward reinsurance, the amount of the guaranteed payment to the ceding insurer and thus the investment component is calculated as the minimum of the benefit and the contractual agreements if no claim is made. Owing to the nature of the reinsurance business, it is assumed that the guaranteed benefit if no claim is made is smaller than the benefits in a loss event. As the contractual terms and conditions are clearly defined, the amount of the investment component can be unequivocally determined when the contract is signed.

### Contractual service margin

At initial measurement, the CSM of a GIC essentially represents the unearned profit that will be recognized as the entity provides services under the insurance contracts in the group.

In the case of insurance contracts without direct participation features, the CSM is calculated at each reporting date from the carrying amount at the end of the preceding reporting period, adjusted by the following:

– The CSM for all new contracts added to the GIC over the course of the year
– The interest accreted on the carrying amount of the CSM during the reporting period
– The changes to the fulfillment cash flows relating to future services
– The effect of any currency exchange differences on the CSM
– The amount recognized as insurance revenue on the basis of the services performed during the year

In the case of insurance contracts with direct participation features, the CSM is calculated at each reporting date from the carrying amount at the end of the preceding reporting period, adjusted by the following:

– The CSM for all new contracts added to the GIC over the course of the year
– The change in the amount of the entity's share of the fair value of the underlying items
– The changes to the fulfillment cash flows relating to future services
– The effect of any currency exchange differences on the CSM
– The amount recognized as insurance revenue on the basis of the services performed during the year

In each period, a share of the CSM of a GIC is recognized in profit or loss in order to reflect the services provided on the basis of the number of coverage units provided in the year. At each reporting date, the coverage units are reviewed and updated for each contract, taking account of the scope of the services provided and the expected coverage period.

The projected risk result, which can be applied consistently across all life insurance product types, is used as a measure of the benefits provided by insurance coverage in life insurance. In health insurance, the total value – calculated for each rate scale – of the profile of benefit drawdown normalized to a single age is used. Both the projected risk result and the rate-scale-specific benefit drawdown constitute an adequate approximation for the rate-scale-specific insurance benefit payment. For investment-related services, the amounts invested in the capital markets are used. The projected benefit reserve under HGB is an equivalent value derived from the setting of insurance rates and HGB accounting principles.

In the case of biometric products, the relative weighting between the benefits provided by insurance coverage and the investment-related service is significantly different from that for savings-focused products. This difference reflects the character of the service being provided. Biometric protection predominates in the case of biometric products. By contrast, the investment-related service is a more important aspect in the case of savings-focused products, although biometric protection is not to be regarded as immaterial.

In the personal insurance business, policyholders of insurance contracts with direct participation features share in both the risk result and the gains and losses on investments. This participation can be structured as a variable fee paid to the entity for the services to be provided. The insurance coverage protection is weighted using the projected risk result, with the weighting determined in line with MindZV. The weighting of the investment-based service is based on the range determined for shareholders' historical share of gains and losses on investments held by insurance companies from the projected HGB benefit reserve. Finally, the weighting factors are used to determine the ratio of the fees for the benefits provided by insurance coverage to the investment-related service.

In inward reinsurance, the settlement pattern for premiums earned is used to measure the coverage units and amortize the CSM. Due to the contract-specific, complex structure of reinsurance products, there is not a more objective method of quantifying the insurance benefit payment that could be used to compare and contrast the individual contracts. Using premiums earned rather than premiums written ensures that amounts are accrued and recognized accordingly.

## Liability for incurred claims

In non-life insurance, the liability for incurred claims in respect of a GIC is recognized in the amount of the fulfillment cash flows related to claims incurred. The future cash flows are discounted at current discount rates.

To calculate the liability for incurred claims, the following 3 components must be measured:

### Claims provision

Claims provisions are provisions for known claims and claims incurred but not reported. The final amount of the claims and the timing of payment are not known. Claims provisions contain compensation payments, annuities that have not been accepted, external claim settlement costs, internal claim settlement costs, recourse, excess proceeds, and loss sharing agreements.

Claims provisions are mainly calculated using the chain ladder method or other actuarial loss reserving technique. The chain ladder method is an actuarial method of calculating claims provisions on the basis of claim payments and claims expenses. This multiplicative reserving technique is the market standard in non-life insurance. It is based on the assumption that historical claim settlement patterns are indicative of future claim settlement patterns. It is also assumed that the individual years in which claims are incurred are independent of each other. Settlement for a particular year is based on a settlement pattern that is identical for all years. This settlement pattern is then used to estimate the expected future cash flows.

The very short period for the settlement of claims in the personal insurance business means that the claims provision in this business is calculated in the amount of the nominal values of the expected payments for claims incurred. In the life insurance business, benefits paid due to occupational incapacity or total unfitness for work are part of the liability for remaining coverage.

For calculation of the claims provision in inward reinsurance, please refer to the section on the liability for remaining coverage and the information on the difference between the liability for remaining coverage and the liability for incurred claims.

### Provision for accepted annuities

Provisions for accepted annuities cover obligations from claims that previously had to be recognized in the claims provisions and were annuitized. Annuities can arise in the liability insurance, casualty insurance, and motor vehicle liability insurance businesses. These annuities are measured in the same way as in the life insurance business.

### Risk adjustment

A confidence level technique is used to determine the risk adjustment. A confidence level of 75 percent has been set for the Group. The necessary distribution assumptions are determined on the basis of stochastic simulations and using market-standard distributions, particularly log-normal distribution. The parameters used include the expected values and the forecasting errors in the recognition of claims provisions.

### Recognition of onerous business on the balance sheet

If, for contracts not measured using the premium allocation approach, the increase in the fulfilment cash flows resulting from changes in estimates relating to remaining coverage exceeds the amount of the CSM, a loss is recognized in profit or loss in the amount of this difference. The loss component is recognized as part of the liability for remaining coverage and reduced to zero on a systematic basis over the coverage period. If, for contracts measured using the premium allocation approach, facts and circumstances indicate at any time during the coverage period that a GIC is onerous, the loss is recognized in profit or loss. The liability for remaining coverage is increased by the amount by which the current estimates of the fulfillment cash flows relating to remaining coverage exceed the carrying amount of the liability for remaining coverage. This difference is also reduced to zero on a systematic basis over the coverage period.

The change in the liability for remaining coverage due to onerous contracts also results in a pro rata change in the loss recovery component from reinsurance contracts held.

### Option of recognition in other comprehensive income

The accounting policy choice to disaggregate and recognize the total insurance finance income or expenses in profit or loss and in other comprehensive income is exercised ('option of recognition in other comprehensive income'). Exercising this option pursuant to IFRS 17.89(b) for insurance contracts with direct participation features, the amount recognized in other comprehensive income at the transition date is equal to the cumulative amount of the underlying items recognized in other comprehensive income. On subsequent measurement, insurance finance income or expenses is disaggregated in such a way that this amount combined with the income and expenses recognized in profit or loss for the underlying items gives a balance of nil for the items presented separately in profit or loss. Exercising the option of recognition in other comprehensive income in accordance with IFRS 17.88(b) for insurance contracts without direct participation features, the amount recognized in other comprehensive income in accordance with IFRS 17.C19(b)(i) is calculated on the basis of the discount rates determined at initial recognition of a GIC. On subsequent measurement, insurance finance income or expenses is disaggregated in such a way that the cumulative amount recognized in other comprehensive income always corresponds to the difference between the carrying amount of the GIC applying the yield curve valid as at the reporting date and the carrying amount of the GIC applying the yield curve valid at the time of initial recognition of the GIC (locked-in yield curve). The locked-in yield curve to be used for the claims provision for insurance contracts under the premium allocation approach is determined on the basis of when the claim is incurred.

# » 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, the lease payments received are recognized in profit or loss on a straight-line basis over the term of the lease and reported under other net operating income.

## 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 are reported under net interest income. Interest income and interest expense arising in connection with derivatives that were entered into for trading purposes are reported under gains and losses on trading activities.

## Recognition of fair value gains and losses when exercising the fair value option

If, to avoid accounting mismatches, hedged items are allocated to the category 'financial assets designated as at fair value through profit or loss' (FVO hedged items), the effects of changes in market prices are reported under other gains and losses on financial instruments unless the effects of changes in market prices relate to derivatives whose gains and losses are reported under gains and losses on trading activities. In this case, the effects of changes in the market prices of the affected financial instruments are reported under gains and losses on trading activities. Credit rating effects arising from FVO hedged items are generally reported under other gains and losses on valuation of financial instruments.

As a rule, fair value gains and losses on derivatives that are classified as FVO hedged items and not reported under gains and losses on trading activities are recognized as an element of other gains and losses on valuation of financial instruments under gains and losses on financial instruments designated as at fair value through profit or loss. Otherwise, the fair value gains and losses on derivatives that are classified as FVO hedged items are recognized under gains and losses on trading activities.

## 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

The amounts recognized in the income statement and statement of comprehensive income are disaggregated into an insurance service result – comprising insurance revenue and insurance service expenses – and insurance finance income or expenses. Insurance revenue is the amount recognized to depict the provision of services relating to the GIC in an amount that reflects the consideration to which the entity expects to be entitled in exchange for these services. The insurance revenue and insurance service expenses recognized in profit or loss must not contain any investment components.

Insurance finance income or expenses generally comprises the changes in the carrying amount of the GIC arising from the effect of the time value of money, the effect of financial risk, and changes in these effects. The accounting policy choices of partial presentation in other comprehensive income pursuant to IFRS 17.88(b) and IFRS 17.89(b) are exercised consistently throughout the group.

## » 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 (banks and customers) 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.

## » 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 categories ‘financial assets measured at fair value through profit or loss’ and ‘financial liabilities 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 financial assets and financial liabilities that are held for trading purposes.

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.

## » 18 Investments

The following are recognized as investments: bearer bonds and other fixed-income securities, shares and other variable-yield securities, investment fund units, 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 non-material subsidiaries and investments in 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. Current income and expense arising from use of the equity method is 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 mandatorily 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 and subsequently at cost less cumulative depreciation and cumulative impairment losses. Depreciation is largely recognized on a straight-line basis over the useful life of the asset. As a rule, external valuations are used to measure recoverability.

Right-of-use assets arising from leases are measured in accordance with the lease accounting provisions and subsequently reduced by cumulative depreciation and cumulative impairment losses. 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 property, plant and equipment, investment property, or right-of-use 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 IFRS carrying amounts of the assets or liabilities and their carrying amounts 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.

In accordance with the exception set out in IAS 12.88A, deferred tax assets and liabilities related to the global minimum tax requirements are not recognized, nor is any information about them disclosed.

In certain jurisdictions where entities in the DZ BANK Group operate, legislation has been enacted or substantively enacted to introduce global minimum tax (Global Anti-Base Erosion Rules Pillar Two). The DZ BANK Group is in the scope of the enacted or substantively enacted legal provisions and has analyzed how it could be affected. The assessment of the potential risk arising from global minimum tax is based on the tax returns and annual financial statements of the entities to be included and on the tax-related country-by-country reporting (CbCR) for previous years. Based on this assessment, the effective tax rates in most of the countries in which the group operates are above 15 percent for the purposes of global minimum tax, so the group assumes that the temporary simplification rules (CbCR safe harbor rules) can be applied. However, there are a limited number of countries where the temporary safe harbor exemptions are expected not to apply. In these countries, the income tax risk from global minimum tax is expected to be immaterial because the revenue in the affected countries recognized in the CbCR for previous years stands at significantly less than 1 percent of the total revenue pursuant to the CbCR.

## » 21 Other assets and other 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.

Other assets held by insurance companies, intangible assets, and contract assets are reported under other 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.

## » 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. Additions to loss allowances for these balance sheet items are recognized under loss allowances in the income statement; 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.

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 (banks and customers) 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.

## » 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 are measured 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 defined contribution 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 annuity trends and average life expectancy. Assumptions about the salary trend are based on past trends and take into account expectations regarding future changes in the labor market. Assumptions about the annuity trend are based on expected changes in the inflation rate. The 2018 G mortality tables published by Professor Dr. Klaus Heubeck are used to estimate average life expectancy in Germany; outside Germany, the relevant country-specific mortality tables are used. 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 AA from at least one of 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.

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.

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.

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, the expense for the recognition of provisions for restructuring is included in 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 salaried employees. 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. Where payment transactions are linked to targets relating to a multi-year, retrospective performance period, the provision is recognized on the basis of the underlying performance period. 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 110 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 under administrative expenses.

## 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. The underlying assumptions and estimates used include figures based on past experience as well as expectations and forecasts relating to future trends and developments.

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.

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 are measured and recognized in accordance with IAS 37. In line with the building society's terms and conditions, the granting of bonuses to home savings customers is tied to various conditions, such as the selection of the interest bonus option by the home savings customer, adherence to a lock-up period that, after the option has been selected, starts on the valuation date on which the target valuation and a certain minimum volume of home savings deposits are reached, the achievement of a minimum term for the home savings contract, or a decision not to draw down the allocated home savings loan. 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 assessments – 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 9.5.3.1 in conjunction with IFRS 9.4.2.1.

Provisions that cover the possible resulting losses are recognized for risks arising from ongoing legal disputes and for pre-litigation risks, including in relation to tax matters. 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. Non-controlling interests in partnerships controlled by entities in the DZ BANK Group that must be classified as subordinated are recognized as share capital repayable on demand.

Subordinated capital is measured 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 profit exist in the following subsidiaries:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Bausparkasse Schwäbisch Hall subgroup | 191 | 169 |
| DZ PRIVATBANK | 77 | 71 |
| R+V Versicherung subgroup | 1,423 | 1,312 |
| Union Asset Management Holding subgroup | 110 | 97 |
| Other | 162 | 157 |
| **Total** | **1,963** | **1,806** |

**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 97.59 percent of the shares in BSH (December 31, 2022: 97.58 percent). The share of voting rights is equal to the shareholding. Non-controlling interests account for 2.41 percent of the voting rights and shares (December 31, 2022: 2.42 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 €13 million (2022: €9 million). Nearly all of this amount was accounted for by the net income for the year attributable to non-controlling interests in the BSH subgroup of €13 million (2022: €6 million). The carrying amount of the non-controlling interests in the DZ BANK Group was €191 million (December 31, 2022: €169 million). Of this amount, €98 million was attributable to non-controlling interests within the BSH subgroup (December 31, 2022: €82 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 2025 financial year. After the end of the 2025 financial year, the profit transfer agreement will be extended automatically by one year at a time until December 31, 2030 at the latest, unless the agreement is terminated by giving notice no later than 6 months before it is due to end. Guaranteed dividends of €1 million were paid to outside shareholders of BSH in 2023 (2022: €1 million).

Aggregated financial information for the BSH subgroup:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Assets | 84,369 | 85,599 |
| Liabilities | 79,916 | 81,384 |

| € million | 2023 | 2022 |
|---|---|---|
| Interest income and fee and commission income | 1,543 | 1,440 |
| Net profit/loss | -36 | 75 |
| Other comprehensive income/loss | 277 | -1,583 |
| Total comprehensive income/loss | 241 | -1,507 |
| Cash flow | -80 | -918 |

## 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, (DZ PRIVATBANK Schweiz), 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 91.83 percent (December 31, 2022: 91.78 percent) of the shares in DZ PRIVATBANK S.A. The share of voting rights is equal to the shareholding. Non-controlling interests account for 8.17 percent (December 31, 2022: 8.22 percent) and are held by local cooperative banks and investment companies in the cooperative sector.

The net income for the year attributable to the non-controlling interests was €7 million (2022: €5 million). The carrying amount of the non-controlling interests was €77 million (December 31, 2022: €71 million). The dividend distributed to the non-controlling interests came to €1 million in 2023 (2022: €1 million).

Aggregated financial information for DZ PRIVATBANK:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Assets | 26,190 | 25,447 |
| Liabilities | 24,969 | 24,273 |

| € million | 2023 | 2022 |
|---|---|---|
| Interest income and fee and commission income | 1,386 | 718 |
| Net profit | 60 | 31 |
| Other comprehensive income | 11 | 11 |
| Total comprehensive income | 71 | 42 |
| Cash flow | 1,445 | 2,392 |

## 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 92.31 percent of the shares in R+V (December 31, 2022: 92.28 percent). The share of voting rights is equal to the shareholding. Non-controlling interests account for 7.69 percent of the voting rights and shares (December 31, 2022: 7.72 percent). Within this figure, local cooperative banks hold 5.93 percent (December 31, 2022: 5.96 percent). The other 1.75 percent (December 31, 2022: 1.75 percent) is held by other entities in the cooperative sector.

The net income for the year attributable to the non-controlling interests was €40 million (2022: €15 million). This included the net loss for the year attributable to non-controlling interests in the R+V subgroup of €14 million (2022: net income of €10 million). The carrying amount of the non-controlling interests in the DZ BANK Group was €1,423 million (December 31, 2022: €1,312 million). Of this amount, €774 million was attributable to non-controlling interests within the R+V subgroup (December 31, 2022: €730 million). DZ BANK entered into a profit-transfer agreement with R+V in 2022. This guarantees an annual cash settlement of €7.32 per non-par-value share (after corporation tax and ancillary taxes) for the outside shareholders of R+V until the end of the 2026 financial year. After the end of the agreement, it can be extended by one year at a time until 2031. Guaranteed dividends of €8 million were paid to outside shareholders of R+V in 2023 (2022: €8 million). In the R+V subgroup, dividends of €9 million were paid to non-controlling interests (2022: €28 million).

Aggregated financial information for the R+V subgroup:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Assets | 127,039 | 119,269 |
| Liabilities | 117,631 | 110,704 |

| € million | 2023 | 2022 |
|---|---|---|
| Insurance service result | 1,972 | 1,980 |
| Net profit/loss | 573 | -33 |
| Other comprehensive income/loss | 277 | -1,483 |
| Total comprehensive income/loss | 850 | -1,516 |

### 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 96.59 percent (December 31, 2022: 96.59 percent). The share of voting rights is equal to the aggregated shareholding. Non-controlling interests account for 3.41 percent of the shares (December 31, 2022: 3.41 percent). Most of these non-controlling interests are held by local cooperative banks. The proportion held indirectly by DZ BANK is 95.82 percent (December 31, 2022: 95.82 percent).

The carrying amount of the non-controlling interests within the DZ BANK Group was €110 million (December 31, 2022: €97 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, 2022: €33 million). The net income for the year attributable to the non-controlling interests was €29 million (2022: €23 million). This included the net income for the year attributable to non-controlling interests in the UMH subgroup of €6 million (2022: €8 million). The dividend distributed to the non-controlling interests totaled €13 million in 2023 (2022: €18 million). €7 million of this amount was paid as dividends to non-controlling interests in the UMH subgroup (2022: €9 million).

Aggregated financial information for the UMH subgroup:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Assets | 5,156 | 4,818 |
| Liabilities | 2,115 | 2,171 |

| € million | 2023 | 2022 |
|---|---|---|
| Interest income and fee and commission income | 3,487 | 3,506 |
| Net profit | 684 | 492 |
| Other comprehensive income/loss | -32 | 33 |
| Total comprehensive income | 652 | 525 |

## 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 assets and liabilities subject to restrictions on the balance sheet date are shown in the following table:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Assets** | **110,433** | **107,222** |
| Loans and advances to banks | 431 | 523 |
| Loans and advances to customers | 4,974 | 3,297 |
| Investments | 731 | 1,614 |
| Investments held by insurance companies | 103,852 | 101,324 |
| Other assets | 445 | 464 |
| **Liabilities** | **162,409** | **165,000** |
| Deposits from banks | 962 | 1,962 |
| Deposits from customers | 63,708 | 66,318 |
| Provisions | 913 | 1,053 |
| Insurance contract liabilities | 96,825 | 95,667 |

# » 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 Bausparkassen Holding GmbH, Vienna, Austria, Slovenská sporiteľňa a.s., Bratislava, Slovakia, and Erste Group Bank AG, Vienna, Austria. PSS is headquartered in Bratislava, Slovakia. BSH's shareholding in PSS was 32.50 percent on the balance sheet date, as it had been at December 31, 2022. 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 2023 (2022: no dividend).

Aggregated financial information for PSS:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Current assets | 518 | 609 |
| of which cash and cash equivalents | 13 | 5 |
| Non-current assets | 2,608 | 2,378 |
| Current liabilities | 787 | 761 |
| of which financial liabilities | 771 | 746 |
| Non-current liabilities | 2,027 | 1,935 |
| of which financial liabilities | 1,999 | 1,909 |

| € million | 2023 | 2022 |
|---|---|---|
| Interest income | 96 | 87 |
| Interest expense | -35 | -24 |
| Fee and commission income | 11 | 12 |
| Fee and commission expenses | -1 | -1 |
| Administrative expenses | -41 | -42 |
| Income taxes | -4 | -5 |
| Profit from continuing operations, net of tax | 21 | 7 |
| Other comprehensive income | - | 1 |
| Total comprehensive income | 21 | 7 |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Total net assets** | **312** | **291** |
| **Share of net assets** | **101** | **95** |
| Cumulative impairment losses on the carrying amount of the investment | -35 | -35 |
| **Carrying amount under the equity method** | **67** | **60** |

### 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. BSH's shareholding in this Chinese building society was 24.90 percent on the balance sheet date, as it had been at December 31, 2022. In the DZ BANK Group, the interests in SGB are accounted for using the equity method. SGB did not pay a dividend in 2023, as had also been the case in the previous year.

Aggregated financial information for SGB:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Current assets | 1,681 | 1,562 |
| of which cash and cash equivalents | 332 | 412 |
| Non-current assets | 3,111 | 3,107 |
| Current liabilities | 3,345 | 3,025 |
| of which financial liabilities | 3,129 | 2,815 |
| Non-current liabilities | 1,058 | 1,239 |
| of which financial liabilities | 1,058 | 1,239 |

| € million | 2023 | 2022 |
|---|---|---|
| Interest income | 149 | 153 |
| Interest expense | -85 | -83 |
| Fee and commission income | 5 | 7 |
| Fee and commission expenses | -12 | -13 |
| Administrative expenses | -40 | -43 |
| Income taxes | -2 | -2 |
| Profit from continuing operations, net of tax | 10 | 10 |
| Other comprehensive income/loss | -26 | -10 |
| Total comprehensive income/loss | -16 | - |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Total net assets** | **388** | 404 |
| **Share of net assets** | **97** | 101 |
| Cumulative impairment losses on the carrying amount of the investment | -75 | -75 |
| **Carrying amount under the equity method** | **21** | 25 |

### 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 50.00 percent stake in dwpbank, as it did at December 31, 2022. The equity method is applied to dwpbank on the basis of financial statements prepared in accordance with HGB because the difference compared with financial statements prepared in accordance with IFRS is not material.

The shares in dwpbank are not traded in an active market. dwpbank did not pay any dividend to DZ BANK in 2023 (2022: dividend of €6 million).

Aggregated financial information for dwpbank:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Assets | 635 | 830 |
| Liabilities | 301 | 545 |
| of which financial liabilities | 91 | 338 |

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

| € million | 2023 | 2022 |
|---|---|---|
| Interest income | 7 | 4 |
| Interest expense | -2 | -4 |
| Fee and commission income | 403 | 421 |
| Fee and commission expenses | -94 | -101 |
| Administrative expenses | -264 | -265 |
| Income taxes | -25 | - |
| Profit from continuing operations, net of tax | 49 | 8 |
| Total comprehensive income | 49 | 8 |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Total net assets** | **334** | 285 |
| **Share of net assets** | **167** | 143 |
| Capitalization of goodwill | 29 | 29 |
| **Carrying amount under the equity method** | **197** | 172 |

### Other joint ventures

The carrying amount of the equity-accounted joint ventures that, individually, are not material totaled €27 million on the balance sheet date (December 31, 2022: €60 million).

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

| € million | 2023 | 2022 |
|---|---|---|
| Share of profit from continuing operations, net of tax | - | 2 |
| Share of total comprehensive income | - | 2 |

## 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 €139 million on the balance sheet date (December 31, 2022: €131 million).

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

| € million | 2023 | 2022 |
|---|---|---|
| Share of profit/loss from continuing operations, net of tax | -1 | 6 |
| Share of total comprehensive income/loss | -1 | 6 |

## » 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 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, 2023 | | Dec. 31, 2022 | |
|---|---|---|---|---|
| € million | Volume | Number | Volume | Number |
| Mutual funds | 240,449 | 337 | 213,006 | 332 |
| of which guarantee funds | 282 | 6 | 307 | 8 |
| Special funds | 152,181 | 517 | 140,438 | 524 |
| **Total** | **392,630** | **854** | **353,444** | **856** |

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, 2023

| € million | Mutual funds | of which guarantee funds | Special funds | **Total** |
|---|---|---|---|---|
| **Assets** | **2,786** | **-** | **154** | **2,940** |
| Loans and advances to customers | 2 | - | 14 | 16 |
| Investments | 2,402 | - | 27 | 2,429 |
| Investments held by insurance companies | 30 | - | 98 | 128 |
| Property, plant and equipment, investment property, and right-of-use assets | 110 | - | - | 110 |
| Other assets | 194 | - | 14 | 208 |
| Non-current assets and disposal groups classified as held for sale | 48 | - | - | 48 |
| **Liabilities** | **128** | **7** | **-** | **128** |
| Financial liabilities held for trading | 7 | 7 | - | 7 |
| Other liabilities | 121 | - | - | 121 |
| Net exposure recognized on the balance sheet | 2,658 | -7 | 154 | 2,812 |
| **Financial guarantee contracts, loan commitments and other obligations** | **290** | **290** | **-** | **290** |
| Other obligations | 290 | 290 | - | 290 |
| **Actual maximum exposure** | **2,948** | **283** | **154** | **3,102** |

AS AT DECEMBER 31, 2022

| € million | Mutual funds | of which guarantee funds | Special funds | **Total** |
|---|---|---|---|---|
| **Assets** | **1,780** | **-** | **645** | **2,426** |
| Loans and advances to customers | 4 | - | 15 | 19 |
| Investments | 1,423 | - | 14 | 1,437 |
| Investments held by insurance companies | 27 | - | 601 | 629 |
| Property, plant and equipment, investment property, and right-of-use assets | 121 | - | - | 121 |
| Other assets | 186 | - | 15 | 201 |
| Non-current assets and disposal groups classified as held for sale | 19 | - | - | 19 |
| **Liabilities** | **139** | **13** | **-** | **139** |
| Financial liabilities held for trading | 13 | 13 | - | 13 |
| Other liabilities | 126 | - | - | 126 |
| Net exposure recognized on the balance sheet | 1,641 | -13 | 645 | 2,286 |
| **Financial guarantee contracts, loan commitments and other obligations** | **332** | **332** | **-** | **332** |
| Other obligations | 332 | 332 | - | 332 |
| **Actual maximum exposure** | **1,973** | **318** | **645** | **2,618** |

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 on the reporting date 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. As at the balance sheet date, the UMH subgroup managed guarantee funds with a volume of €282 million (net asset value) (December 31, 2022: €307 million) and a nominal amount of minimum payment commitments of €290 million (December 31, 2022: €332 million). The put options embedded in the guarantee funds were measured at €7 million as at the balance sheet date (December 31, 2022: €13 million) and are reported as derivatives (negative fair values) under equity and liabilities on the balance sheet.

In addition, there were investment funds issued by the group in connection with unit-linked life insurance amounting to €5,064 million (December 31, 2022: €4,149 million) that, however, do not result in a maximum exposure.

The earnings generated from investment funds issued by the DZ BANK Group were as follows:

**2023**

| € million | Mutual funds | of which guarantee funds | Special funds | **Total** |
|---|---|---|---|---|
| Interest income and current income and expense | 13 | - | 1 | 15 |
| Fee and commission income | 2,853 | 1 | 265 | 3,118 |
| Gains and losses on investments | -2 | - | - | -2 |
| Other gains and losses on valuation of financial instruments | 55 | 6 | 7 | 62 |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | 3 | - | 8 | 11 |
| Losses | -4 | - | - | -4 |
| **Total** | **2,918** | **7** | **281** | **3,199** |

**2022**

| € million | Mutual funds | of which guarantee funds | Special funds | **Total** |
|---|---|---|---|---|
| Interest income and current income and expense | 5 | - | 1 | 5 |
| Fee and commission income | 2,929 | 1 | 259 | 3,189 |
| Gains and losses on investments | -62 | - | - | -62 |
| Other gains and losses on valuation of financial instruments | -31 | -3 | 1 | -30 |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | -6 | - | -160 | -166 |
| Losses | -97 | -3 | -1 | -98 |
| **Total** | **2,737** | **-4** | **101** | **2,838** |

Distributions in 2023 relating to each investment fund were offset in the calculation of the losses incurred in respect of each fund.

## 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 €38,100 million (December 31, 2022: €38,500 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 €15,428 million (December 31, 2022: €12,043 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Assets** | **9,889** | **9,413** |
| Loans and advances to customers | 7,731 | 7,383 |
| Investments held by insurance companies | 2,158 | 2,030 |
| Net exposure recognized on the balance sheet | 9,889 | 9,413 |
| **Financial guarantee contracts, loan commitments and other obligations** | **355** | **259** |
| Financial guarantee contracts | 38 | 37 |
| Loan commitments | 317 | 223 |
| **Maximum exposure** | **10,244** | **9,672** |

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

| € million | 2023 | 2022 |
|---|---|---|
| Interest income and current income | 139 | 118 |
| Fee and commission income | 69 | 76 |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | 185 | -395 |
| Gains and losses from loss allowances | 2 | -8 |
| **Total** | **396** | **-209** |

## 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Assets** | **3,851** | **4,195** |
| Loans and advances to customers | 2,337 | 2,299 |
| Financial assets held for trading | 52 | 158 |
| Investments | 106 | 111 |
| Investments held by insurance companies | 1,355 | 1,626 |
| **Liabilities** | **28** | **50** |
| Financial liabilities held for trading | 26 | 48 |
| Provisions | 2 | 2 |
| Net exposure recognized on the balance sheet | 3,823 | 4,145 |
| **Financial guarantee contracts, loan commitments and other obligations** | **3,712** | **3,468** |
| Loan commitments | 3,712 | 3,468 |
| **Maximum exposure** | **7,535** | **7,613** |

In 2023, interests in securitization vehicles resulted in income of €39 million that was recognized in other comprehensive income (2022: losses of €68 million).

The earnings generated from interests in securitization vehicles were as follows:

| € million | 2023 | 2022 |
|---|---|---|
| Interest income | 88 | 20 |
| Fee and commission income | 83 | 72 |
| Gains and losses on trading activities | - | -47 |
| Gains and losses on investments | 4 | 1 |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | 60 | 16 |
| Gains and losses from loss allowances | - | 3 |
| **Total** | **236** | **64** |

The material interests in securitization vehicles comprise DZ BANK's two multi-seller asset-backed commercial paper (ABCP) programs CORAL and AUTOBAHN as well as R+V's asset-backed securities (ABSs).

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 2023, 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.

The current carrying amount of the ABSs held by R+V represents the maximum downside risk.

## » 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. There were no sponsoring arrangements for unconsolidated structured entities in either 2023 or 2022.

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

## » 33 Segment information

### Information on operating segments

**2023**

| € million | BSH | R+V | TeamBank | UMH |
|---|---|---|---|---|
| Net interest income | 550 | - | 530 | 71 |
| Net fee and commission income | -13 | - | -39 | 2,018 |
| Gains and losses on trading activities | - | - | - | - |
| Gains and losses on investments | - | - | - | -31 |
| Other gains and losses on valuation of financial instruments | 1 | - | -2 | 197 |
| Gains and losses from the derecognition of financial assets measured at amortized cost | -2 | - | - | - |
| Insurance service result | - | 1,972 | - | - |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | - | 3,136 | - | - |
| Insurance finance income or expenses | - | -4,107 | - | - |
| Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business | - | 6 | - | - |
| Loss allowances | -18 | - | -133 | -1 |
| Administrative expenses | -536 | - | -285 | -1,231 |
| Other net operating income | 38 | - | 10 | -50 |
| **Profit/loss before taxes** | **20** | **1,008** | **81** | **974** |
| Cost/income ratio (%) | 93.4 | - | 57.1 | 55.8 |
| Regulatory RORAC (%) | 1.6 | 11.3 | 16.3 | >100.0 |
| Average own funds/solvency requirement | 1,276 | 8,955 | 495 | 647 |
| Total assets/total equity and liabilities as at Dec. 31, 2023 | 84,369 | 127,039 | 10,640 | 5,156 |

| | DZ BANK – CICB | DZ HYP | DZ PRIVAT-BANK | VR Smart Finanz | DZ BANK – holding function | Other/ Consolidation | **Total** |
|---|---|---|---|---|---|---|---|
| | 1,483 | 721 | 147 | 123 | -103 | 811 | **4,333** |
| | 544 | 9 | 220 | -29 | - | 97 | **2,807** |
| | 674 | -1 | 16 | - | - | -864 | **-175** |
| | -42 | - | - | - | - | 1 | **-72** |
| | -93 | 87 | 17 | - | - | 91 | **298** |
| | -35 | - | -7 | - | - | 55 | **11** |
| | - | - | - | - | - | 22 | **1,994** |
| | - | - | - | - | - | -138 | **2,998** |
| | - | - | - | - | - | - | **-4,107** |
| | - | - | - | - | - | - | **6** |
| | -82 | -111 | -1 | -18 | - | 2 | **-362** |
| | -1,455 | -247 | -293 | -73 | -253 | -224 | **-4,597** |
| | 41 | 19 | -16 | -2 | - | 16 | **56** |
| | **1,035** | **476** | **83** | **1** | **-356** | **-133** | **3,189** |
| | 56.6 | 29.6 | 77.7 | 79.3 | - | - | **56.4** |
| | 18.9 | 35.2 | 25.3 | 0.7 | - | - | **17.1** |
| | 5,474 | 1,355 | 328 | 161 | - | - | **18,690** |
| | 375,464 | 87,410 | 26,190 | 3,454 | 23,077 | -98,210 | **644,589** |

**2022**

| € million | BSH | R+V | TeamBank | UMH |
|---|---|---|---|---|
| Net interest income | 744 | - | 511 | 12 |
| Net fee and commission income | 11 | - | -13 | 2,036 |
| Gains and losses on trading activities | - | - | - | - |
| Gains and losses on investments | -90 | - | - | -58 |
| Other gains and losses on valuation of financial instruments | 4 | - | 6 | -155 |
| Gains and losses from the derecognition of financial assets measured at amortized cost | 3 | - | - | - |
| Insurance service result | - | 1,980 | - | - |
| Gains and losses on investments held by insurance companies and other insurance company gains and losses | - | -3,748 | - | - |
| Insurance finance income or expenses | - | 1,951 | - | - |
| Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business | - | 8 | - | - |
| Loss allowances | -16 | - | -100 | - |
| Administrative expenses | -528 | - | -286 | -1,194 |
| Other net operating income | 16 | -5 | 15 | 54 |
| **Profit/loss before taxes** | **143** | **187** | **134** | **695** |
| Cost/income ratio (%) | 76.7 | - | 55.1 | 63.2 |
| Regulatory RORAC (%) | 11.2 | 2.0 | 22.8 | >100.0 |
| Average own funds/solvency requirement | 1,274 | 9,184 | 585 | 565 |
| Total assets/total equity and liabilities as at Dec. 31, 2022 | 85,599 | 119,269 | 10,611 | 4,818 |

| | DZ BANK – CICB | DZ HYP | DZ PRIVAT-BANK | VR Smart Finanz | DZ BANK – holding function | Other/ Consolidation | **Total** |
|---|---|---|---|---|---|---|---|
| | 1,113 | 732 | 83 | 116 | -51 | 62 | **3,322** |
| | 489 | 18 | 220 | -29 | - | 17 | **2,749** |
| | 871 | -1 | 21 | - | - | -68 | **823** |
| | -13 | 31 | - | - | - | 11 | **-119** |
| | -91 | -14 | 4 | 1 | - | -41 | **-286** |
| | 32 | - | -1 | - | - | 1 | **35** |
| | - | - | - | - | - | 97 | **2,077** |
| | - | - | - | - | - | -11 | **-3,759** |
| | - | - | - | - | - | - | **1,951** |
| | - | - | - | - | - | - | **8** |
| | -172 | -78 | -2 | -9 | - | 73 | **-304** |
| | -1,350 | -256 | -277 | -76 | -228 | -252 | **-4,447** |
| | 26 | 24 | 4 | - | - | 70 | **204** |
| | **904** | **455** | **52** | **3** | **-279** | **-42** | **2,252** |
| | 55.6 | 32.4 | 83.7 | 86.4 | - | - | **63.5** |
| | 15.2 | 33.6 | 14.1 | 1.8 | - | - | **11.6** |
| | 5,935 | 1,357 | 367 | 163 | - | - | **19,431** |
| | 367,462 | 89,181 | 25,447 | 3,367 | 21,557 | -98,946 | **628,365** |

## 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 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, the function of which is to create transparency, notably in respect of the risk structure and risk-bearing capacity of the individual management units. 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, 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 is primarily based on the IFRS accounting and measurement principles applicable to the DZ BANK Group.

Intragroup transactions between operating segments and internal transactions in the DZ BANK – CICB operating segment are carried out on an arm's-length basis. These transactions are predominantly 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. It reflects 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 are accounted for using the equity method. Differences between the figures in internal management reporting and those reported in the consolidated financial statements that arise from the recognition of internal transactions in the DZ BANK – CICB operating segment are also eliminated.

The adjustments to net interest income are primarily the result of the elimination of intragroup dividend payments and profit distributions in connection with intragroup liabilities to dormant partners and are also attributable to the early redemption of issued bonds and commercial paper acquired by entities in the DZ BANK Group other than the issuer. Internal transactions in the DZ BANK – CICB operating segment are also eliminated in net interest income and with offsetting entries under gains and losses on trading activities.

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

Operating income was generated in the following geographical areas:

| € million | **2023** | 2022 |
|---|---|---|
| Germany | 7,392 | 6,131 |
| Rest of Europe | 808 | 880 |
| Rest of World | 135 | 178 |
| Consolidation/reconciliation | -186 | -186 |
| **Total** | **8,149** | **7,003** |

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 is included in the income statement disclosures below.

## » 34 Net interest income

| € million | 2023 | 2022 |
|---|---|---|
| **INTEREST INCOME AND CURRENT INCOME AND EXPENSE** | **13,834** | **5,974** |
| **Interest income from** | **13,733** | **5,919** |
| Lending and money market business | 11,423 | 5,726 |
| of which relating to mortgage loans | 1,340 | 972 |
| of which relating to money market business | 4,262 | 628 |
| of which relating to home savings loans advanced by building society | 1,063 | 1,007 |
| of which relating to pass-through loans | 617 | 518 |
| of which relating to registered securities | 435 | 283 |
| of which relating to finance leases | 20 | 23 |
| Bonds and other fixed-income securities | 916 | 485 |
| Portfolio hedges of interest-rate risk | 1,405 | -77 |
| Financial assets with a negative effective interest rate | -11 | -215 |
| Other assets | - | 1 |
| **Current income and expense from** | **101** | **55** |
| Shares and other variable-yield securities | 57 | 24 |
| of which income from other shareholdings | 14 | 18 |
| Investments in subsidiaries | 4 | 8 |
| Entities accounted for using the equity method | 34 | 17 |
| of which relating to investments in joint ventures | 34 | 10 |
| of which relating to investments in associates | - | 6 |
| Income from profit-pooling, profit-transfer and partial profit-transfer agreements | 7 | 6 |
| **INTEREST EXPENSE ON** | **-9,501** | **-2,652** |
| Deposits from banks and customers | -7,180 | -2,528 |
| of which relating to home savings deposits | -746 | -511 |
| Debt certificates issued including bonds | -1,754 | -494 |
| Subordinated capital | -151 | -93 |
| Portfolio hedges of interest-rate risk | -421 | -19 |
| Financial liabilities with a positive effective interest rate | 20 | 483 |
| Provisions and other liabilities | -15 | -2 |
| **Total** | **4,333** | **3,322** |

The interest income from other assets included gains from non-credit-risk-related modifications of €3 million (2022: €1 million) and losses from non-credit-risk-related modifications of €3 million (2022: €0 million), such gains and losses resulting from financial assets. The interest expense on provisions and other liabilities included interest expense on lease liabilities of €7 million (2022: €5 million).

## » 35 Net fee and commission income

| € million | 2023 | 2022 |
|---|---|---|
| **Fee and commission income** | **5,174** | **5,262** |
| Securities business | 3,964 | 4,089 |
| Asset management | 334 | 344 |
| Payments processing including card processing | 368 | 332 |
| Lending business and trust activities | 178 | 162 |
| Financial guarantee contracts and loan commitments | 96 | 72 |
| International business | 13 | 13 |
| Building society operations | 35 | 45 |
| Other | 186 | 206 |
| **Fee and commission expenses** | **-2,368** | **-2,513** |
| Securities business | -1,656 | -1,764 |
| Asset management | -201 | -216 |
| Payments processing including card processing | -224 | -183 |
| Lending business | -79 | -77 |
| Financial guarantee contracts and loan commitments | -12 | -12 |
| Building society operations | -73 | -68 |
| Other | -122 | -193 |
| **Total** | **2,807** | **2,749** |

Fee and commission income included revenue from contracts with customers pursuant to IFRS 15 in an amount of €5,166 million (2022: €5,247 million); see note 103.

## » 36 Gains and losses on trading activities

| € million | 2023 | 2022 |
|---|---|---|
| Gains and losses on non-derivative financial instruments and embedded derivatives | -2,430 | 4,473 |
| of which gains and losses on financial instruments designated as at fair value through profit or loss that are related to derivatives held for trading purposes | -975 | 3,064 |
| Gains and losses on derivatives | 2,193 | -3,794 |
| Gains and losses on exchange differences | 62 | 144 |
| **Total** | **-175** | **823** |

Gains and losses on exchange differences included currency translation gains of €5 million on financial instruments not measured at fair value through profit or loss (2022: losses of €40 million).

## » 37 Gains and losses on investments

| € million | 2023 | 2022 |
|---|---|---|
| **Gains and losses on the disposal of bonds and other fixed-income securities** | **-36** | **-41** |
| **Gains and losses on the disposal of shares and other variable-yield securities** | **-2** | **-62** |
| **Gains and losses on investments in joint ventures** | **-28** | **-31** |
| Impairment losses | -28 | -31 |
| **Gains and losses on investments in associates** | **-5** | **15** |
| Disposals | - | 11 |
| Impairment losses | -11 | -4 |
| Reversals of impairment losses | 5 | 8 |
| **Total** | **-72** | **-119** |

## » 38 Other gains and losses on valuation of financial instruments

| € million | 2023 | 2022 |
|---|---|---|
| **Gains and losses from fair value hedge accounting** | **-44** | -45 |
| **Gains and losses on derivatives used for purposes other than trading** | **156** | -6 |
| **Gains and losses on financial instruments designated as at fair value through profit or loss** | **114** | -160 |
| Gains and losses on non-derivative financial instruments and embedded derivatives that are not related to derivatives held for trading purposes | -162 | 349 |
| Gains and losses on derivatives | 277 | -509 |
| **Gains and losses on financial assets mandatorily measured at fair value through profit or loss** | **71** | -75 |
| **Total** | **298** | -286 |

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 and/or are not related to financial instruments designated as at fair value through profit or loss.

## » 39 Gains and losses from the derecognition of financial assets measured at amortized cost

| € million | 2023 | 2022 |
|---|---|---|
| **Gains from the derecognition of financial assets measured at amortized cost** | **122** | 56 |
| Loans and advances to banks and customers | 2 | 10 |
| Investments | 4 | 2 |
| Fair value changes of the hedged items in portfolio hedges of interest-rate risk | 117 | 44 |
| **Losses on derecognition of financial assets measured at amortized cost** | **-111** | -22 |
| Loans and advances to banks and customers | -70 | -8 |
| Investments | -21 | -13 |
| Fair value changes of the hedged items in portfolio hedges of interest-rate risk | -21 | -1 |
| **Total** | **11** | 35 |

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

| € million | 2023 | 2022 |
|---|---|---|
| **Income from investments held by insurance companies** | **7,117** | 6,615 |
| Interest income and current income | 2,535 | 2,406 |
| Income from reversals of impairment losses and reversals of loss allowances, and unrealized gains | 342 | 1,402 |
| Gains on valuation through profit or loss of investments held by insurance companies | 3,833 | 1,864 |
| Gains on disposals | 407 | 944 |
| **Expenses in connection with investments held by insurance companies** | **-3,589** | -10,285 |
| Administrative expenses | -156 | -169 |
| Depreciation/amortization expense, additions to loss allowances, and impairment losses and unrealized losses | -859 | -1,104 |
| Losses on valuation through profit or loss of investments held by insurance companies | -1,899 | -7,139 |
| Losses on disposals | -675 | -1,873 |
| **Other non-insurance gains and losses** | **-530** | -89 |
| **Total** | **2,998** | -3,759 |

Other non-insurance gains and losses included interest expenses on lease liabilities amounting to €2 million (2022: €1 million).

Income from and expenses in connection with investments held by insurance companies and other non-insurance gains and losses included currency translation losses of €9 million on financial instruments not measured at fair value through profit or loss (2022: gains of €12 million).

Income from and expenses in connection with investments held by insurance companies included additions to loss allowances of €100 million (2022: €67 million) and reversals of loss allowances of €39 million (2022: €57 million).

## » 41 Insurance finance income or expenses

| € million | 2023 | 2022 |
|---|---|---|
| Insurance finance income or expenses from insurance contracts | -4,109 | 1,951 |
| Insurance finance income or expenses from reinsurance contracts held | 2 | - |
| **Total** | **-4,107** | **1,951** |

## » 42 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 (2022: €11 million) and losses of €1 million (2022: €3 million).

## » 43 Loss allowances

| € million | 2023 | 2022 |
|---|---|---|
| **Loss allowances for loans and advances to banks** | **14** | **-30** |
| Additions | -36 | -93 |
| Reversals | 45 | 61 |
| Recoveries on loans and advances to banks previously impaired | 4 | 1 |
| **Loss allowances for loans and advances to customers** | **-374** | **-236** |
| Additions | -2,543 | -2,223 |
| Reversals | 2,083 | 1,905 |
| Directly recognized impairment losses | -53 | -29 |
| Recoveries on loans and advances to customers previously impaired | 105 | 78 |
| Other | 33 | 34 |
| **Loss allowances for investments** | **2** | **4** |
| Additions | -21 | -13 |
| Reversals | 23 | 17 |
| **Loss allowances for other assets** | **-1** | **-1** |
| Reversals | 1 | - |
| Directly recognized impairment losses | -2 | -1 |
| **Other loss allowances for loans and advances** | **-3** | **-42** |
| Additions to and reversals of provisions for loan commitments | 9 | -20 |
| Additions to and reversals of provisions for financial guarantee contracts | -14 | -9 |
| Additions to and reversals of other provisions for loans and advances | 2 | -13 |
| **Total** | **-362** | **-304** |

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.

## » 44 Administrative expenses

| € million | 2023 | 2022 |
|---|---|---|
| **Staff expenses** | **-2,174** | **-2,072** |
| Wages and salaries | -1,812 | -1,726 |
| Social security contributions | -239 | -228 |
| Pension and other post-employment benefit expenses | -105 | -107 |
| Expenses for share-based payment transactions | -18 | -11 |
| **General and administrative expenses** | **-2,128** | **-2,082** |
| Expenses for temporary staff | -28 | -26 |
| Contributions and fees | -284 | -315 |
| of which contributions to the resolution fund for CRR credit institutions | -114 | -151 |
| Consultancy | -509 | -494 |
| Office expenses | -162 | -156 |
| IT expenses | -624 | -577 |
| Property and occupancy costs | -120 | -116 |
| Information procurement | -109 | -100 |
| Public relations and marketing | -168 | -173 |
| Other general and administrative expenses | -120 | -121 |
| Expenses for administrative bodies | -4 | -4 |
| **Depreciation and amortization** | **-295** | **-292** |
| Property, plant and equipment, and investment property | -81 | -84 |
| Right-of-use assets | -89 | -86 |
| Other assets | -125 | -122 |
| **Total** | **-4,597** | **-4,447** |

## » 45 Other net operating income

| € million | 2023 | 2022 |
|---|---|---|
| Income from the reversal of provisions and accruals | 175 | 157 |
| Restructuring expenses | -94 | -5 |
| Income and expense from impairment losses on other intangible assets, and reversals thereof | -53 | - |
| Gains and losses on non-current assets and disposal groups classified as held for sale | 25 | 49 |
| Gains on the disposal of other assets | 21 | 43 |
| Residual other net operating income | -18 | -39 |
| **Total** | **56** | **204** |

Gains and losses on non-current assets and disposal groups classified as held for sale included realized gains of €25 million on disposals (2022: €51 million) and no impairment losses (2022: impairment losses of €2 million).

Restructuring expenses included additions of €70 million to provisions for termination benefits linked with restructuring (2022: €3 million).

Residual other net operating income included rental income from investment property of €17 million (2022: €13 million) and directly assignable expenses of €4 million for the management of investment property (2022: €4 million).

## » 46 Income taxes

| € million | 2023 | 2022 |
|---|---|---|
| Current tax expense | -986 | -908 |
| Deferred tax income/expense | 31 | -3 |
| **Total** | **-955** | **-912** |

The total for current taxes includes expenses of €302 million (2022: €49 million) attributable to previous years. Deferred taxes include income of €4 million (2022: expenses of €77 million) 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 (2022: 15.825 percent) based on a corporation tax rate of 15.0 percent (2022: 15.0 percent) plus the solidarity surcharge. The effective rate of trade tax for DZ BANK and subsidiaries that are members of its tax group was 15.470 percent (2022: 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 | 2023 | 2022 |
|---|---|---|
| **Profit before taxes** | **3,189** | 2,252 |
| Group income tax rate | 31.295% | 31.260% |
| **Expected income taxes** | **-998** | -704 |
| **Income tax effects** | **43** | -208 |
| Impact of tax-exempt income and non-deductible expenses | -50 | -65 |
| Adjustments resulting from other types of income tax, other trade tax multipliers, and changes in tax rates | 76 | -79 |
| Tax rate differences on income subject to taxation in other countries | 26 | 25 |
| Current and deferred taxes relating to prior years | -38 | -21 |
| Change in impairment losses on deferred tax assets | 38 | 21 |
| Other effects | -10 | -89 |
| **Recognized income taxes** | **-955** | **-912** |

## » 47 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 | 2023 | 2022 |
|---|---|---|
| **Gains and losses on debt instruments measured at fair value through other comprehensive income** | **4,679** | **-22,777** |
| Gains (+)/losses (-) arising during the reporting period | 4,338 | -23,312 |
| Gains (-)/losses (+) reclassified to the income statement during the reporting period | 341 | 535 |
| **Exchange differences on currency translation of foreign operations** | **-12** | **13** |
| Gains (+)/losses (-) arising during the reporting period | -12 | 12 |
| Gains (-)/losses (+) reclassified to the income statement during the reporting period | - | 1 |
| **Insurance finance income or expenses included in other comprehensive income** | **-3,745** | **18,452** |
| Gains (+)/losses (-) arising during the reporting period | -3,745 | 18,452 |
| **Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method** | **-8** | **1** |
| Gains (+)/losses (-) arising during the reporting period | -8 | 1 |

## » 48 Income taxes relating to components of other comprehensive income

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

| € million | 2023 Amount before taxes | 2023 Income taxes | 2023 Amount after taxes | 2022 Amount before taxes | 2022 Income taxes | 2022 Amount after taxes |
|---|---|---|---|---|---|---|
| **Items that may be reclassified to the income statement** | **914** | **-349** | **566** | **-4,311** | **1,415** | **-2,896** |
| Gains and losses on debt instruments measured at fair value through other comprehensive income | 4,679 | -1,460 | 3,219 | -22,777 | 7,129 | -15,648 |
| Exchange differences on currency translation of foreign operations | -12 | 5 | -7 | 13 | -1 | 13 |
| Insurance finance income or expenses included in other comprehensive income | -3,745 | 1,106 | -2,638 | 18,452 | -5,713 | 12,739 |
| Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method | -8 | - | -8 | 1 | - | 1 |
| **Items that will not be reclassified to the income statement** | **108** | **-117** | **-9** | **-46** | **13** | **-33** |
| Gains and losses on equity instruments for which the fair value OCI option has been exercised | -47 | -71 | -118 | -636 | 191 | -445 |
| Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk | 300 | -94 | 206 | 170 | -51 | 119 |
| Gains and losses arising from remeasurement of defined benefit plans | -145 | 48 | -98 | 419 | -126 | 293 |
| **Total** | **1,022** | **-465** | **556** | **-4,357** | **1,428** | **-2,929** |

# D Balance sheet disclosures

## » 49 Cash and cash equivalents

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Cash on hand | 366 | 312 |
| Balances with central banks | 101,463 | 93,405 |
| **Total** | **101,830** | **93,717** |

The average target minimum reserve for 2023 was €4,134 million (2022: €4,159 million).

## » 50 Loans and advances to banks

| | Repayable on demand | | Other loans and advances | | Total | |
|---|---|---|---|---|---|---|
| € million | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| **Domestic banks** | **4,945** | **6,666** | **117,557** | **107,350** | **122,502** | **114,015** |
| Affiliated banks | 2,831 | 4,033 | 115,153 | 103,471 | 117,984 | 107,505 |
| Other banks | 2,115 | 2,632 | 2,404 | 3,878 | 4,519 | 6,510 |
| **Foreign banks** | **2,108** | **2,636** | **4,256** | **6,793** | **6,364** | **9,429** |
| **Total** | **7,054** | **9,301** | **121,813** | **114,142** | **128,867** | **123,444** |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Mortgage loans | 56 | 96 |
| Home savings loans advanced by building society | 103 | - |
| Registered securities | 11,502 | 11,593 |
| Pass-through loans | 69,065 | 68,213 |
| Other bank loans | 27,175 | 20,267 |
| Money market placements | 17,847 | 19,978 |
| Current account debit balances | 2,075 | 2,524 |
| Other loans and advances | 1,044 | 773 |
| **Total** | **128,867** | **123,444** |

## » 51 Loans and advances to customers

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Loans and advances to domestic customers | 178,389 | 176,145 |
| Loans and advances to foreign customers | 26,388 | 27,501 |
| **Total** | **204,776** | **203,646** |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Mortgage loans | 57,227 | 56,962 |
| Home savings loans advanced by building society | 64,631 | 63,660 |
| Finance leases | 463 | 565 |
| Registered securities | 7,605 | 7,994 |
| Pass-through loans | 8,378 | 7,742 |
| Other bank loans | 49,643 | 48,903 |
| Money market placements | 2,165 | 2,879 |
| Current account debit balances | 5,686 | 6,042 |
| Other loans and advances | 8,979 | 8,900 |
| Total | 204,776 | 203,646 |

## » 52 Hedging instruments (positive fair values)

Hedging instruments (positive fair values) amounted to €923 million (December 31, 2022: €1,568 million) and resulted solely from derivatives used as fair value hedges.

## » 53 Financial assets held for trading

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **DERIVATIVES (POSITIVE FAIR VALUES)** | **16,482** | **21,474** |
| Interest-linked contracts | 13,799 | 17,779 |
| Currency-linked contracts | 1,759 | 2,956 |
| Share-/index-linked contracts | 688 | 547 |
| Other contracts | 11 | 6 |
| Credit derivatives | 225 | 187 |
| **BONDS AND OTHER FIXED-INCOME SECURITIES** | **8,334** | **7,729** |
| Money market instruments | 60 | 212 |
| Bonds | 8,275 | 7,517 |
| **SHARES AND OTHER VARIABLE-YIELD SECURITIES** | **1,329** | **1,388** |
| Shares | 1,325 | 1,381 |
| Investment fund units | 4 | 7 |
| **RECEIVABLES** | **8,815** | **18,318** |
| of which from affiliated banks | 816 | 76 |
| of which from other banks | 7,522 | 16,915 |
| **Money market placements** | **7,815** | **17,058** |
| with banks | 7,798 | 16,322 |
| with customers | 17 | 737 |
| **Promissory notes and registered bonds** | **1,000** | **1,259** |
| from banks | 539 | 669 |
| from customers | 461 | 590 |
| Total | 34,961 | 48,909 |

## » 54 Investments

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Bonds and other fixed-income securities** | **44,453** | **40,731** |
| Money market instruments | 925 | 1,070 |
| Bonds | 43,527 | 39,661 |
| **Shares and other variable-yield securities** | **2,880** | **1,962** |
| Shares and other shareholdings | 388 | 470 |
| Investment fund units | 2,492 | 1,491 |
| Other variable-yield securities | - | 1 |
| **Investments in subsidiaries** | **180** | **236** |
| **Investments in joint ventures** | **312** | **320** |
| **Investments in associates** | **145** | **144** |
| **Total** | **47,970** | **43,393** |

The carrying amount of investments in joint ventures accounted for using the equity method totaled €312 million (December 31, 2022: €317 million). €139 million of the investments in associates has been accounted for using the equity method (December 31, 2022: €131 million).

## » 55 Investments held by insurance companies

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Investment property | 3,866 | 4,028 |
| Investments in subsidiaries | 810 | 840 |
| Investments in joint ventures | 62 | 69 |
| Investments in associates | - | 1 |
| Mortgage loans | 12,008 | 10,960 |
| Promissory notes and loans | 5,996 | 5,946 |
| Registered bonds | 5,531 | 5,430 |
| Other loans | 1,014 | 834 |
| Variable-yield securities | 11,871 | 13,023 |
| Fixed-income securities | 53,647 | 47,652 |
| Derivatives (positive fair values) | 159 | 278 |
| Deposits with ceding insurers and other investments | 40 | 56 |
| Assets related to unit-linked contracts | 20,563 | 16,429 |
| **Total** | **115,568** | **105,548** |

The fair value of investment property was €5,643 million as at the balance sheet date (December 31, 2022: €5,904 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 €1,242 million (December 31, 2022: €1,182 million). The group also has capital expenditure commitments amounting to €48 million (December 31, 2022: €20 million). A total of €35 million was spent on the repair and maintenance of investment property in 2023 (2022: €41 million). Vacant property resulted in repair and maintenance expenses of €3 million (2022: €4 million).

## » 56 Property, plant and equipment, investment property, and right-of-use assets

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Land and buildings | 858 | 867 |
| Office furniture and equipment | 178 | 179 |
| Investment property | 280 | 293 |
| Right-of-use assets | 554 | 622 |
| **Total** | **1,870** | **1,960** |

The fair value of investment property was €345 million as at the balance sheet date (December 31, 2022: €361 million). Payments in advance are allocated to the relevant item of property, plant and equipment.

## » 57 Income tax assets and liabilities

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Income tax assets** | **4,827** | **5,777** |
| Current income tax assets | 329 | 284 |
| Deferred tax assets | 4,497 | 5,493 |
| **Income tax liabilities** | **4,813** | **5,346** |
| Current income tax liabilities | 662 | 635 |
| Deferred tax liabilities | 4,151 | 4,711 |

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, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| Tax loss carryforwards | 118 | 91 | | |
| Loans and advances to banks and customers | 33 | 37 | 222 | 446 |
| Financial assets and liabilities held for trading, hedging instruments (positive and negative fair values) | 812 | 1,145 | 29 | 63 |
| Investments | 635 | 1,100 | 5 | 9 |
| Loss allowances | 262 | 257 | - | - |
| Investments held by insurance companies | 2,745 | 3,602 | 223 | - |
| Property, plant and equipment, investment property, and right-of-use assets | 10 | 11 | 207 | 233 |
| Deposits from banks and customers | 196 | 219 | 310 | 470 |
| Debt certificates issued including bonds | 2 | 2 | 713 | 827 |
| Provisions for employee benefits and for share-based payment transactions | 583 | 543 | 70 | 60 |
| Other provisions | 361 | 149 | 33 | 26 |
| Insurance contract liabilities | 1,162 | 1,033 | 4,746 | 5,307 |
| Other balance sheet items | 461 | 517 | 476 | 484 |
| Total (gross) | 7,380 | 8,708 | 7,034 | 7,926 |
| Netting of deferred tax assets and deferred tax liabilities | -2,883 | -3,215 | -2,883 | -3,215 |
| **Total (net)** | **4,497** | **5,493** | **4,151** | **4,711** |

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 €182 million (December 31, 2022: €181 million), which can be carried forward indefinitely, or for trade tax loss carryforwards amounting to €148 million (December 31, 2022: €127 million). There remained foreign loss carryforwards of €95 million (December 31, 2022: €324 million) for which no deferred tax assets are recognized. Of this total, €10 million will expire by 2031 and €85 million can be used indefinitely.

As regards companies (or permanent establishments of companies) in the DZ BANK Group that suffered tax losses in 2023 or 2022 in their tax jurisdiction, it will be possible to utilize deferred tax assets amounting to €4,219 million (December 31, 2022: €4,952 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 asset recognized through other comprehensive income of €615 million (December 31, 2022: €1,080 million).

Deferred tax assets of €3,347 million (December 31, 2022: €4,113 million) and deferred tax liabilities of €3,064 million (December 31, 2022: €3,538 million) are expected to be realized only after a period of 12 months.

As at December 31, 2023, no deferred tax liabilities were recognized for temporary differences of €182 million (December 31, 2022: €184 million) relating to investments in subsidiaries.

## » 58 Other assets

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Other assets held by insurance companies | 3,578 | 3,768 |
| Goodwill | 155 | 155 |
| Other intangible assets | 437 | 508 |
| of which software | 388 | 415 |
| of which acquired customer relationships | 10 | 60 |
| Other loans and advances | 526 | 464 |
| Residual other assets | 1,149 | 1,693 |
| **Total** | **5,845** | **6,588** |

Other intangible assets include internally generated intangible assets amounting to €16 million (December 31, 2022: €23 million).

Residual other assets included initial margins from client clearing of €522 million (December 31, 2022: €1,129 million).

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Intangible assets** | **160** | 145 |
| **Reinsurance contract assets** | **368** | 560 |
| Liability for remaining coverage | 34 | 36 |
| Liability for incurred claims | 334 | 524 |
| **Insurance contract assets** | **1** | 2 |
| Liability for remaining coverage | 1 | 3 |
| Liability for incurred claims | - | -1 |
| **Receivables** | **1,028** | 1,002 |
| Receivables arising out of direct insurance operations | 114 | 106 |
| Receivables arising out of reinsurance operations | 41 | 48 |
| Other receivables | 873 | 848 |
| **Credit balances with banks, checks and cash on hand** | **647** | 703 |
| **Property, plant and equipment** | **424** | 410 |
| Land and buildings | 298 | 281 |
| Office furniture and equipment | 61 | 65 |
| Right-of-use assets held by insurance companies | 64 | 64 |
| **Residual other assets** | **952** | 947 |
| Prepaid expenses | 53 | 47 |
| Remaining assets held by insurance companies | 899 | 900 |
| **Loss allowances** | **-2** | -1 |
| **Total** | **3,578** | 3,768 |

The intangible assets in the other assets held by insurance companies include internally generated intangible assets amounting to €24 million (December 31, 2022: €22 million).

Trustee’s blocking notes have been entered in the land register for land and buildings held by companies offering personal insurance of €176 million (December 31, 2022: €159 million).

## » 59 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:

| | Loans and advances to banks | | | Loans and advances to customers | | | |
|---|---|---|---|---|---|---|---|
| € million | Stage 1 | Stage 2 | Stage 3 | Stage 1 | Stage 2 | Stage 3 | POCI assets |
| Balance as at Jan. 1, 2022 | 14 | 2 | 8 | 264 | 364 | 1,267 | 13 |
| Additions | 34 | 12 | 46 | 280 | 906 | 1,009 | 28 |
| Utilizations | - | - | - | - | -1 | -318 | -4 |
| Reversals | -29 | -7 | -24 | -482 | -429 | -974 | -19 |
| Other changes | -1 | -2 | 2 | 182 | -305 | 172 | 1 |
| Balance as at Dec. 31, 2022 | 17 | 5 | 32 | 244 | 535 | 1,157 | 18 |
| Additions | 26 | 2 | 8 | 275 | 920 | 1,316 | 31 |
| Utilizations | - | - | - | - | -2 | -199 | -5 |
| Reversals | -29 | -4 | -13 | -472 | -592 | -996 | -21 |
| Other changes | - | - | -1 | 196 | -357 | 152 | -5 |
| **Balance as at Dec. 31, 2023** | **15** | **2** | **26** | **243** | **504** | **1,430** | **18** |

| | Investments | | | Other assets | Total |
|---|---|---|---|---|---|
| € million | Stage 1 | Stage 2 | Stage 3 | Stage 1 | |
| Balance as at Jan. 1, 2022 | 4 | 13 | 5 | 2 | 1,956 |
| Additions | 3 | 2 | 1 | - | 2,322 |
| Utilizations | - | - | - | - | -323 |
| Reversals | -2 | -4 | -3 | - | -1,975 |
| Other changes | - | - | - | - | 49 |
| Balance as at Dec. 31, 2022 | 4 | 11 | 4 | 2 | 2,029 |
| Additions | 2 | 2 | 1 | - | 2,583 |
| Utilizations | - | - | - | - | -205 |
| Reversals | -10 | -4 | -2 | -1 | -2,144 |
| Other changes | 8 | -8 | - | - | -15 |
| **Balance as at Dec. 31, 2023** | **3** | **1** | **4** | **1** | **2,248** |

## » 60 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<br>Investment property |
|---|---|
| Carrying amounts as at Jan. 1, 2022 | 3,813 |
| Cost as at Jan. 1, 2022 | 4,571 |
| Additions | 58 |
| Reclassifications | - |
| Reclassifications to/from non-current assets and disposal groups classified as held for sale | -7 |
| Disposals | -10 |
| Changes attributable to currency translation | - |
| Changes in scope of consolidation | 257 |
| **Cost as at Dec. 31, 2022** | **4,869** |
| Reversals of impairment losses as at Jan. 1, 2022 | 27 |
| Additions | - |
| **Reversals of impairment losses as at Dec. 31, 2022** | **28** |
| Depreciation/amortization and impairment losses as at Jan. 1, 2022 | -785 |
| Depreciation/amortization expense for the year | -89 |
| Impairment losses for the year | -2 |
| Reclassifications | - |
| Reclassifications to/from non-current assets and disposal groups classified as held for sale | 3 |
| Disposals | 5 |
| Changes in scope of consolidation | - |
| **Depreciation/amortization and impairment losses as at Dec. 31, 2022** | **-869** |
| Carrying amounts as at Dec. 31, 2022 | 4,028 |
| Cost as at Jan. 1, 2023 | 4,869 |
| Additions | 29 |
| Reclassifications | - |
| Reclassifications to/from non-current assets and disposal groups classified as held for sale | -25 |
| Disposals | -5 |
| Changes attributable to currency translation | - |
| Changes in scope of consolidation | - |
| **Cost as at Dec. 31, 2023** | **4,867** |
| Reversals of impairment losses as at Jan. 1, 2023 | 28 |
| Additions | - |
| **Reversals of impairment losses as at Dec. 31, 2023** | **28** |
| Depreciation/amortization and impairment losses as at Jan. 1, 2023 | -869 |
| Depreciation/amortization expense for the year | -88 |
| Impairment losses for the year | -84 |
| Reclassifications | - |
| Reclassifications to/from non-current assets and disposal groups classified as held for sale | 12 |
| Disposals | 1 |
| Changes attributable to currency translation | - |
| **Depreciation/amortization and impairment losses as at Dec. 31, 2023** | **-1,029** |
| **Carrying amounts as at Dec. 31, 2023** | **3,866** |

| | Property, plant and equipment, and investment property | | | Other assets | |
|---|---|---|---|---|---|
| | Land and buildings | Office furniture and equipment | Investment property | Goodwill | Other intangible assets |
| | 888 | 178 | 279 | 155 | 522 |
| | 1,305 | 571 | 319 | 385 | 2,078 |
| | 13 | 58 | 5 | - | 121 |
| | -15 | -1 | 16 | - | - |
| | - | - | - | - | - |
| | -1 | -44 | - | -28 | -65 |
| | - | - | - | - | -2 |
| | - | 10 | - | - | -1 |
| | **1,303** | **594** | **339** | **356** | **2,133** |
| | 13 | - | 5 | - | 4 |
| | 5 | - | 1 | - | - |
| | **18** | **-** | **6** | **-** | **4** |
| | -430 | -393 | -45 | -230 | -1,560 |
| | -24 | -54 | -6 | - | -126 |
| | - | -1 | - | - | - |
| | 2 | - | -2 | - | - |
| | - | - | - | - | - |
| | -1 | 39 | - | 28 | 60 |
| | - | -7 | - | - | - |
| | **-454** | **-416** | **-52** | **-202** | **-1,628** |
| | 867 | 179 | 293 | 155 | 508 |
| | 1,303 | 594 | 339 | 356 | 2,133 |
| | 535 | 61 | 2 | - | 137 |
| | 3 | -2 | -1 | - | - |
| | - | -22 | - | - | -48 |
| | - | -42 | - | - | -24 |
| | - | 1 | - | - | 3 |
| | -521 | - | - | - | - |
| | **1,320** | **590** | **340** | **356** | **2,200** |
| | 18 | - | 6 | - | 4 |
| | - | 2 | - | - | 2 |
| | **18** | **2** | **6** | **-** | **6** |
| | -454 | -416 | -52 | -202 | -1,628 |
| | -24 | -51 | -6 | - | -128 |
| | -1 | - | -8 | - | -55 |
| | -1 | 1 | - | - | - |
| | - | 13 | - | - | 23 |
| | - | 41 | - | - | 21 |
| | - | -1 | - | - | -2 |
| | **-480** | **-413** | **-66** | **-202** | **-1,769** |
| | **858** | **178** | **280** | **155** | **437** |

| € million | Other assets<br>of which other assets held by insurance companies<br>Land and buildings | <br><br>Office furniture and equipment | <br><br>Intangible assets |
|---|---|---|---|
| Carrying amounts as at Jan. 1, 2022 | 277 | 62 | 151 |
| Cost as at Jan. 1, 2022 | 500 | 209 | 734 |
| Additions | 14 | 25 | 45 |
| Reclassifications | - | 2 | - |
| Disposals | - | -8 | -8 |
| **Cost as at Dec. 31, 2022** | **514** | **228** | **771** |
| Reversals of impairment losses as at Jan. 1, 2022 | 10 | - | - |
| **Reversals of impairment losses as at Dec. 31, 2022** | **10** | **-** | **-** |
| Depreciation/amortization and impairment losses as at Jan. 1, 2022 | -233 | -148 | -583 |
| Depreciation/amortization expense for the year | -11 | -22 | -46 |
| Reclassifications | - | -2 | - |
| Disposals | - | 8 | 4 |
| **Depreciation/amortization and impairment losses as at Dec. 31, 2022** | **-243** | **-163** | **-626** |
| Carrying amounts as at Dec. 31, 2022 | 281 | 65 | 145 |
| Cost as at Jan. 1, 2023 | 514 | 228 | 771 |
| Additions | 30 | 19 | 78 |
| Reclassifications | - | - | -2 |
| Reclassifications to/from non-current assets and disposal groups classified as held for sale | -8 | - | - |
| Disposals | - | -20 | -81 |
| **Cost as at Dec. 31, 2023** | **536** | **227** | **767** |
| Reversals of impairment losses as at Jan. 1, 2023 | 10 | - | - |
| **Reversals of impairment losses as at Dec. 31, 2023** | **10** | **-** | **-** |
| Depreciation/amortization and impairment losses as at Jan. 1, 2023 | -243 | -163 | -626 |
| Depreciation/amortization expense for the year | -8 | -22 | -56 |
| Impairment losses for the year | -4 | - | - |
| Reclassifications | - | - | 2 |
| Reclassifications to/from non-current assets and disposal groups classified as held for sale | 7 | - | - |
| Disposals | - | 20 | 73 |
| **Depreciation/amortization and impairment losses as at Dec. 31, 2023** | **-247** | **-166** | **-607** |
| **Carrying amounts as at Dec. 31, 2023** | **298** | **61** | **160** |

In 2023, the useful life of the assets ranged from 2 to 60 years for buildings (2022: 2 to 58 years) and from 1 to 25 years for office furniture and equipment (2022: 1 to 33 years). As had been the case in 2022, the useful life for investment property was 1 to 80 years. Software included in other intangible assets was amortized over a useful life of 1 to 10 years (2022: 1 to 12 years). Acquired customer relationships were amortized over a useful life of 10 to 20 years, as had also been the case in 2022. Depreciation and amortization are recognized on a straight-line basis over the useful life of the asset.

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

Disclosures regarding the changes in goodwill are included in note 101.

Other intangible assets include acquired customer relationships amounting to €10 million (December 31, 2022: €60 million). The associated amortization expense came to €2 million (2022: €4 million) and the associated impairment losses to €50 million (2022: €0 million).

The changes in right-of-use assets are described in note 102.

## » 61 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.

At the level of the BSH subgroup, shares in the Hungarian subsidiary Fundamenta-Laskáskassza Lakástrakarékpénztár Zrt., Budapest, (FLK) are to be sold. FLK constitutes a disposal group not qualifying as a discontinued operation.

In this context, Bausparkasse Schwäbisch Hall AG signed a sale agreement with MBH Bank Nyrt, Budapest, Hungary, which is part of Magyar Bankholding, on November 10, 2023. The fair value was determined on the basis of the purchase consideration agreement. The consideration will be transferred upon completion of the transaction, which is expected to take place in the first half of 2024. The fair value determined for the FLK disposal group, which is derived from the purchase consideration mechanism specified in the sale and purchase agreement, is higher than its carrying amount as at the balance sheet date.

On December 31, 2023, the FLK disposal group was recognized at the lower of the carrying amount and the fair value less costs to sell. It consisted of the following material groups of assets and liabilities:

ASSETS

| € million | Dec. 31, 2023 |
|---|---|
| Cash and cash equivalents | 124 |
| Loans and advances to banks | 12 |
| Loans and advances to customers | 1,374 |
| Investments | 194 |
| Property, plant and equipment, investment property, and right-of-use assets | 19 |
| Income tax assets | 3 |
| Other assets | 31 |
| Loss allowances | -24 |
| **Total** | **1,733** |

LIABILITIES

| € million | Dec. 31, 2023 |
|---|---|
| Deposits from banks | 40 |
| Deposits from customers | 1,463 |
| Provisions | 3 |
| Income tax liabilities | 3 |
| Other liabilities | 23 |
| **Total** | **1,533** |

The disposal groups not qualifying as discontinued operations also include units in various investment funds with a carrying amount of €48 million.

The individual non-current assets classified as held for sale comprise real estate, investments in associates, and other shareholdings. The carrying amount comes to a total of €9 million. The sale of these individual non-current assets classified as held for sale is expected to take place in the first half of 2024.

The sale of individual non-current assets classified as held for sale gave rise to income of €25 million in 2023, which was recognized under other net operating income.

## » 62 Deposits from banks

| € million | Repayable on demand | | With agreed maturity or notice period | | Total | |
|---|---|---|---|---|---|---|
| | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| **Domestic banks** | **48,289** | 46,067 | **109,078** | 124,645 | **157,367** | 170,712 |
| Affiliated banks | 44,407 | 41,487 | 27,644 | 33,705 | 72,052 | 75,192 |
| Other banks | 3,881 | 4,580 | 81,434 | 90,940 | 85,315 | 95,520 |
| **Foreign banks** | **9,219** | 7,093 | **7,995** | 8,983 | **17,214** | 16,075 |
| **Total** | **57,507** | **53,160** | **117,073** | **133,628** | **174,580** | **186,787** |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Home savings deposits | 433 | 1,275 |
| Money market deposits | 42,945 | 53,584 |
| Other deposits | 131,203 | 131,928 |
| **Total** | **174,580** | **186,787** |

## » 63 Deposits from customers

| € million | Repayable on demand | | With agreed maturity or notice period | | Total | |
|---|---|---|---|---|---|---|
| | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| Domestic customers | 38,660 | 30,418 | 97,628 | 99,261 | 136,288 | 129,679 |
| Foreign customers | 19,529 | 17,265 | 3,824 | 12,485 | 23,354 | 29,750 |
| **Total** | **58,189** | **47,682** | **101,452** | **111,747** | **159,641** | **159,429** |

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Home savings deposits | 63,702 | 66,310 |
| Money market deposits | 41,612 | 37,246 |
| Other deposits | 54,327 | 55,873 |
| **Total** | **159,641** | **159,429** |

## » 64 Debt certificates issued including bonds

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Bonds issued** | **88,011** | **68,271** |
| Mortgage Pfandbriefe | 31,859 | 28,968 |
| Public-sector Pfandbriefe | 1,696 | 1,232 |
| Other bonds | 54,457 | 38,071 |
| **Other debt certificates issued** | **15,757** | **14,077** |
| **Total** | **103,768** | **82,349** |

As was also the case a year earlier, all other debt certificates issued are commercial paper.

## » 65 Hedging instruments (negative fair values)

Hedging instruments (negative fair values) amounted to €624 million (December 31, 2022: €442 million) and resulted solely from derivatives used as fair value hedges.

## » 66 Financial liabilities held for trading

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **DERIVATIVES (NEGATIVE FAIR VALUES)** | **17,131** | **26,641** |
| Interest-linked contracts | 13,687 | 21,217 |
| Currency-linked contracts | 1,897 | 3,148 |
| Share-/index-linked contracts | 1,362 | 1,899 |
| Other contracts | 112 | 270 |
| Credit derivatives | 73 | 107 |
| **SHORT POSITIONS** | **701** | **1,017** |
| **BONDS ISSUED** | **20,836** | **20,014** |
| **DEPOSITS** | **9,007** | **4,806** |
| of which from affiliated banks | 3,688 | 3,705 |
| of which from other banks | 4,943 | 954 |
| **Money market deposits** | **8,854** | **4,652** |
| from banks | 8,571 | 4,592 |
| from customers | 284 | 60 |
| **Promissory notes and registered bonds issued** | **153** | **155** |
| to banks | 60 | 68 |
| to customers | 93 | 87 |
| **Total** | **47,675** | **52,478** |

As was also the case a year earlier, bonds issued mainly comprise share certificates and index-linked certificates.

# » 67 Provisions

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Provisions for employee benefits** | **1,508** | **1,356** |
| Provisions for defined benefit plans | 1,045 | 922 |
| Provisions for other long-term employee benefits | 213 | 200 |
| of which for semi-retirement schemes | 79 | 72 |
| Provisions for termination benefits | 221 | 206 |
| of which for early retirement schemes | 26 | 26 |
| of which for restructuring | 156 | 135 |
| Provisions for short-term employee benefits | 29 | 28 |
| **Provisions for share-based payment transactions** | **58** | **51** |
| **Other provisions** | **1,669** | **1,841** |
| Provisions for onerous contracts | 10 | 30 |
| Provisions for restructuring | 31 | 16 |
| Provisions for loan commitments | 138 | 147 |
| Provisions for financial guarantee contracts | 105 | 89 |
| Other provisions for loans and advances | 52 | 51 |
| Provisions relating to building society operations | 913 | 1,053 |
| Residual provisions | 420 | 455 |
| **Total** | **3,235** | **3,248** |

The underlying discount rate used to measure the defined benefit obligations fell from 3.70 percent as at December 31, 2022 to 3.20 percent as at December 31, 2023. The assumptions about salary and annuity trends were unchanged compared with December 31, 2022.

## Other provisions

The following table shows the changes in other provisions in 2023:

| € million | Provisions for onerous contracts | Provisions for restruc-turing | Provisions for loan commit-ments | 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, 2023 | 30 | 16 | 147 | 89 | 51 | 1,053 | 455 | 1,841 |
| Additions | 8 | 29 | 266 | 102 | 17 | 223 | 311 | 955 |
| Utilizations | - | -8 | - | - | - | -360 | -256 | -623 |
| Reversals | -29 | -4 | -275 | -87 | -19 | -2 | -92 | -509 |
| Interest expense/changes in discount rate | 1 | - | 1 | 1 | 3 | - | 1 | 7 |
| Other changes | - | -2 | -1 | - | 1 | - | 1 | -2 |
| **Balance as at Dec. 31, 2023** | **10** | **31** | **138** | **105** | **52** | **913** | **420** | **1,669** |

The provisions of €72 million for litigation risk that had been included in residual provisions as at December 31, 2022 were largely reversed in the year under review. An amount of €13 million was utilized. The residual provisions continue to include provisions of €111 million for pre-litigation risks in connection with the lending business and building society operations (December 31, 2022: €113 million). The other disclosures required under IAS 37 are not provided because it is likely that such disclosures would seriously harm the outcome of the legal disputes.

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

AS AT DECEMBER 31, 2023

| € million | ≤ 3 months | > 3 months – 1 year | > 1 year – 5 years | > 5 years | Indefinite |
|---|---|---|---|---|---|
| Provisions for onerous contracts | - | - | - | 10 | - |
| Provisions for restructuring | - | 7 | 24 | - | - |
| Provisions for loan commitments | 19 | 16 | 57 | 41 | 5 |
| Provisions for financial guarantee contracts | 15 | 11 | 53 | 26 | - |
| Other provisions for loans and advances | 1 | 1 | 50 | - | - |
| Provisions relating to building society operations | 4 | 266 | 490 | 153 | - |
| Residual provisions | 84 | 181 | 52 | 94 | 9 |
| **Total** | **123** | **482** | **726** | **324** | **14** |

AS AT DECEMBER 31, 2022

| € million | ≤ 3 months | > 3 months – 1 year | > 1 year – 5 years | > 5 years | Indefinite |
|---|---|---|---|---|---|
| Provisions for onerous contracts | - | - | - | 30 | - |
| Provisions for restructuring | 2 | 14 | 1 | - | - |
| Provisions for loan commitments | 19 | 10 | 74 | 38 | 5 |
| Provisions for financial guarantee contracts | 17 | 12 | 37 | 23 | - |
| Other provisions for loans and advances | - | 44 | 5 | 1 | - |
| Provisions relating to building society operations | 5 | 280 | 482 | 286 | - |
| Residual provisions | 103 | 154 | 124 | 67 | 8 |
| **Total** | **146** | **514** | **722** | **446** | **13** |

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, 2022 | 56 | 31 | 38 | 1 | 7 | 9 | 72 | 213 |
| Additions | 97 | 115 | 65 | 7 | 9 | 25 | 67 | 385 |
| Reversals | -108 | -71 | -77 | -8 | -9 | -11 | -72 | -356 |
| Other changes | 2 | -1 | 1 | - | -1 | -1 | -5 | -5 |
| Balance as at Dec. 31, 2022 | 46 | 74 | 27 | - | 6 | 21 | 62 | 236 |
| Additions | 90 | 123 | 51 | 2 | 12 | 28 | 61 | 367 |
| Reversals | -113 | -101 | -59 | -2 | -11 | -21 | -55 | -362 |
| Other changes | 23 | -28 | 5 | - | - | -11 | 12 | 1 |
| **Balance as at Dec. 31, 2023** | **46** | **68** | **24** | **-** | **8** | **17** | **80** | **242** |

## » 68 Insurance contract liabilities

| € million | **Dec. 31, 2023** | Dec. 31, 2022 |
|---|---|---|
| **Insurance contract liabilities** | **105,150** | 98,328 |
| Liability for remaining coverage | 93,033 | 86,740 |
| Liability for incurred claims | 12,117 | 11,587 |
| **Reinsurance contract liabilities** | **1** | - |
| Liability for remaining coverage | 2 | 1 |
| **Total** | **105,151** | 98,328 |

## » 69 Other liabilities

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Other liabilities of insurance companies | 5,620 | 5,534 |
| Accruals | 1,518 | 1,485 |
| Other payables | 250 | 221 |
| Lease liabilities | 576 | 637 |
| Residual other liabilities | 907 | 1,083 |
| **Total** | **8,872** | **8,960** |

Residual other liabilities included initial margins from client clearing of €489 million (December 31, 2022: €764 million).

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Other provisions** | **394** | **354** |
| Provisions for employee benefits | 344 | 311 |
| of which provisions for defined benefit plans | 125 | 119 |
| Provisions for share-based payment transactions | 4 | 3 |
| Other provisions | 46 | 39 |
| **Payables and residual other liabilities** | **5,226** | **5,180** |
| Subordinated capital | 100 | 90 |
| Deposits received from reinsurers | 6 | 24 |
| Payables arising out of direct insurance operations | 340 | 305 |
| Payables arising out of reinsurance operations | 8 | 61 |
| Debt certificates issued including bonds | 39 | 36 |
| Deposits from banks | 431 | 413 |
| Derivatives (negative fair values) | 44 | 223 |
| Liabilities from investment contracts | 3,145 | 2,932 |
| Insurance lease liabilities | 75 | 80 |
| Other payables | 345 | 329 |
| Residual other liabilities | 694 | 686 |
| **Total** | **5,620** | **5,534** |

## » 70 Subordinated capital

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Subordinated liabilities | 4,257 | 4,510 |
| Share capital repayable on demand | 5 | 12 |
| **Total** | **4,261** | **4,521** |

# » 71 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.

For the 2022 financial year, DZ BANK paid a dividend of €0.20 per share in 2023 on the basis of a resolution of the Extraordinary General Meeting on October 19, 2023. In 2022, DZ BANK had paid a dividend of €0.20 per share on the basis of a resolution of the Annual General Meeting on May 25, 2022. A dividend of €0.25 per share for 2023 will be proposed to the Annual General Meeting.

## Authorized capital

The Board of Managing Directors of DZ BANK is authorized, subject to the approval of the Supervisory Board, to increase the share capital by June 30, 2026 on one or more occasions by up to a total of €200 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),
– 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 June 30, 2026 on one or more occasions by up to a total of €600 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 2023.

## Disclosures on shareholders

At the end of 2023, 99.5 percent of shares were held by cooperative enterprises (December 31, 2022: 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 €537 million (December 31, 2022: loss of €443 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.

### 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. At the end of 2023, an amount of minus €19 million was attributable to the currency translation reserve for disposal groups not qualifying as discontinued operations that are classified as held for sale (December 31, 2022: no amount).

### Reserve for insurance contracts measured at fair value through other comprehensive income

The reserve for insurance contracts measured at fair value through other comprehensive income contains the cumulative insurance finance income or expenses that are recognized in other comprehensive income taking deferred taxes into account.

## Additional equity components

### Additional Tier 1 notes

In 2023, DZ BANK issued a tranche of additional Tier 1 notes (AT1 bonds) with a total volume of €1,143 million.

The AT1 bonds are split into 3 types depending on their interest-rate arrangements (types A to C). Type A has a variable interest rate, whereas types B and C have fixed interest rates. At the end of the fixed-interest period, type B is aligned with the variable interest rate attaching to type A. In the case of type C, a new interest rate will be fixed every 5 years. Interest is payable annually. The date for the payment of interest has been specified as August 1 each year.

In previous years, DZ BANK had issued tranches of 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. However, the interest payments 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.

## 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

## 2023

| € 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 | - | 2,900 | 319 |
| Exchange differences on currency translation of foreign operations | - | -10 | 3 |
| Insurance finance income or expenses included in other comprehensive income | - | -2,384 | -254 |
| Gains and losses on equity instruments for which the fair value OCI option has been exercised | - | -118 | - |
| Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk | - | 206 | - |
| Gains and losses arising from remeasurement of defined benefit plans | -94 | - | -4 |
| Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method | - | -8 | - |
| **Other comprehensive income/loss** | **-94** | **586** | **64** |

## 2022

| € 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 | - | -14,171 | -1,477 |
| Exchange differences on currency translation of foreign operations | - | 17 | -4 |
| Insurance finance income or expenses included in other comprehensive income | - | 11,539 | 1,200 |
| Gains and losses on equity instruments for which the fair value OCI option has been exercised | - | -396 | -49 |
| Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk | - | 119 | - |
| Gains and losses arising from remeasurement of defined benefit plans | 279 | - | 13 |
| Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method | - | 1 | - |
| **Other comprehensive income/loss** | **279** | **-2,892** | **-316** |

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 | Reserve for insurance contracts measured at fair value through other compre-hensive income |
| Equity as at Jan. 1, 2022 | 621 | -54 | 1,025 | 58 | - |
| Restatements according to IAS 8 | 572 | - | 2,357 | 3 | -2,754 |
| Equity restated as at Jan. 1, 2022 | 1,193 | -54 | 3,382 | 61 | -2,754 |
| Other comprehensive income/loss | -396 | 119 | -14,171 | 18 | 11,539 |
| **Total comprehensive income/loss** | **-396** | **119** | **-14,171** | **18** | **11,539** |
| Changes in scope of consolidation | 4 | - | - | 1 | - |
| Acquisition/disposal of non-controlling interests | - | - | 3 | - | - |
| Reclassifications within equity | -111 | -6 | - | - | - |
| **Equity as at Dec. 31, 2022** | **690** | **59** | **-10,786** | **80** | **8,785** |
| Other comprehensive income/loss | -118 | 206 | 2,900 | -18 | -2,384 |
| **Total comprehensive income/loss** | **-118** | **206** | **2,900** | **-18** | **-2,384** |
| Acquisition/disposal of non-controlling interests | - | - | -4 | - | 4 |
| Reclassifications within equity | -59 | 1 | - | - | - |
| **Equity as at Dec. 31, 2023** | **514** | **267** | **-7,889** | **62** | **6,405** |

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 | | | Investments held by insurance companies | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| € million | Stage 1 | Stage 2 | Stage 1 | Stage 2 | Stage 3 | Stage 1 | Stage 2 | Stage 3 | |
| Balance as at Jan. 1, 2022 | - | - | 7 | - | 24 | 19 | 2 | 1 | 53 |
| Restatements according to IAS 8 | - | - | - | - | - | 22 | 6 | - | 27 |
| Balance restated as at Jan. 1, 2022 | - | - | 7 | - | 24 | 40 | 8 | 1 | 81 |
| Additions | - | - | 6 | 1 | - | 28 | 35 | 4 | 74 |
| Utilizations | - | - | - | - | - | - | - | -4 | -4 |
| Reversals | - | - | -7 | - | - | -40 | -17 | - | -65 |
| Other changes | - | - | - | - | - | 5 | -9 | - | -4 |
| Balance as at Dec. 31, 2022 | - | - | 7 | - | 24 | 34 | 17 | 1 | 83 |
| Additions | 1 | 1 | 11 | 3 | 2 | 17 | 55 | 29 | 118 |
| Utilizations | - | - | - | - | - | - | - | -6 | -6 |
| Reversals | -1 | -1 | -7 | -1 | - | -32 | -8 | - | -49 |
| Other changes | - | - | -1 | - | -1 | 13 | -29 | -10 | -30 |
| **Balance as at Dec. 31, 2023** | **-** | **-** | **9** | **2** | **25** | **31** | **35** | **13** | **115** |

## Information on regulatory capital

The information on regulatory capital and on capital management pursuant to IAS 1.134-136, which also forms part of these IFRS consolidated financial statements, can be found in chapter VII.7 ‘Capital adequacy’ of the risk report in the group management report.

# E Financial instruments and fair value disclosures

## » 72 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, 2023 Carrying amount | Dec. 31, 2023 Fair value | Dec. 31, 2022 Carrying amount | Dec. 31, 2022 Fair value |
|---|---|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | **188,770** | **188,785** | **187,855** | **187,870** |
| **Financial assets measured at fair value through profit or loss** | **75,149** | **75,164** | **85,556** | **85,571** |
| ***Financial assets mandatorily measured at fair value through profit or loss*** | ***70,134*** | ***70,149*** | ***80,128*** | ***80,142*** |
| Loans and advances to customers | 221 | 221 | 192 | 192 |
| Hedging instruments (positive fair values) | 923 | 923 | 1,568 | 1,568 |
| Financial assets held for trading | 34,961 | 34,975 | 48,909 | 48,923 |
| Investments | 3,385 | 3,385 | 2,489 | 2,489 |
| Investments held by insurance companies | 30,644 | 30,644 | 26,970 | 26,970 |
| ***Financial assets designated as at fair value through profit or loss*** | ***5,015*** | ***5,015*** | ***5,428*** | ***5,428*** |
| Loans and advances to banks | 1,202 | 1,202 | 1,340 | 1,340 |
| Loans and advances to customers | 613 | 613 | 753 | 753 |
| Investments | 3,200 | 3,200 | 3,336 | 3,336 |
| **Financial assets measured at fair value through other comprehensive income** | **113,573** | **113,573** | **102,280** | **102,280** |
| ***Financial assets mandatorily measured at fair value through other comprehensive income*** | ***108,080*** | ***108,080*** | ***95,861*** | ***95,861*** |
| Loans and advances to banks | 31 | 31 | 55 | 55 |
| Loans and advances to customers | 2,115 | 2,115 | 2,070 | 2,070 |
| Investments | 30,169 | 30,169 | 25,244 | 25,244 |
| Investments held by insurance companies | 75,765 | 75,765 | 68,492 | 68,492 |
| ***Financial assets designated as at fair value through other comprehensive income*** | ***5,493*** | ***5,493*** | ***6,419*** | ***6,419*** |
| Investments | 394 | 394 | 504 | 504 |
| Investments held by insurance companies | 5,099 | 5,099 | 5,916 | 5,916 |
| **Non-current assets and disposal groups classified as held for sale** | **48** | **48** | **19** | **19** |
| **FINANCIAL ASSETS MEASURED AT AMORTIZED COST** | **440,080** | **428,109** | **422,802** | **401,048** |
| Cash and cash equivalents | 101,463 | 101,462 | 93,405 | 93,400 |
| Loans and advances to banks | 127,591 | 122,965 | 121,994 | 111,969 |
| Loans and advances to customers | 199,175 | 189,565 | 198,125 | 182,465 |
| Investments | 10,362 | 10,288 | 11,354 | 11,129 |
| Investments held by insurance companies | 154 | 193 | 85 | 73 |
| Other assets | 2,043 | 2,043 | 2,011 | 2,011 |
| Fair value changes of the hedged items in portfolio hedges of interest-rate risk | -2,389 | | -4,173 | |
| Non-current assets and disposal groups classified as held for sale | 1,680 | 1,592 | - | - |
| **FINANCE LEASES** | **456** | **447** | **552** | **555** |
| Loans and advances to customers | 456 | 447 | 552 | 555 |
| Non-current assets and disposal groups classified as held for sale | 1 | 1 | - | - |

| € million | Dec. 31, 2023 Carrying amount | Fair value | Dec. 31, 2022 Carrying amount | Fair value |
|---|---|---|---|---|
| **FINANCIAL LIABILITIES MEASURED AT FAIR VALUE** | **78,663** | **78,591** | **80,798** | **80,711** |
| **Financial liabilities mandatorily measured at fair value through profit or loss** | **50,554** | **50,515** | **55,185** | **55,111** |
| Hedging instruments (negative fair values) | 624 | 624 | 442 | 442 |
| Financial liabilities held for trading | 47,675 | 47,636 | 52,478 | 52,404 |
| Other liabilities | 2,256 | 2,256 | 2,266 | 2,266 |
| **Financial liabilities designated as at fair value through profit or loss** | **28,109** | **28,076** | **25,612** | **25,600** |
| Deposits from banks | 3,804 | 3,804 | 3,888 | 3,887 |
| Deposits from customers | 7,420 | 7,399 | 6,089 | 6,081 |
| Debt certificates issued including bonds | 16,885 | 16,872 | 15,565 | 15,562 |
| Subordinated capital | - | - | 69 | 69 |
| **FINANCIAL LIABILITIES MEASURED AT AMORTIZED COST** | **417,111** | **409,333** | **408,306** | **392,653** |
| Deposits from banks | 170,776 | 167,289 | 182,899 | 173,934 |
| Deposits from customers | 152,222 | 150,921 | 153,339 | 151,400 |
| Debt certificates issued including bonds | 86,883 | 83,583 | 66,783 | 61,413 |
| Other liabilities | 2,098 | 2,098 | 1,979 | 1,979 |
| Subordinated capital | 4,261 | 3,933 | 4,452 | 3,928 |
| Fair value changes of the hedged items in portfolio hedges of interest-rate risk | -634 | | -1,147 | |
| Liabilities included in disposal groups classified as held for sale | 1,505 | 1,509 | - | - |
| **LEASES** | **664** | **664** | **717** | **717** |
| Other liabilities | 652 | 652 | 717 | 717 |
| Liabilities included in disposal groups classified as held for sale | 12 | 12 | - | - |
| **FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS** | **242** | **585** | **236** | **780** |
| **Financial guarantee contracts** | **105** | **105** | **89** | **89** |
| Provisions | 105 | 105 | 89 | 89 |
| **Loan commitments** | **138** | **480** | **147** | **691** |
| Provisions | 138 | 480 | 147 | 691 |

There is no active market with quoted prices pursuant to IFRS 13.76 for home savings loans, home savings deposits, or similar assets and liabilities. The specific features of a home savings product also mean that there is currently no suitable method for calculating fair value in accordance with IFRS 13. The home savings contracts cannot be measured individually because the allocation of home savings loans depends on the overall performance of the collective building society operations (allocation assets) and thus, in particular, on the performance of the home savings deposits (link to the collective). Consequently, the financial assets and financial liabilities resulting from collective building society operations are shown only at their carrying amounts in the table above.

Building society simulation models are used to calculate risk-bearing capacity and for regulatory purposes. These models have been updated in line with the increased requirements imposed by the banking supervisor in recent years. Statistical parameters, empirical values, and current market assessments are used in the models. The present value of the expected future cash flows from the collective contracts in force, less cost components and risk margins, is compared with the balance of the carrying amounts from building society operations below. The balance of the carrying amounts from building society operations amounted to an excess of liabilities and stood at minus €60,338 million (December 31, 2022: minus €64,430 million), whereas the collective present value came to minus €52,854 million (December 31, 2022: minus €54,469 million).

The differences between the carrying amount and the fair value of financial assets held for trading, financial liabilities held for trading, deposits from banks, deposits from customers, and debt certificates issued including bonds in the 'financial assets measured at fair value' and 'financial liabilities measured at fair value' classes are due to the deferral of day-one profit or loss, which is based on unobservable valuation parameters.

## » 73 Differences not recognized at the time of initial recognition

Differences that are not recognized at the time of initial recognition of financial instruments (day-one profit or loss) arise if the fair value of a financial instrument differs from its transaction price at the time of initial recognition and the calculation of the fair value is not substantiated by a price quoted in an active market for an identical asset or identical liability or is not based on a valuation technique that only uses data from observable markets. Such transactions are initially recognized at fair value on the balance sheet, plus the unrecognized day-one profit or loss. This unrecognized difference is amortized to profit or loss over the maturity period or at the time that all parameters factored into the valuation models are observable.

The following table shows the deferred day-one profit or loss that has not yet been amortized to profit or loss, broken down by class pursuant to IFRS 7.

| | **Measured at fair value** | |
|---|---|---|
| € million | Financial assets | Financial liabilities |
| Balance as at Jan. 1, 2022 | 57 | 14 |
| Additions as a result of transactions | 8 | 41 |
| Differences amortized to profit or loss | -6 | -12 |
| Reclassifications | -44 | 44 |
| Balance as at Dec. 31, 2022 | 14 | 87 |
| Additions as a result of transactions | 25 | 67 |
| Differences amortized to profit or loss | -28 | -79 |
| Reclassifications | 3 | -3 |
| **Balance as at Dec. 31, 2023** | **15** | **72** |

## » 74 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, 2023** | **Dec. 31, 2022** |
|---|---|---|
| **Investments** | **394** | **504** |
| Shares and other variable-yield securities | 324 | 408 |
| Investments in subsidiaries | 65 | 89 |
| Investments in joint ventures | - | 2 |
| Investments in associates | 6 | 5 |
| **Investments held by insurance companies** | **5,099** | **5,916** |
| Shares and other variable-yield securities | 4,657 | 5,477 |
| Investments in subsidiaries | 425 | 419 |
| Investments in joint ventures | 16 | 19 |
| Investments in associates | - | 1 |
| **Total** | **5,493** | **6,419** |

In 2023, dividends of €46 million (2022: €69 million) were recognized in respect of equity instruments designated as at fair value through other comprehensive income that were held as at the balance sheet date.

Equity instruments designated as at fair value through other comprehensive income with a carrying amount of €2,152 million (December 31, 2022: €2,077 million) were derecognized in 2023. 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 €235 million (2022: €53 million), which were reclassified to retained earnings. Dividends of €115 million (2022:

€149 million) were recognized in respect of equity instruments designated as at fair value through other comprehensive income that were sold in 2023.

## » 75 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, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| **Assets** | **86,356** | 69,475 | **68,911** | 94,824 | **33,518** | 23,570 |
| Loans and advances to banks | - | - | 1,232 | 1,395 | - | - |
| Loans and advances to customers | - | - | 2,309 | 2,419 | 641 | 596 |
| Hedging instruments (positive fair values) | - | - | 918 | 1,568 | 5 | - |
| Financial assets held for trading | 5,870 | 1,394 | 27,368 | 46,906 | 1,737 | 623 |
| Investments | 23,171 | 13,020 | 11,536 | 16,567 | 2,442 | 1,985 |
| Investments held by insurance companies | 57,267 | 55,061 | 25,549 | 25,951 | 28,692 | 20,366 |
| Non-current assets and disposal groups classified as held for sale | 48 | - | - | 19 | - | - |
| **Liabilities** | **623** | 3,059 | **76,664** | 77,080 | **1,304** | 572 |
| Deposits from banks | - | - | 3,804 | 3,887 | - | - |
| Deposits from customers | - | - | 7,109 | 6,081 | 290 | - |
| Debt certificates issued including bonds | - | 2,987 | 16,363 | 12,170 | 510 | 404 |
| Hedging instruments (negative fair values) | - | - | 624 | 442 | - | - |
| Financial liabilities held for trading | 617 | 51 | 46,514 | 52,255 | 505 | 98 |
| Other liabilities | 6 | 21 | 2,250 | 2,245 | - | - |
| Subordinated capital | - | - | - | - | - | 69 |

The investments held by insurance companies measured at fair value include assets related to unit-linked contracts. These are offset within insurance contract liabilities by financial liabilities that arise from unit-linked insurance products and are measured using the variable fee approach under IFRS 17, and within other liabilities by liabilities measured at fair value from investment contracts that are 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 | |
|---|---|---|---|---|
| | 2023 | 2022 | 2023 | 2022 |
| **Financial assets measured at fair value** | **10,219** | 2,220 | **18,071** | 760 |
| Financial assets held for trading | 2,117 | 516 | 6,629 | - |
| Investments | 2,670 | 22 | 10,041 | 35 |
| Investments held by insurance companies | 5,432 | 1,682 | 1,356 | 725 |
| Non-current assets and disposal groups classified as held for sale | - | - | 45 | - |
| **Financial liabilities measured at fair value** | **2,526** | 1,027 | **237** | - |
| Debt certificates issued including bonds | 2,520 | - | - | - |
| Financial liabilities held for trading | 6 | 1,027 | 237 | - |

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 material valuation parameter 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.

Prices in active markets are used (provided these prices are available) for the fair value measurement of loans and advances as well as unstructured bonds. Otherwise, the DCF method is mainly used. 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 material 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 measurement of shares and other variable-yield securities and of other shareholdings is 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 measurement of investment fund units is 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 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 measurement is 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. Next, 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.

If the value of the financial instruments is based on unobservable inputs and they are thus assigned to Level 3 of the fair value hierarchy, the exact value of these inputs can be determined as at the balance sheet date from a range of appropriate possible alternatives. Determining the value for the inputs from a range has an impact on the fair value recognized. The following disclosures explain the material unobservable input categories (known as risk categories) for Level 3 financial instruments. These categories are factored into the significance analysis. Their areas of application are also shown below.

The method for assessing the observability of inputs was refined in 2023. In respect of financial instruments with unrecognized day-one profit or loss at the time of initial recognition, the resulting change of estimate led to the amortization to profit or loss of the day-one profit or loss previously deferred of €41 million. The resulting change of estimate also led to transfers between the levels of the fair value hierarchy. Furthermore, the fair value measurement of investment funds that are not traded in active markets has no longer factored in a liquidity markdown since the second half of 2023. This change of estimate resulted in income of €7 million. The method for determining the funding valuation adjustment for the fair value measurement of unsecured derivatives was refined as at December 31, 2023. The resulting change of estimate led to an expense of €44 million.

## Risk categories

### ABS spreads
ABS spreads encompass ABS spread curves derived from sector, rating, or expert assessments. These curves are used, for example, to measure ABSs and other structured bonds. The presentation of the sensitivities to ABS spreads relates to a shift of plus 1 basis point.

### Probability of default
Probability of default describes a banking regulation-related risk parameter used to measure credit risk. The probability of default of a borrower, issuer, or counterparty is the probability that the borrower, issuer, or counterparty will not be able to meet its payment obligations or other contractual obligations in the future. The presentation of the sensitivities to probability of default relates to a shift of plus 1 basis point.

### Bond spreads
Bond spreads contain both credit rating-related and issuer-related spread curves for corporates and governments. Also in this category are benchmark bond spread curves that, for example, are factored into the measurement of issues, bonds, promissory notes, bond futures, and bond options. The presentation of the sensitivities to bond spreads relates to a shift of plus 1 basis point.

### Credit default swap spreads (CDS spreads)
CDS spreads encompass credit default swap spreads for corporates and governments. They are used to measure credit default swaps and are factored into the measurement of structured issues. The presentation of the sensitivities to CDS spreads relates to a shift of plus 1 basis point.

### Discount rate for investments in companies
Both observable and unobservable inputs are factored into the discount rate for investments in companies. The risk-free basic interest rate is an observable input. The material unobservable inputs are the premium for market risk, the company-specific beta factor and, if applicable, a growth markdown. A sensitivity analysis is carried out at the level of the discount rate as a whole rather than at the level of the individual unobservable inputs factored into the discount rate. The presentation of the sensitivities to the discount rate for investments in companies relates to a shift of 50 basis points.

### Dividend estimate
This category covers estimated future dividend yields as well as repo yields and convenience yields. The presentation of the sensitivities to dividends relates to a shift of plus 1 percent.

### Duration
Duration is the unobservable, weighted average lifetime of mortgage-backed securities. The presentation of the sensitivities to duration relates to a shift of plus 1 year.

### Equity prices
This category includes not only equity prices but also prices for equity indices. Equity prices are used to measure equities and derivative products based on equities, but they are also used to measure issues and profit-sharing rights. The presentation of the sensitivities to equity prices relates to a shift of plus 1 percent in relation to fair value.

### Fair value adjustments

As a component of fair value, fair value adjustments must be taken into account in the significance analysis in their full absolute amount, provided they are unobservable. The absolute amount of the fair value adjustment must be disclosed as the sensitivity.

### Fund prices

This category contains prices both for commodity funds and for equity funds. Fund prices are factored into the measurement of funds and issues. The presentation of the sensitivities to fund prices relates to a shift of plus 1 percent in relation to fair value.

### Impairment

Impaired financial instruments are generally assigned to Level 3 of the fair value hierarchy. The absolute amount must be disclosed as the sensitivity.

### Mean reversion

This category comprises the unobservable parameter ‘mean reversion’ in the Hull-White model, which is used to model short rates. The presentation of the sensitivities to mean reversion relates to a shift of plus 1 basis point.

### Illiquid market prices

In some circumstances, depending on the liquidity of the bond spread curve, liquid market price information may not be available as at the valuation date for marked-to-market financial instruments such as bonds. Where this is the case, the financial instruments are assigned to Level 3 of the fair value hierarchy. The presentation of the sensitivities to illiquid market prices relates to a shift of plus 1 percent in relation to fair value (fair value changes by 1 percent of the current market price).

### Volatilities

These include various volatilities for commodities, equities, and currencies as well as cap/floor volatilities and swaption volatilities. For the latter, particularly derivative products such as swaps and options, fly volatilities and risk reversal volatilities are also factored into the calculations. The presentation of the sensitivities to volatilities relates to a shift of plus 1 percentage point for volatilities with log-normal distribution and a shift of plus 1 basis point for volatilities with normal distribution.

### Yield curves

In addition to standard yield curves, this category covers cross-currency spread curves and tenor basis spread curves as well as fixing, fund, and swap rates. Yield curves are factored into the measurement of most financial instruments. The presentation of the sensitivities to yield curves relates to a shift of plus 1 basis point.

## Aggregate sensitivity

For each product type whose fair value is based on unobservable inputs and are therefore assigned to Level 3, the inputs used in the measurement of the assets and liabilities are used to determine and present an aggregate sensitivity. The aggregate sensitivity, presented in euros, provides information about the sensitivity of assets and liabilities in each class to a change in the unobservable inputs used in the measurement of this class, such inputs belonging to the risk category identified for this class. The aggregate sensitivity relates to a standardized change in the inputs in the risk category, for example relating to a change of plus 1 basis point.

For example, an aggregate sensitivity of €1 million for the ‘yield curves’ risk category means that a change of plus 10 basis points would result in an increase in fair value of €10 million for the line item.

### Measurements of fair value at Level 3 as at December 31, 2023

The following table shows the valuation techniques, risk categories, sensitivity reference values, and the aggregate sensitivities used for the fair value measurements at Level 3 of the fair value hierarchy.

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Risk category | Sensitivity reference value | Aggregate sensitivity (€ million) |
|---|---|---|---|---|---|---|
| Loans and advances to customers | Other bank loans | 18 | Mark-to-model (DCF) | Probability of default | Shift of +1 basis point | - |
| | Other bank loans | 14 | Present value for which loss allowances have been recognized | Impairment | Absolute amount (impairment) | - |
| | Registered securities | 14 | Black model (simple option pricing model) | Bond spreads | Shift of +1 basis point | - |
| | Registered securities | 405 | Mark-to-model (DCF) | Fair value adjustments | Absolute amount (fair value adjustment) | 4 |
| | Other loans and advances | 1 | Mark-to-model (DCF) | Probability of default | Shift of +1 basis point | - |
| | | | Mark-to-model (DCF) | Yield curves | Shift of +1 basis point | - |
| | Other loans and advances | 189 | Mark-to-model (DCF) | Fair value adjustments | Absolute amount (fair value adjustment) | 3 |
| Derivatives used for hedging (positive fair values) | Derivatives | 5 | Mark-to-model (DCF) | Yield curves | Shift of +1 basis point | - |
| Financial assets held for trading | Shares | 1 | Mark-to-market | Equity prices | Shift of +1% in relation to fair value | - |
| | Bonds | 35 | Black model (simple option pricing model) | Bond spreads | Shift of +1 basis point | - |
| | Bonds | 182 | Mark-to-market | Illiquid market prices | Shift of +1 percentage point | 1 |
| | Bonds | 74 | Mark-to-model (DCF) | Fair value adjustments | Absolute amount (fair value adjustment) | - |
| | | | Black model (simple option pricing model) | Fair value adjustments | Absolute amount (fair value adjustment) | 4 |
| | Derivatives | 83 | Black model (simple option pricing model) | Volatilities (normal) | Shift of +1 basis point | -6 |
| | | | Analytical yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 2 |
| | Derivatives | 22 | Analytical yield curve model | Volatilities (normal) | Shift of +1 basis point | 14 |
| | | | Multi-factor yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 53 |
| | Derivatives | 508 | Multi-factor yield curve model | Volatilities (normal) | Shift of +1 basis point | 10 |
| | | | Local volatility model | Dividend estimate | Shift of +1 basis point | - |
| | Derivatives | 13 | Local volatility model | Volatilities (log-normal) | Shift of +1 percentage point | -2 |
| | | | One-factor yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 9 |
| | Derivatives | 58 | One-factor yield curve model | Volatilities (normal) | Shift of +1 basis point | 2 |
| | | | Mark-to-model (DCF) | ABS spreads | Shift of +1 basis point | - |
| | | | Mark-to-model (DCF) | Fair value adjustments | Absolute amount (fair value adjustment) | 27 |
| | Derivatives | 478 | Mark-to-model (DCF) | Volatilities (log-normal) | Shift of +1 percentage point | 4 |
| | Promissory notes and registered bonds | 1 | Multi-factor yield curve model | Bond spreads | Shift of +1 basis point | - |
| | Promissory notes and registered bonds | 282 | Mark-to-model (DCF) | Bond spreads | Shift of +1 percentage point | - |

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Risk category | Sensitivity reference value | Aggregate sensitivity (€ million) |
|---|---|---|---|---|---|---|
| | Shares and other shareholdings | 118 | Income capitalization approach | Discount rate for investments in companies | Shift of +1 basis point | - |
| | Shares and other shareholdings | 126 | Mark-to-model (DCF) | Yield curves | Shift of +1 basis point | - |
| | Shares and other shareholdings | 3 | Simplified income capitalization approach | | | - |
| | Shares and other shareholdings | 141 | Mark-to-model (DCF) | Dividend estimate | Shift of +1 percentage point | 1 |
| | Bonds | 1 | Black model (simple option pricing model) | ABS spreads | Shift of +1 basis point | - |
| | | | Mark-to-market | Illiquid market prices | Shift of +1% in relation to fair value | 5 |
| | Bonds | 553 | Black model (simple option pricing model) | Fair value adjustments | Absolute amount (fair value adjustment) | 1 |
| | | | Mark-to-model (DCF) | Fair value adjustments | Absolute amount (fair value adjustment) | - |
| | Bonds | 303 | Mark-to-model (DCF) | Illiquid market prices | Shift of +1% in relation to fair value | 4 |
| Investments | Bonds | 6 | Present value for which loss allowances have been recognized | Impairment | Absolute amount (impairment) | - |
| | Bonds | 699 | Mark-to-market | Illiquid market prices | Shift of +1% in relation to fair value | 7 |
| | Bonds | 255 | Mark-to-model (DCF) | Duration | Shift of +1 year | -7 |
| | Bonds | 12 | Present value for which loss allowances have been recognized | Impairment | Absolute amount (impairment) | - |
| | Investments in associates | 6 | Income capitalization approach | Discount rate for investments in companies | Shift of +1 basis point | - |
| | Investments in subsidiaries | 67 | Income capitalization approach | Discount rate for investments in companies | Shift of +1 basis point | - |
| | Investments in subsidiaries | 43 | Simplified income capitalization approach | | | - |
| | Investments in subsidiaries | 59 | Mark-to-model (DCF) | Yield curves | Shift of +1 basis point | - |
| | Investments in subsidiaries | 10 | Net asset value | | | - |
| | Investment fund units | 31 | Mark-to-model (other) | Fund prices | Shift of +1% in relation to fair value | - |
| | Investment fund units | 9 | Net asset value | | | - |

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Risk category | Sensitivity reference value | Aggregate sensitivity (€ million) |
|---|---|---|---|---|---|---|
| Investments held by insurance companies | Shares and other variable-yield securities | 3 | Income capitalization approach | Discount rate for investments in companies | Shift of +1 basis point | - |
| | Shares and other variable-yield securities | 24 | Valuation reports | | | - |
| | Shares and other variable-yield securities | 11 | Simplified income capitalization approach | | | - |
| | Shares and other variable-yield securities | 5,194 | Net asset value | | | - |
| | Investments in joint ventures | 4 | Income capitalization approach | Discount rate for investments in companies | Shift of +1 basis point | - |
| | Investments in joint ventures | 58 | Net asset value | | | - |
| | Investments in subsidiaries | 276 | Income capitalization approach | Discount rate for investments in companies | Shift of +1 basis point | - |
| | Investments in subsidiaries | 1 | Simplified income capitalization approach | | | - |
| | Investments in subsidiaries | 418 | Net asset value | | | - |
| | Fixed-income securities | 1,962 | Mark-to-model (DCF) | Bond spreads | Shift of +1 basis point | -2 |
| | Fixed-income securities | 485 | Multi-factor yield curve model | Bond spreads | Shift of +1 basis point | -1 |
| | Fixed-income securities | 1,194 | Mark-to-model (DCF) | ABS spreads | Shift of +1 basis point | - |
| | Fixed-income securities | 3 | Mark-to-market | Illiquid market prices | Shift of +1% in relation to fair value | - |
| | Mortgage loans | 12,004 | Mark-to-model (DCF) | Bond spreads | Shift of +1 basis point | -11 |
| | Registered bonds | 2,058 | Mark-to-model (DCF) | Bond spreads | Shift of +1 basis point | -3 |
| | Registered bonds | 1,353 | Multi-factor yield curve model | Bond spreads | Shift of +1 basis point | -3 |
| | Promissory notes and loans | 3,125 | Mark-to-model (DCF) | Bond spreads | Shift of +1 basis point | -3 |
| | Promissory notes and loans | 310 | Multi-factor yield curve model | Bond spreads | Shift of +1 basis point | - |
| | Other loans and receivables | 105 | Amortized cost | | | - |
| | Other loans and receivables | 102 | Mark-to-model (DCF) | Probability of default | Shift of +1 basis point | - |
| | Assets managed for third parties | 1 | Net asset value | | | - |

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Risk category | Sensitivity reference value | Aggregate sensitivity (€ million) |
|---|---|---|---|---|---|---|
| Deposits from customers | Other deposits | 180 | Multi-factor yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 5 |
| | | | Multi-factor yield curve model | Volatilities (normal) | Shift of +1 basis point | 3 |
| | | | Analytical yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 1 |
| | Other deposits | 110 | Analytical yield curve model | Volatilities (normal) | Shift of +1 basis point | -6 |
| Debt certificates issued including bonds | Other bonds | 310 | Mark-to-model (DCF) | Illiquid market prices | Shift of +1 percentage point | -4 |
| | Other bonds | 26 | Analytical yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | - |
| | Other bonds | 173 | Multi-factor yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 4 |
| Financial liabilities held for trading | Bonds issued, share certificates and index-linked certificates, and other debt certificates issued | 116 | Local volatility model | Dividend estimate | Shift of +1 basis point | - |
| | | | Local volatility model | Fair value adjustments | Absolute amount (fair value adjustment) | 3 |
| | | | Local volatility model | Volatilities (log-normal) | Shift of +1 percentage point | 1 |
| | Derivatives | 5 | Analytical yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 2 |
| | Derivatives | 71 | Black model (simple option pricing model) | Fair value adjustments | Absolute amount (fair value adjustment) | 6 |
| | | | Black model (simple option pricing model) | Volatilities (normal) | Shift of +1 basis point | -5 |
| | Derivatives | 28 | One-factor yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 2 |
| | | | One-factor yield curve model | Volatilities (normal) | Shift of +1 basis point | -1 |
| | Derivatives | 131 | Local volatility model | Dividend estimate | Shift of +1 basis point | - |
| | | | Local volatility model | Fair value adjustments | Absolute amount (fair value adjustment) | 6 |
| | | | Local volatility model | Volatilities (log-normal) | Shift of +1 percentage point | -16 |
| | Derivatives | 94 | Mark-to-model (DCF) | CDS spreads | Shift of +1 basis point | - |
| | | | Mark-to-model (DCF) | Fair value adjustments | Absolute amount (fair value adjustment) | 14 |
| | Derivatives | 58 | Multi-factor yield curve model | Fair value adjustments | Absolute amount (fair value adjustment) | 5 |
| | Derivatives | 1 | One-factor yield curve model | Mean reversion | Shift of +1 basis point | - |

## Measurements of fair value at Level 3 as at December 31, 2022

The following table shows the valuation techniques, the unobservable inputs, and their spreads used for the fair value measurements at Level 3 of the fair value hierarchy. Due to the change in the method used to determine observability for each individual input used in the calculation of fair value, the disclosures as at December 31, 2022 are not comparable with those as at December 31, 2023.

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Unobservable inputs | Spread of unobservable inputs (%) |
|---|---|---|---|---|---|
| Loans and advances to customers | Loans | 404 | DCF method | BVAL price adjustment | -4.0 to 5.3 |
| | Profit-participation certificates | 25 | DCF method | Credit spread | 7.4 to 8.2 |
| | Shareholders' loans | 91 | DCF method | Credit spread | 3.6 to 12.1 |
| | Initial fund loans | 16 | DCF method | Probability of default | 0.4 |
| | Receivables arising from silent partnerships | 54 | DCF method | Credit spread | 6.1 to 12.2 |
| | Loans and advances to issuers in default | 6 | DCF method | Recovery rate | - |
| Financial assets held for trading | ABSs | 2 | DCF method | Credit spread | 7.9 |
| | Loans and advances to issuers in default | 17 | DCF method | Recovery rate | - |
| | Collateralized loan obligations | 133 | Gaussian copula model | Liquidity spread | 2.0 to 6.5 |
| | Bearer securities | 127 | DCF method | BVAL price adjustment | -0.3 to 1.5 |
| | Registered securities | 343 | DCF method | BVAL price adjustment | -4.0 to 5.3 |
| | Option in connection with acquisition of long-term equity investments | 1 | Black-Scholes model | Earnings indicators | - |
| Investments | ABSs | 61 | DCF method | Credit spread | 0.6 to 13.1 |
| | Investments in associates | 4 | Income capitalization approach | Future income | - |
| | Investments in joint ventures | 2 | Income capitalization approach | Future income | - |
| | Investments in subsidiaries | 57 | DCF method | Credit spread | 0 to 11.5 |
| | | 172 | Income capitalization approach, net asset value method | Future income | - |
| | | 7 | Net asset value | - | - |
| | Collateralized loan obligations | 1 | Gaussian copula model | Liquidity spread | 1.8 to 2.6 |
| | Loans and advances to issuers in default | 6 | DCF method | Recovery rate | - |
| | Bearer securities | 567 | DCF method | BVAL price adjustment | -0.3 to 107.5 |
| | Investment fund units | 23 | Net asset value | - | - |
| | Mortgage-backed securities | 195 | DCF method | Duration | - |
| | | 15 | DCF method | Recovery rate | 0.0 to 71.4 |
| | Other shareholdings | 245 | DCF method | Capitalization rate, growth factor | 1.0 to 11.0 |
| | | 22 | DCF method | Credit spread | 0.0 |
| | | 203 | Income capitalization approach, net asset value method | Future income | - |
| | VR Circle | 405 | 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 | 1,547 | Third-party pricing information | - | - |
| | Investments in subsidiaries, associates, and joint ventures, real estate funds, profit-participation certificates, and other long-term equity investments | 5,038 | Net asset value | - | - |
| | Investments in subsidiaries, associates, and joint ventures, other long-term equity investments, and shares in cooperatives | 287 | Income capitalization approach | Future income | 7.0 to 9.0 |
| | Fixed-income securities, convertible bonds, shares, investment fund units, and shares in cooperatives | 754 | Third-party pricing information | - | - |
| | Profit-participation certificates, mortgage loans, and promissory notes | 12,674 | DCF method | Credit spread | 0.6 to 10.0 |
| | Initial fund loans | 56 | DCF method | Probability of default | 0.4 |
| | Other shareholdings | 10 | Approximation | - | - |
| Debt certificates issued including bonds | VR Circle | 404 | DCF method | Multiple-year default probabilities | 0.0 to 100.0 |
| Financial liabilities held for trading | Equity/commodity basket products | 95 | Local volatility model | Correlation of the risk factors considered | 10.1 to 80.7 |
| | Products with commodity volatility derived from comparable instruments | 3 | Local volatility model | Volatility | 12.2 to 86.8 |
| Subordinated capital | Loans | 69 | DCF method | Credit spread | 0.5 |

## 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 | Derivatives used for hedging (positive fair values) | 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, 2022 | 679 | - | 645 | 1,900 | 21,365 | 163 |
| Additions (purchases) | 97 | - | 587 | 161 | 4,465 | 1 |
| Transfers | - | - | 436 | 663 | 280 | - |
| from Level 3 to Levels 1 and 2 | - | - | -416 | -591 | -51 | - |
| from Levels 1 and 2 to Level 3 | - | - | 852 | 1,254 | 331 | - |
| Disposals (sales) | -113 | - | -1,026 | -603 | -1,974 | -161 |
| Changes resulting from measurement at fair value | -67 | - | -22 | -100 | -3,799 | - |
| through profit or loss | -38 | - | -22 | -41 | 67 | - |
| through other comprehensive income | -29 | - | - | -59 | -3,866 | - |
| Other changes | 1 | - | 2 | -36 | 30 | -2 |
| Balance as at Dec. 31, 2022 | 596 | - | 623 | 1,985 | 20,366 | - |
| Additions (purchases) | 9 | - | 1,333 | 737 | 3,557 | - |
| Transfers | 44 | -1 | 1,408 | 1,532 | 6,819 | - |
| from Level 3 to Levels 1 and 2 | -12 | -1 | -389 | -1,675 | -607 | - |
| from Levels 1 and 2 to Level 3 | 56 | - | 1,797 | 3,207 | 7,426 | - |
| Disposals (sales) | -20 | - | -1,535 | -1,692 | -2,001 | - |
| Changes resulting from measurement at fair value | 5 | 1 | -85 | -119 | -12 | - |
| through profit or loss | -5 | 1 | -81 | 23 | -413 | - |
| through other comprehensive income | 10 | - | -4 | -142 | 401 | - |
| Other changes | 7 | 5 | -6 | -2 | -38 | - |
| **Balance as at Dec. 31, 2023** | **641** | **5** | **1,737** | **2,442** | **28,692** | **-** |

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

| € million | Deposits from customers | Debt certificates issued including bonds | Financial liabilities held for trading | Subordinated capital |
|---|---|---|---|---|
| Balance as at Jan. 1, 2022 | - | 427 | 148 | 20 |
| Additions (issues) | - | - | 42 | - |
| Transfers | - | - | -39 | 50 |
| from Level 3 to Level 2 | - | - | -251 | - |
| from Level 2 to Level 3 | - | - | 212 | 50 |
| Disposals (settlements) | - | -25 | -40 | - |
| Changes resulting from measurement at fair value | - | 2 | -14 | -1 |
| through profit or loss | - | 2 | -14 | - |
| Other changes | - | 1 | - | - |
| Balance as at Dec. 31, 2022 | - | 404 | 98 | 69 |
| Additions (issues) | 200 | 193 | 1,213 | - |
| Transfers | 282 | 18 | 206 | - |
| from Level 3 to Level 2 | - | - | -2,082 | - |
| from Level 2 to Level 3 | 282 | 18 | 2,287 | - |
| Disposals (settlements) | -201 | -100 | -842 | -68 |
| Changes resulting from measurement at fair value | 7 | -6 | -173 | - |
| through profit or loss | 9 | -2 | -158 | 1 |
| through other comprehensive income | -2 | -4 | -16 | -1 |
| Other changes | 2 | - | 4 | -1 |
| **Balance as at Dec. 31, 2023** | **290** | **510** | **505** | **-** |

As part of the processes for fair value measurement, the DZ BANK Group reviews whether the valuation methods used for the measurement are typical. This review takes place at every balance sheet date, i.e. at least every 6 months. For the valuation parameters used in the valuation methods, a review is carried out as part of a significance analysis to examine whether unobservable inputs have a significant influence on the fair value.

For each input used in the calculation of fair value, a liquidity score is determined on an ongoing basis that provides information on whether the underlying market is active and the input is observable. Various parameters are used to determine the liquidity score, irrespective of the market data group. In respect of equity prices, for example, a check is carried out of whether the equity was traded in a specified period and whether the trading volume has exceeded a certain threshold. For bonds, the bid-ask spread and the number of price contributors are taken into account. The rules on determining the liquidity score are set centrally by DZ BANK AG and apply to all group entities. On the basis of the liquidity scores determined, the fair value measurements are assigned to the levels of the fair value hierarchy, provided that the group entities use the centralized market database. 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 are largely attributable to a revised estimate of the market observability of the valuation parameters 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 parameters 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 €538 million during the year under review (2022: net gain of €82 million). The gains or losses are predominantly included in the line items net interest income, gains and losses on trading activities, other gains and losses on valuation of financial instruments, and gains and losses on investments held by insurance companies and other insurance company gains and losses.

## 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. If allocation of the portfolio-based valuation adjustments to the assets and liabilities is required, it is generally carried out in proportion to the nominal amounts of the financial instruments in question.

## Sensitivity analysis

In the DZ BANK Group, financial instruments are generally assigned to Level 2 and Level 3 of the fair value hierarchy using a sensitivity-based significance analysis of unobservable inputs. Taking a prudent valuation approach pursuant to article 105 of the Capital Requirements Regulation (CRR), an uncertainty spread is formed for the unobservable inputs that, as a rule, equates to the 90 percent quantile and the 10 percent quantile for the distribution of the input; the change in fair value at the ends of the spread is also examined.

The following table shows the changes in the fair values of financial instruments assigned to Level 3 of the fair value hierarchy that would occur if all inputs in each risk category were factored into the measurement with the ends of each uncertainty spread. Changes in fair value at the lower and upper end of the uncertainty spread are shown separately. In practice, however, it is unlikely that all unobservable inputs would be at the extreme end of their uncertainty spread at the same time. Correlations between inputs are disregarded when determining the uncertainty spreads.

| | Dec. 31, 2023 | |
|---|---|---|
| € million | Alternative assumptions at the lower end of the uncertainty spread | Alternative assumptions at the upper end of the uncertainty spread |
| **Loans and advances to customers** | | |
| Other loans and advances | 2 | -2 |
| **Financial assets held for trading** | | |
| Derivatives | -1 | 1 |
| **Investments** | | |
| Shares and other shareholdings | 6 | -2 |
| Bonds | -8 | 7 |
| Investments in subsidiaries | 1 | -1 |
| Investment fund units | -3 | 1 |
| **Investments held by insurance companies** | | |
| Investments in subsidiaries | 19 | -16 |
| Fixed-income securities | 33 | -31 |
| Mortgage loans | 2 | -2 |
| Registered bonds | 163 | -163 |
| Promissory notes and loans | 65 | -36 |
| Other loans | 2 | -2 |
| **Debt certificates issued including bonds** | | |
| Other bonds | -1 | 1 |
| **Financial liabilities held for trading** | | |
| Bonds issued, share certificates and index-linked certificates, and other debt certificates issued | -1 | 1 |
| Derivatives | 4 | -4 |

The sensitivity analysis was adjusted in the reporting year, so there are no direct comparative figures for the reporting date of December 31, 2022. Based on the sensitivity analysis used in 2022, the values as at December 31, 2022 were as follows:

For the fair values of investments held by insurance companies reported within Level 3, a rise in the interest rate of 1 percent would have led to the recognition of a €22 million loss in the income statement and a loss of €1,089 million under other comprehensive income/loss. For the fair values of investments held by insurance companies, a worsening in the credit rating of 1 percent would have led to the recognition of a €29 million loss in the income statement and a loss of €1,083 million under other comprehensive income/loss.

In the case of the fair values of loans and advances to customers, a worsening in the credit rating or a rise in the interest rate of 1 percent would have led to the recognition of a €9 million loss in the income statement. For the fair values of investments, there would have been a €47 million loss under other comprehensive income/loss and a €16 million loss in the income statement.

The fair values of bonds without liquid markets that are reported within financial assets held for trading, investments, and loans and advances to customers were given an individual adjustment spread or were 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 have led to the recognition of a €14 million loss in the income statement and a loss of €3 million under other comprehensive income/loss.

An alternative assumption about the credit spreads used could have led 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 of 1 percent in these spreads would have led to the recognition of a €1 million loss under other comprehensive income/loss.

An alternative assumption about the liquidity spreads used could have led 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 have led to a €4 million decrease in the fair values of these financial assets that would be recognized in the income statement.

Non-performing exposures, strategically held investments in subsidiaries and other shareholdings, and investments in real estate funds whose fair values are calculated using an income capitalization approach or the net asset value were not included in the sensitivity analysis as at December 31, 2022.

## » 76 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:

| | Level 1 | | Level 2 | | Level 3 | |
|---|---|---|---|---|---|---|
| € million | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| **Assets** | **4,070** | 168 | **251,052** | 248,661 | **178,983** | 158,484 |
| Cash and cash equivalents | - | - | 101,462 | 93,400 | - | - |
| Loans and advances to banks | - | - | 119,326 | 108,805 | 3,639 | 3,164 |
| Loans and advances to customers | - | - | 23,376 | 35,210 | 166,189 | 147,255 |
| Investments | 3,850 | 167 | 6,224 | 10,615 | 215 | 346 |
| Investments held by insurance companies | 37 | - | 2 | - | 5,797 | 5,977 |
| Property, plant and equipment, investment property, and right-of-use assets | - | - | - | 168 | 345 | 192 |
| Other assets | - | - | 526 | 462 | 1,518 | 1,549 |
| Non-current assets and disposal groups classified as held for sale | 184 | - | 137 | - | 1,280 | - |
| **Liabilities** | **19,368** | 22,256 | **318,593** | 297,355 | **71,957** | 73,822 |
| Deposits from banks | - | - | 166,324 | 172,525 | 965 | 1,410 |
| Deposits from customers | - | - | 86,817 | 84,877 | 64,103 | 66,523 |
| Debt certificates issued including bonds | 19,368 | 22,256 | 64,215 | 39,157 | - | - |
| Provisions | - | - | 359 | 513 | 226 | 268 |
| Other liabilities | - | - | 830 | 277 | 1,268 | 1,702 |
| Subordinated capital | - | - | 1 | 7 | 3,933 | 3,920 |
| Liabilities included in disposal groups classified as held for sale | - | - | 47 | - | 1,462 | - |

### 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 risk categories and valuation techniques used for the fair value measurements at Level 3 of the fair value hierarchy as at December 31, 2023.

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Unobservable inputs |
|---|---|---|---|---|
| Loans and advances to banks | Home savings loans advanced by building society | 103 | Amortized cost | |
| | Mortgage loans | 4 | Mark-to-model (DCF) | Probability of default |
| | Current account debit balances | 8 | Mark-to-model (DCF) | Probability of default |
| | Registered securities | 110 | Black model (simple option pricing model) | Bond spreads, fair value adjustments, subordinated spreads |
| | Registered securities | 46 | Mark-to-model (DCF) | Bond spreads |
| | Other bank loans | 3,367 | Mark-to-model (DCF) | Probability of default |
| | Other bank loans | 1 | Present value for which loss allowances have been recognized | Impairment |
| Loans and advances to customers | Home savings loans advanced by building society | 4,848 | Amortized cost | |
| | Home savings loans advanced by building society | 56,179 | Mark-to-model (DCF) | Probability of default |
| | Pass-through loans | 1,462 | Mark-to-model (DCF) | Probability of default |
| | Pass-through loans | 2 | Present value for which loss allowances have been recognized | Impairment |
| | Mortgage loans | 51,924 | Mark-to-model (DCF) | Probability of default |
| | Mortgage loans | 333 | Present value for which loss allowances have been recognized | Impairment |
| | Current account debit balances | 1,565 | Mark-to-model (DCF) | Probability of default |
| | Current account debit balances | 16 | Present value for which loss allowances have been recognized | Impairment |
| | Registered securities | 1,394 | Black model (simple option pricing model) | Bond spreads, fair value adjustments, volatilities |
| | Registered securities | 1,105 | Mark-to-model (DCF) | Bond spreads, fair value adjustments |
| | Other bank loans | 46,228 | Mark-to-model (DCF) | Probability of default |
| | Other bank loans | 4 | Present value for which loss allowances have been recognized | Impairment |
| | Other loans and advances | 1,127 | Mark-to-model (DCF) | Probability of default |
| Investments | Bonds | 5 | Black model (simple option pricing model) | ABS spreads |
| | Bonds | 24 | Black model (simple option pricing model) | Illiquid market prices, fair value adjustments |
| | Bonds | 68 | Mark-to-market | Illiquid market prices, fair value adjustments |
| | Bonds | 116 | Mark-to-model (DCF) | Bond spreads, fair value adjustments |
| | Bonds | 3 | Multi-factor yield curve model | Illiquid market prices, fair value adjustments |
| Investments held by insurance companies | Investment property | 25 | Amortized cost | |
| | Investment property | 3,945 | Income capitalization approach | Future rent, reference prices in the market, and similar |
| | Investment property | 1,673 | Valuation reports | |
| | Registered bonds | 100 | Mark-to-model (DCF) | Bond spreads |
| | Registered bonds | 33 | Multi-factor yield curve model | Bond spreads |
| | Promissory notes and loans | 10 | Amortized cost | |
| | Other loans and receivables | 11 | Amortized cost | |

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Unobservable inputs |
|---|---|---|---|---|
| Property, plant and equipment | Investment property | 345 | Valuation reports | |
| Other assets | Credit balances with banks (insurance) | 647 | Amortized cost | |
| | Other receivables | 871 | Amortized cost | |
| Non-current assets and disposal groups classified as held for sale | Loans and advances to customers | 170 | Amortized cost | |
| | Loans and advances to customers | 1,101 | Mark-to-model (DCF) | Probability of default |
| | Other assets | 9 | Income capitalization approach | Future rent, reference prices in the market, and similar |
| Deposits from banks | Home savings deposits | 433 | Cost | |
| | Other deposits | 533 | Mark-to-model (DCF) | Probability of default |
| Deposits from customers | Home savings deposits | 63,564 | Cost | |
| | Other deposits | 32 | Cost | |
| | Other deposits | 508 | Mark-to-model (DCF) | Probability of default |
| Provisions | Provisions for financial guarantee contracts | 2 | Mark-to-model (DCF) | Probability of default |
| | Provisions for loan commitments | 6 | Cost | |
| | Provisions for loan commitments | 216 | Mark-to-model (DCF) | Probability of default |
| | Provisions for loan commitments | 1 | Present value for which loss allowances have been recognized | Impairment |
| Other liabilities | Subordinated liabilities (insurance) | 15 | Cost | |
| | Subordinated liabilities (insurance) | 26 | Net asset value | |
| | Other payables | 282 | Cost | |
| | Liabilities from investment contracts | 608 | Cost | |
| | Liabilities to banks (insurance) | 312 | Cost | |
| | Debt certificates issued including bonds (insurance) | 25 | Cost | |
| Subordinated capital | Subordinated liabilities | 1,030 | Black model (simple option pricing model) | Bond spreads, fair value adjustments, subordinated spreads |
| | Subordinated liabilities | 2,904 | Mark-to-model (DCF) | Subordinated spreads |
| Liabilities included in disposal groups classified as held for sale | Deposits from customers | 1,462 | Cost | |

The following table shows the valuation techniques and the unobservable inputs used for the fair value measurements at Level 3 of the fair value hierarchy as at December 31, 2022. Due to the change in the method used to determine observability for each individual input used in the calculation of fair value, the disclosures as at December 31, 2022 are not comparable with those as at December 31, 2023.

| Class according to IFRS 13 | Assets/liabilities | Fair value (€ million) | Valuation technique | Unobservable inputs |
|---|---|---|---|---|
| Loans and advances to banks | Loans | 3,164 | DCF method | Credit spread, recovery rate |
| Loans and advances to customers | Home savings loans | 3,013 | Amortized cost | |
| | Building loans | 53,722 | DCF method | Credit spread |
| | Loans | 90,520 | DCF method | Credit spread, recovery rate |
| Investments | ABSs | 34 | DCF method | Credit spread |
| | Bonds with adjustment spread | 310 | DCF method | BVAL price adjustment |
| | Loans and advances to issuers in default | 2 | DCF method | Recovery rate |
| Investments held by insurance companies | | 88 | Cost | Nominal amounts |
| | Investment property | 5,816 | DCF method | Future rent, reference prices in the market |
| | Loans and bank accounts | 73 | Cost | Nominal amounts |
| Property, plant and equipment | Investment property | 192 | Valuation reports | |
| Other assets | Credit balances with banks | 702 | Cost | Nominal amounts |
| | Other receivables | 847 | Cost | Nominal amounts |
| Deposits from banks | Home savings deposits | 1,275 | Cost | |
| | Loans | 135 | DCF method | Credit spread |
| Deposits from customers | Home savings deposits | 66,087 | Cost | |
| | Loans | 409 | DCF method | Credit spread |
| | Overpayments on consumer finance loans | 27 | Cost | |
| Provisions | Provisions for loan commitments | 268 | Settlement amount | |
| Other liabilities | Loans | 576 | Cost | Nominal amounts |
| | Non-controlling interests in special funds | 156 | Cost | Nominal amounts |
| | Subordinated liabilities | 16 | Cost | Nominal amounts |
| | Subordinated liabilities | 18 | Net asset value | |
| | Registered securities | 36 | Cost | Nominal amounts |
| | Other payables | 10 | Cost | Nominal amounts |
| | Liabilities arising from rented software | 1 | Cost | Assumptions regarding the exercise of extension or termination options |
| | Liabilities from capitalization transactions | 889 | Cost | Nominal amounts |
| Deposits from customers | Bonds with adjustment spread | 3,920 | DCF method | Credit spread |

## » 77 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 gain of €389 million in 2023 (2022: gain of €87 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 carrying amounts 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 | Carrying amount | | Repayment amount | |
|---|---|---|---|---|
| | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| Deposits from banks | 3,804 | 3,888 | 4,138 | 4,366 |
| Deposits from customers | 7,420 | 6,089 | 8,318 | 7,249 |
| Debt certificates issued including bonds | 16,885 | 15,565 | 18,538 | 17,956 |
| Subordinated capital | - | 69 | - | 68 |
| **Total** | **28,109** | **25,612** | **30,993** | **29,639** |

In the course of the year under review, a loss of €1 million – previously reported in other comprehensive income/loss – was realized upon derecognition of financial liabilities as a result of measurement effects in connection with changes in the DZ BANK Group's own credit risk (2022: gain of €6 million). This amount was reclassified to retained earnings within equity once the financial liabilities had been derecognized.

## » 78 Reclassification

On January 1, 2021, financial assets had been reclassified prospectively due to a change to the business model that was attributable to the R+V-wide strategic program known as 'Wachstum durch Wandel' (growth through change).

Financial assets of €15,606 million categorized as 'financial assets measured at amortized cost' had been reclassified as 'financial assets measured at fair value through other comprehensive income' in 2021.

Financial assets of €3,139 million categorized as 'financial assets measured at fair value through profit or loss' had been reclassified as 'financial assets measured at fair value through other comprehensive income' in 2021. At the time of reclassification, the reclassified assets had an average effective interest rate of 2.25 percent. During the reporting period, these assets generated interest income of €59 million (2022: €69 million).

## » 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, 2023

| € 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 | 60,015 | 43,024 | 16,991 | 9,840 | 6,232 | 919 |
| Reverse repos/securities borrowing | 8,686 | - | 8,686 | 8,656 | - | 30 |
| **Total** | **68,701** | **43,024** | **25,677** | **18,497** | **6,232** | **949** |

AS AT DECEMBER 31, 2022

| € 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 | 79,486 | 58,113 | 21,373 | 12,289 | 8,269 | 815 |
| Reverse repos/securities borrowing | 18,911 | - | 18,911 | 18,565 | - | 345 |
| **Total** | **98,396** | **58,113** | **40,283** | **30,854** | **8,269** | **1,160** |

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, 2023

| € 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 | 59,669 | 41,584 | 18,086 | 10,122 | 4,414 | 3,550 |
| Repos/securities lending | 889 | - | 889 | 889 | - | - |
| Other financial instruments | 214 | 214 | - | - | - | - |
| **Total** | **60,772** | **41,798** | **18,974** | **11,010** | **4,414** | **3,550** |

AS AT DECEMBER 31, 2022

| € 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 | 79,447 | 53,573 | 25,874 | 12,860 | 6,799 | 6,216 |
| Repos/securities lending | 1,034 | - | 1,034 | 920 | - | 114 |
| Other financial instruments | 219 | 219 | - | - | - | - |
| **Total** | **80,700** | **53,792** | **26,908** | **13,780** | **6,799** | **6,330** |

## » 80 Sale and repurchase agreements, securities lending

### Transfers of financial assets

In 2023, 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | **300** | **100** |
| **Financial assets measured at fair value through profit or loss** | **300** | 100 |
| ***Financial assets mandatorily measured at fair value through profit or loss*** | ***300*** | *100* |
| Financial assets held for trading | 300 | 100 |
| **FINANCIAL ASSETS MEASURED AT AMORTIZED COST** | **599** | **608** |
| Investments | 599 | 608 |
| **Total** | **899** | 708 |

As at the balance sheet date, additional collateral with a carrying amount of €160 million had been furnished in connection with repos (December 31, 2022: €146 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **LIABILITIES ASSOCIATED WITH FINANCIAL ASSETS MEASURED AT FAIR VALUE** | **300** | **100** |
| **Liabilities associated with financial assets measured at fair value through profit or loss** | **300** | 100 |
| ***Liabilities associated with financial assets mandatorily measured at fair value through profit or loss*** | ***300*** | *100* |
| Liabilities associated with financial assets held for trading | 300 | 100 |
| **LIABILITIES ASSOCIATED WITH FINANCIAL ASSETS MEASURED AT AMORTIZED COST** | **589** | **623** |
| Liabilities associated with investments | 589 | 623 |
| **Total** | **889** | 723 |

### 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, 2023, the fair value of securities involved in such transactions was €8,718 million (December 31, 2022: €18,634 million).

The receivables arising from these reverse repo transactions and reported under financial assets held for trading and under loans and advances to banks amounted to €8,680 million as at the balance sheet date (December 31, 2022: €18,674 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | **4,866** | 4,055 |
| **Financial assets measured at fair value through profit or loss** | **883** | 1,228 |
| ***Financial assets mandatorily measured at fair value through profit or loss*** | ***883*** | *1,228* |
| Financial assets held for trading | 883 | 1,228 |
| **Financial assets measured at fair value through other comprehensive income** | **3,982** | 2,827 |
| ***Financial assets mandatorily measured at fair value through other comprehensive income*** | ***3,982*** | *2,827* |
| Investments held by insurance companies | 3,982 | 2,827 |
| **FINANCIAL ASSETS MEASURED AT AMORTIZED COST** | **52** | 33 |
| Investments held by insurance companies | 52 | 33 |
| **Total** | **4,918** | 4,089 |

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 €34 million had been furnished in connection with securities lending (December 31, 2022: €19 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| Bonds and other fixed-income securities | 737 | 1,078 |
| Shares and other variable-yield securities | 34 | 23 |
| **Total** | **770** | **1,101** |

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, 2023, the fair value of the additional collateral received was €22 million (December 31, 2022: €56 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| Financial assets held for trading | 1,183 | 1,328 |
| Investments | 599 | 608 |
| Investments held by insurance companies | 4,034 | 2,861 |
| **Total** | **5,817** | **4,797** |

## Securities subject to a sale and repurchase and borrowed securities that the collateral provider may sell or repledge as collateral with no requirement for a prior counterparty default

The fair value of the sold or repledged securities amounted to €4 billion as at the balance sheet date. The DZ BANK Group is obliged to return collateral of equal value to the collateral provider.

# » 81 Collateral

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

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Loans and advances to banks | 76,807 | 75,686 |
| Loans and advances to customers | 179 | 313 |
| Financial assets held for trading | 8,810 | 13,427 |
| Investments | 504 | 10,887 |
| Investments held by insurance companies | 1,591 | 1,640 |
| **Total** | **87,891** | **101,954** |

Of the total financial assets pledged as collateral for liabilities, financial assets held for trading and investments with a carrying amount of €4,187 million (December 31, 2022: €6,673 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 pledged loans and advances to customers 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. The loans and advances to customers pledged as collateral also comprise collateral in the form of cash as part of collateral management. This is arranged under standard industry collateral agreements.

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 | 2023 | 2022 |
|---|---|---|
| **Financial instruments measured at fair value through profit or loss** | **326** | -1,876 |
| Financial instruments mandatorily measured at fair value through profit or loss | 1,794 | -5,114 |
| Financial instruments designated as at fair value through profit or loss | -1,467 | 3,238 |
| **Financial assets measured at fair value through other comprehensive income** | **5,954** | -23,064 |
| Financial assets mandatorily measured at fair value through other comprehensive income | 5,840 | -22,659 |
| of which gains and losses recognized in profit or loss | 1,843 | 1,188 |
| of which gains and losses recognized in other comprehensive income | 4,338 | -23,312 |
| of which gains and losses reclassified on derecognition from cumulative other comprehensive income to profit or loss | -341 | -535 |
| Financial assets designated as at fair value through other comprehensive income | 114 | -405 |
| **Financial assets measured at amortized cost** | **10,899** | 4,891 |
| **Financial liabilities measured at amortized cost** | **-8,653** | -2,316 |

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 gain of €300 million (2022: gain of €170 million) was recognized in other comprehensive income/loss and a loss of €1,712 million (2022: gain of €4,409 million) in profit or loss.

## 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 | 2023 | 2022 |
|---|---|---|
| **Interest income** | **13,532** | 6,913 |
| From financial assets measured at amortized cost including finance leases | 11,277 | 5,183 |
| From financial assets measured at fair value through other comprehensive income | 2,256 | 1,729 |
| **Interest expense** | **-8,662** | -2,322 |

## Fee and commission income and expenses

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

| € million | 2023 | 2022 |
|---|---|---|
| **Fee and commission income** | | |
| From financial assets and financial liabilities not at fair value through profit or loss | 170 | 194 |
| From trust and other fiduciary activities | 4,359 | 4,478 |
| **Fee and commission expenses** | | |
| For financial assets and financial liabilities not at fair value through profit or loss | -202 | -198 |
| For trust and other fiduciary activities | -1,856 | -1,960 |

## » 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, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| **INTEREST-LINKED CONTRACTS** | **268,862** | **550,990** | **736,073** | **1,555,925** | **1,413,140** | **14,735** | **19,362** | **14,311** | **21,815** |
| **OTC products** | | | | | | | | | |
| Forward rate agreements | 38,583 | - | - | 38,583 | 20,266 | - | 7 | - | 1 |
| Interest-rate swaps | 184,847 | 507,038 | 712,468 | 1,404,353 | 1,289,824 | 13,632 | 18,027 | 11,982 | 18,921 |
| Interest-rate options – bought | 18,314 | 19,135 | 9,221 | 46,670 | 41,708 | 790 | 1,074 | 132 | 118 |
| Interest-rate options – written | 19,372 | 23,653 | 14,384 | 57,410 | 55,330 | 303 | 248 | 2,195 | 2,624 |
| Other interest-rate contracts | 43 | 14 | - | 57 | 213 | - | - | - | 150 |
| **Exchange-traded products** | | | | | | | | | |
| Interest-rate futures | 7,702 | 1,150 | - | 8,853 | 5,799 | 8 | 7 | 2 | 2 |
| **CURRENCY-LINKED CONTRACTS** | **105,584** | **28,729** | **7,668** | **141,981** | **186,663** | **1,884** | **3,168** | **1,935** | **3,193** |
| **OTC products** | | | | | | | | | |
| Cross-currency swaps (excl. portfolio hedging) | 5,815 | 17,772 | 7,287 | 30,873 | 33,235 | 640 | 1,064 | 595 | 867 |
| Forward forex transactions | 89,602 | 9,671 | 356 | 99,629 | 126,574 | 1,168 | 1,909 | 1,280 | 2,156 |
| Forex options – bought | 5,347 | 243 | - | 5,589 | 11,733 | 10 | 52 | 39 | 65 |
| Forex options – written | 4,695 | 1,043 | - | 5,738 | 14,843 | 66 | 142 | 18 | 104 |
| **Exchange-traded products** | | | | | | | | | |
| Forex futures | 49 | - | - | 49 | 204 | - | - | - | - |
| Forex options | 77 | - | 26 | 103 | 74 | - | - | 2 | 1 |
| **SHARE-/INDEX-LINKED CONTRACTS** | **17,483** | **13,512** | **1,648** | **32,643** | **33,299** | **709** | **599** | **1,368** | **1,920** |
| **OTC products** | | | | | | | | | |
| Share/index options – bought | 2,219 | 52 | 106 | 2,377 | 2,396 | 21 | 8 | - | - |
| Share/index options – written | 595 | 356 | - | 951 | 653 | - | - | 21 | 52 |
| Other share/index contracts | 542 | 4,587 | 1,343 | 6,472 | 6,192 | 89 | 21 | 331 | 703 |
| **Exchange-traded products** | | | | | | | | | |
| Share/index futures | 1,431 | 138 | - | 1,569 | 1,711 | - | 1 | 1 | 10 |
| Share/index options | 12,698 | 8,378 | 199 | 21,274 | 22,348 | 598 | 570 | 1,015 | 1,154 |
| **OTHER CONTRACTS** | **4,297** | **3,424** | **12,206** | **19,927** | **18,719** | **11** | **6** | **112** | **270** |
| **OTC products** | | | | | | | | | |
| Precious metal contracts (excl. gold derivatives) | - | - | - | - | 1 | - | - | - | - |
| Commodities contracts | 1 | 62 | 47 | 110 | 33 | 10 | 2 | - | - |
| Other contracts | 3,952 | 3,356 | 12,125 | 19,434 | 18,400 | - | 1 | 103 | 262 |
| **Exchange-traded products** | | | | | | | | | |
| Futures | 36 | 1 | - | 38 | 101 | - | 1 | - | - |
| Options | 308 | 4 | 34 | 346 | 185 | 1 | 1 | 8 | 8 |
| **CREDIT DERIVATIVES** | **2,901** | **8,256** | **3,242** | **14,398** | **16,521** | **225** | **187** | **73** | **107** |
| **Protection buyer** | | | | | | | | | |
| Credit default swaps | 633 | 1,883 | 643 | 3,159 | 3,442 | 3 | 12 | 60 | 42 |
| **Protection seller** | | | | | | | | | |
| Credit default swaps | 2,258 | 6,362 | 2,592 | 11,212 | 13,046 | 222 | 174 | 12 | 64 |
| Total return swaps | 10 | 10 | 7 | 27 | 32 | - | - | 1 | 1 |
| **Total** | **399,126** | **604,910** | **760,837** | **1,764,874** | **1,668,343** | **17,564** | **23,321** | **17,798** | **27,305** |

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

| € million | Fair value | | | |
|---|---|---|---|---|
| | Positive | | Negative | |
| | **Dec. 31, 2023** | Dec. 31, 2022 | **Dec. 31, 2023** | Dec. 31, 2022 |
| OECD central governments | **11** | 11 | **36** | 29 |
| OECD banks | **11,644** | 15,887 | **14,669** | 22,650 |
| OECD financial services institutions | **135** | 196 | **171** | 345 |
| Other companies, private individuals | **5,613** | 7,007 | **2,853** | 4,248 |
| Non-OECD banks | **162** | 219 | **68** | 33 |
| **Total** | **17,564** | **23,321** | **17,798** | **27,305** |

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 €19,144 million (December 31, 2022: €18,067 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 €290 million (December 31, 2022: €332 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 and debt certificates issued including bonds, 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 are designated as hedging instruments in fair value hedges of financial assets and financial liabilities. The swaps are predominantly plain vanilla interest-rate swaps, but occasionally interest-rate swaps with termination options are used. 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 of the hedged items must be almost fully offset by the changes in fair value of 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 analysis; 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. Unexpected causes of hedge ineffectiveness may arise, primarily in the event of early (partial) termination of derivatives used for hedging or the unexpected sale or repayment of hedged items.

## 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, 2023

| € 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 ineffective-ness for the period |
|---|---|---|---|---|---|
| | | | Existing hedges | Terminated hedges | |
| **Assets** | **63,369** | **48,556** | **-2,361** | **-945** | **888** |
| Loans and advances to banks | 4 | | - | - | - |
| Loans and advances to customers | 1,112 | | -199 | 58 | 74 |
| Investments | 3,319 | | -82 | 10 | 132 |
| Portfolio hedges of interest-rate risk | 58,011 | | -2,081 | -1,013 | 1,427 |
| Hedging instruments (positive fair values) | 923 | 48,556 | | | -744 |
| **Liabilities** | **21,032** | **32,671** | **-233** | **-420** | **-932** |
| Deposits from banks | 90 | | -14 | 7 | -6 |
| Deposits from customers | 72 | | -15 | 7 | -5 |
| Debt certificates issued including bonds | 33 | | -8 | 3 | -2 |
| Portfolio hedges of interest-rate risk | 20,214 | | -197 | -437 | -101 |
| Hedging instruments (negative fair values) | 624 | 32,671 | | | -818 |

AS AT DECEMBER 31, 2022

| € 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 ineffective-ness for the period |
|---|---|---|---|---|---|
| | | | Existing hedges | Terminated hedges | |
| **Assets** | **59,004** | **57,799** | **-5,196** | **-1,151** | **-1,416** |
| Loans and advances to banks | 1 | | - | - | - |
| Loans and advances to customers | 1,086 | | -279 | 66 | -347 |
| Investments | 2,710 | | -215 | 11 | -225 |
| Portfolio hedges of interest-rate risk | 53,637 | | -4,703 | -1,228 | -7,691 |
| Hedging instruments (positive fair values) | 1,568 | 57,799 | | | 6,848 |
| **Liabilities** | **16,847** | **16,382** | **-587** | **-588** | **1,371** |
| Deposits from banks | 83 | | -20 | 8 | 40 |
| Deposits from customers | 77 | | -20 | 11 | 147 |
| Debt certificates issued including bonds | 31 | | -10 | 4 | 18 |
| Portfolio hedges of interest-rate risk | 16,215 | | -537 | -610 | 1,425 |
| Hedging instruments (negative fair values) | 442 | 16,382 | | | -260 |

## 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, 2023

| | ≤ 1 month | > 1 month – 3 months | > 3 months – 1 year | > 1 year – 5 years | > 5 years |
|---|---|---|---|---|---|
| Nominal amount (€ million) | 82 | 940 | 7,932 | 43,428 | 28,844 |
| Average hedged interest rate (%) | 0.22 | -0.06 | 2.07 | 1.5 | 1.84 |

AS AT DECEMBER 31, 2022

| | ≤ 1 month | > 1 month – 3 months | > 3 months – 1 year | > 1 year – 5 years | > 5 years |
|---|---|---|---|---|---|
| Nominal amount (€ million) | 318 | 1,427 | 4,940 | 38,254 | 29,242 |
| Average hedged interest rate (%) | 0.55 | 0.26 | 1.58 | 0.91 | 1.22 |

## » 85 Reform of interest-rate benchmarks

The publication of USD Libor was discontinued by the administrator with effect from June 30, 2023. A synthetic (non-representative) USD Libor will be published until September 30, 2024, which can be used in exceptional cases for existing business that is difficult to amend (‘tough legacy’).

In 2022, the DZ BANK Group applied the temporary exceptions provided for hedge accounting resulting from the provisions in phase 1 of the reform of interest-rate benchmarks. The remaining hedging instruments that were pegged to USD Libor were switched over in 2023. As a result, the exceptions for phase 1 were no longer in use as at the balance sheet date.

The 3-month USD Libor-related risk attaching to the hedges as at December 31, 2022 could be seen from the nominal amount of the hedging instruments of €3,117 million. The weighted average maturity was 8.6 years.

In 2023, most of the transactions and contracts referencing USD Libor as well as measurement and risk calculation methods were amended as planned and in keeping with relevant deadlines so that they use SOFR-based interest rates and yield curves instead. Certain individual contracts were switched over after June 30, 2023 but before the end of the current interest period in which the interest rate is still based on USD Libor, or alternatively with the help of the synthetic USD Libor. These steps have been implemented, thereby completing the replacement of USD Libor in the DZ BANK Group.

As at the balance sheet date, derivatives continued to be held that predominantly reference the Canadian Dollar Offered Rate (CDOR). The publication of CDOR will be discontinued by the administrator with effect from June 28, 2024. It is planned to switch over all transactions referencing CDOR by the relevant deadlines. A specialist team in the DZ BANK Group will ensure the correct technical switchover of these transactions and resolve any outstanding issues.

The table below shows the carrying amounts of the non-derivative financial instruments and the nominal amounts of the derivatives for which the switch to alternative interest-rate benchmarks had not yet taken place as at the reporting date. Financial instruments that will expire before any potential transition are not included.

AS AT DECEMBER 31, 2023

| € million | Non-derivative financial assets | Non-derivative financial liabilities | Derivatives |
|---|---|---|---|
| USD Libor | 301 | - | 48 |
| Other | - | - | 1,265 |

AS AT DECEMBER 31, 2022

| € million | Non-derivative financial assets | Non-derivative financial liabilities | Derivatives |
|---|---|---|---|
| USD Libor | 3,420 | 438 | 93,523 |
| Other | 76 | - | 1,648 |

## » 86 Nature and extent of risks arising from financial instruments

Disclosures pursuant to IFRS 7.35F(a)-36(b) can be found in this note in the notes to the consolidated financial statements. With the exception of the qualitative and quantitative disclosures pursuant to IFRS 7.35F(a)-36(b), further disclosures on the nature and extent of risks arising from financial instruments (IFRS 7.31-42) are included in the group management report in chapter VII ‘Risk report’, sections 6 ‘Liquidity adequacy’ and 8 ‘Credit risk’ and for the Bank sector in section 10 ‘Market risk’.

The disclosures published in the risk report form part of the content of these notes to the consolidated financial statements.

### 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
– financial assets mandatorily 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 credit-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 but are not considered credit-impaired, 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 credit-impaired and thus assigned to stage 3 if they are deemed to be in default pursuant to article 178 CRR as operationalized in the DZ BANK Group's definition of default. Because the indicators and events deemed to be stage 3 criteria under IFRS 9 cover the same scope and, at the same time, lead to default pursuant to article 178 CRR, there is a correlation between these two classifications. Therefore, if the financial assets are in default, they are also classified as credit-impaired and assigned to stage 3. Here too, loss allowances are recognized in the amount of the lifetime expected credit losses. Interest income on credit-impaired financial assets is calculated on the amortized cost after loss allowances using the effective interest method.
- POCI assets: Financial assets that are already deemed credit-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 taken into account in the form of shift factors. The model-driven default probability profiles used in economic and regulatory risk management are adjusted on the basis of these shift factors (see the section 'Impact of macroeconomic conditions'). For the quantitative transfer criterion, 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 as the ratio of the latest changes in the lifetime probability of default (lifetime PD) to the portfolio's past lifetime PD. Internal risk measurement systems, external credit ratings, and risk forecasts are also used to assess the credit risk of financial assets. The maximum value for these transfer thresholds is 200 percent.

There are also 3 qualitative transfer criteria: assets for which forbearance measures have been agreed, assets where the counterparty has been put on the watchlist for the early identification of risk, and assets where payments are more than 30 days past due. These also have significantly increased credit risk and are assigned to stage 2, unless they need to be assigned to stage 3. Payments being more than 30 days past due is deemed a backstop criterion because, as a rule, the other transfer criteria mean that financial assets are allocated to stage 2 well before payments become more than 30 days past due.

Assets with low credit risk and/or an investment-grade credit rating are also monitored for increases in credit risk and for credit rating changes. If the quantitative transfer threshold is exceeded, however, the low credit risk exemption means that these assets are transferred to stage 2 only if a qualitative transfer criterion applies or if a non-investment-grade credit rating is awarded. The low credit risk exemption applies to securities.

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. A transfer back from stage 3 is carried out if there are no longer indicators of credit impairment. As there is assumed to be a methodological correlation between stage 3 and default status, the transfer back from stage 3 always takes place when the default status ceases to apply due to recovery of the financial instrument.

Expected losses are calculated as the probability-weighted present value of the expected outstanding payments. In the case of transactions assigned to stage 1 of the impairment model, the analysis period is the next 12 months. For stage 2 transactions, the residual life is used. The expected losses are discounted with the original effective interest rate for the transaction and variable-rate assets with the current interest rate. The 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 parameters incorporate historical, current, 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 and exposure amount, 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 expected cash flows and probability-weighted scenarios at individual transaction level.

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 immaterial amounts.

Post-model adjustments are carried out in the retail consumer finance business because, for various input parameters in the loss allowance model, it is assumed that developments observable in the past are no longer fully representative of future developments. The evaluation for 2023 shows that the impact of insolvency law reforms and the previously anticipated increase in insolvency rates were overestimated, which meant that the post-model adjustments made in this context have been reduced. The amount for the Austria portfolio has also been reduced as a new sales scorecard has been used for new business in this portfolio since March 2023 and provides a better picture of credit risk in the portfolio. It is also evident that the uncertainties arising from the short observation period for group contagion in the definition of default have an only immaterial impact on credit risk. Consequently, the associated contribution to the post-model adjustment was fully reversed in the year under review. Conversely, a new post-model adjustment of €9 million was recognized in 2023 because the 12-month probability of default for loans issued in the sales segment is underestimated by the sales scorecard in Germany. Taking account of portfolio growth and an increase in risk, the updating of the post-model adjustments resulted in an overall reduction in loss allowances of €21 million recognized in profit or loss in 2023 and thus led to a post-model adjustment volume of €46 million as at the reporting date (December 31, 2022: €67 million).

## Impact of macroeconomic conditions

The established models and processes for calculating expected losses on specific exposures or at portfolio level in line with IFRS 9 have generally been retained. The impact of geopolitical risks is also examined at specific exposure level. Primary effects due to customer or supplier relationships and secondary effects such as rising energy prices are considered as part of impact analyses. These effects are factored into the calculation of specific loan loss allowances and, in a more nuanced manner, in the credit assessment and in decisions concerning inclusion in watchlists for the early identification of risk. At portfolio level, the forecast macroeconomic conditions are taken into account by adjusting the model-driven default probability profiles used in economic and regulatory risk management on the basis of shift factors.

The macroeconomic scenarios specifically look at future trends in the labor market, interest rates in the money market, changes in gross domestic product, inflation, real estate prices, and energy prices and are primarily based on economic forecasts provided by the Economic Roundtable, which is made up of representatives from the entities in the DZ BANK Group. The Economic Roundtable considers various scenarios when deciding on its macroeconomic forecasts. At a minimum, these scenarios must include a baseline scenario and a risk scenario that have a significant probability of occurrence in a relevant macroeconomic environment. The Economic Roundtable participants determine the probability of occurrence of the scenarios relative to each other.

The shift factors used as at December 31, 2023 are based on 2 macroeconomic scenarios developed by the Economic Roundtable of the DZ BANK Group in November 2023 (baseline scenario 80 percent and risk scenario 20 percent). The shift factors are then 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 risk parameters adjusted on the basis of the macroeconomic scenarios are then factored into the calculation of loss allowances.

The methods and assumptions, including the forecasts, are validated regularly.

The main macroeconomic forecasts for 2024 to 2027 used to calculate the expected loss as at December 31, 2023 were as follows:

| | | 2024 | | 2025 | | 2026 | | 2027 | |
|---|---|---|---|---|---|---|---|---|---|
| | | Baseline | Risk | Baseline | Risk | Baseline | Risk | Baseline | Risk |
| DAX 40, Germany | Index | 16,500 | 11,300 | 17,500 | 14,125 | 18,600 | 14,980 | 19,700 | 15,880 |
| EURO STOXX 50, European Monetary Union (EMU) | Index | 4,400 | 3,080 | 4,600 | 3,850 | 4,900 | 4,080 | 5,200 | 4,330 |
| Unemployment rate, Germany | % | 3.30 | 3.40 | 3.10 | 3.20 | 3.10 | 3.10 | 3.00 | 3.00 |
| Harmonized unemployment rates, EU | % | 6.10 | 6.20 | 5.90 | 6.00 | 5.90 | 5.90 | 5.80 | 5.80 |
| Real GDP growth, Germany (seasonally and calendar-adjusted) | Compared with prior year (%) | 0.80 | -1.00 | 1.30 | 1.30 | 1.00 | 1.30 | 0.80 | 0.80 |
| Real GDP growth, EU (seasonally and calendar-adjusted) | Compared with prior year (%) | 1.20 | -0.50 | 1.80 | 1.80 | 1.50 | 1.80 | 1.30 | 1.30 |
| Consumer price index, Germany | Compared with prior year (%) | 3.30 | 6.00 | 2.50 | 5.00 | 2.30 | 3.50 | 2.30 | 2.30 |
| Oil price (Brent), USD/bbl | At year-end | 95 | 110 | 90 | 100 | 85 | 90 | 80 | 90 |
| Natural gas price, USD/MMBtu | At year-end | 3.50 | 8.00 | 3.00 | 7.50 | 2.60 | 6.00 | 2.60 | 5.00 |
| Commercial real estate price index, Germany | Compared with prior year (%) | -6.00 | -7.50 | -2.00 | -7.50 | 0.00 | -4.00 | 0.00 | 0.00 |
| 3m Euribor, EMU | % | 3.40 | 4.80 | 2.60 | 4.15 | 2.50 | 3.30 | 2.50 | 3.30 |
| 10-year government bonds, Germany | % | 2.75 | 3.50 | 2.75 | 3.75 | 2.75 | 3.50 | 2.75 | 3.25 |

On the basis of consultation with relevant experts, the shift factors determined using statistical methods were overridden again in 2023 in order to better represent the currently critical market situation. 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 methodology for the process of overriding the model shift factors at group level was virtually unchanged compared with December 31, 2022. Because the Economic Roundtable forecasts dated November 7, 2023 do not take account of the German Federal Constitutional Court's ruling in mid-November 2023 that the reallocation of unused COVID-19 funding to the climate fund is unconstitutional, all of the model's shift factors for 2024 were adjusted by a factor of 1.1. This is intended to account for a potential deterioration in the market situation given the current budget deficit of €60 billion. Plausibility of the shift factors at sector level was then tested by examining the degree to which sectors are affected. This aspect includes all identifiable material increases in risk resulting from current developments and factors influencing the economy that have yet to be included in the credit rating. These factors specifically include the war in Ukraine, other geopolitical risks, commodity shortages, supply chain difficulties, high inflation coupled with soaring energy prices, and the consideration of climate-related and environmental risks. Overall, additional loss allowances of €360 million were recognized as at December 31, 2023 due to the expert-led override of the shift factors determined using statistical methods.

The shifted lifetime PDs are then factored into the decision on stage assignment. An increase in the lifetime PDs resulting from the shift factors being overridden does not necessarily lead to a transfer to stage 2. Consequently, a second override was carried out for portfolios that were particularly affected. Unlike the first override component, this second override component resulted in a general stage 2 classification for all unimpaired exposures in certain sectors. Alongside the automotive supplier sector and the asset classes hotels, department stores, shopping malls, inner-city commercial properties, building contractors, project developers, and office real estate, which were classified as stage 2 as at December 31, 2022, the construction, home improvement store, and textile/clothing sectors were all added to stage 2 as at December 31, 2023. This decision reflects current macroeconomic developments, such as supply chain disruptions, high inflation (primarily persistently high energy prices and increased construction costs), unavailability of materials, the shortage of skilled workers, the rise in interest rates, the gloomy economic outlook, and a changed competitor structure. The fixed staging that had been in place at the end of 2022 was reviewed again in the fourth quarter of 2023 and, given the continued high level of uncertainty, was retained.

Climate and environmental parameters are included in the Economic Roundtable’s scenario analysis. In the first instance, the focus is on carbon pricing, which is a factor in assessing macroeconomic variables. The scenarios devised by the Network for Greening the Financial System (NGFS), which show how climate change and action can affect key economic variables, are used in this context. In terms of the impact on macroeconomic variables, the Economic Roundtable’s forecast table is based on the legal situation in Germany and the technical assumptions of the European Central Bank (ECB). The impact on macroeconomic variables has been minimal to date. The introduction of a carbon price should only have a minor to moderate increasing effect on the annual average rate of inflation in Germany and the eurozone. This price effect is already included in inflation rates. As the carbon price is not expected to rise significantly in either Germany or the eurozone in the next few years, the pressure on prices from climate parameters is expected to remain immaterial over the forecast period. The climate and environmental parameters currently have an only immaterial impact on loss allowances. The effects on loss allowances will be examined more closely in the context of planned sustainability initiatives.

## 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, 2022 | 26 | 121,359 | 3 | 674 | 25 | 34 |
| Restatements according to IAS 8 | 22 | - | 6 | - | - | - |
| Balance restated as at Jan. 1, 2022 | 48 | 121,359 | 9 | 674 | 25 | 34 |
| Addition/increase in loan drawdowns | 11 | 22,807 | 1 | 166 | - | - |
| Change to financial assets due to transfer between stages | 4 | -381 | -4 | 372 | - | 9 |
| Transfer from stage 1 | -7 | -1,877 | 7 | 1,873 | - | 5 |
| Transfer from stage 2 | 12 | 1,496 | -12 | -1,500 | - | 5 |
| Use of loss allowances/directly recognized impairment losses | - | - | - | - | -4 | -4 |
| Derecognitions and repayments | -25 | -23,454 | -15 | -250 | - | -8 |
| Changes to models/risk parameters | 1 | - | 32 | - | 4 | - |
| Additions | 23 | - | 35 | - | 4 | - |
| Reversals | -22 | - | -3 | - | - | - |
| Modifications | - | 2 | - | - | - | - |
| Modification gains | - | 2 | - | - | - | - |
| Amortization, fair value changes, and other changes in measurement | - | -25,381 | - | -172 | - | - |
| Exchange differences and other changes | - | 81 | - | 4 | - | 1 |
| Deferred taxes | 1 | - | -5 | - | - | - |
| Balance as at Dec. 31, 2022 | 41 | 95,034 | 17 | 795 | 25 | 32 |
| Addition/increase in loan drawdowns | 11 | 20,851 | 1 | 52 | - | 2 |
| Change to financial assets due to transfer between stages | 10 | -1,191 | -12 | 1,068 | 2 | 122 |
| Transfer from stage 1 | -4 | -1,586 | 4 | 1,578 | - | 8 |
| Transfer from stage 2 | 15 | 388 | -16 | -510 | 2 | 122 |
| Transfer from stage 3 | - | 8 | - | - | - | -8 |
| Use of loss allowances/directly recognized impairment losses | - | - | - | - | -6 | -6 |
| Derecognitions and repayments | -10 | -14,222 | -1 | -132 | - | -9 |
| Changes to models/risk parameters | -13 | - | 50 | - | 31 | - |
| Additions | 17 | - | 57 | - | 31 | - |
| Reversals | -30 | - | -8 | - | - | - |
| Modifications | - | -1 | - | -1 | - | - |
| Modification losses | - | -1 | - | -1 | - | - |
| Amortization, fair value changes, and other changes in measurement | - | 5,112 | - | 67 | - | 4 |
| Exchange differences and other changes | - | -94 | - | -1 | - | -1 |
| Changes in scope of consolidation | - | 599 | - | - | - | - |
| Addition of subsidiaries | - | 599 | - | - | - | - |
| Deferred taxes | 1 | - | -18 | - | -13 | - |
| **Balance as at Dec. 31, 2023** | **40** | **106,087** | **37** | **1,849** | **38** | **144** |

## Financial assets measured at amortized cost

| € million | Stage 1 | | Stage 2 | | Stage 3 | | POCI assets | |
|---|---|---|---|---|---|---|---|---|
| | 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, 2022 | 282 | 376,209 | 374 | 17,187 | 1,267 | 2,870 | 13 | 90 |
| Addition/increase in loan drawdowns | 205 | 22,742,157 | 113 | 31,746 | 650 | 1,798 | 1 | 134 |
| Change to financial assets due to transfer between stages | 182 | -23,064 | -307 | 22,335 | 128 | 729 | - | - |
| Transfer from stage 1 | -69 | -31,696 | 68 | 31,640 | 1 | 56 | - | - |
| Transfer from stage 2 | 243 | 8,573 | -397 | -9,520 | 154 | 948 | - | - |
| Transfer from stage 3 | 7 | 60 | 21 | 215 | -27 | -274 | - | - |
| Use of loss allowances/directly recognized impairment losses | - | -1 | -3 | - | -318 | -24 | -4 | -5 |
| Derecognitions and repayments | -143 | -22,707,324 | -140 | -33,280 | -653 | -2,694 | -9 | -111 |
| Changes to models/risk parameters | -259 | - | 510 | - | 63 | - | 17 | - |
| Additions | 110 | - | 804 | - | 393 | - | 27 | - |
| Reversals | -369 | - | -294 | - | -330 | - | -10 | - |
| Modifications | - | 1 | - | 3 | 1 | 1 | - | - |
| Modification gains | - | 1 | - | 3 | 1 | 1 | - | - |
| Amortization, fair value changes, and other changes in measurement | - | -639 | - | -24 | - | -34 | - | - |
| Positive change in fair value of POCI assets | - | - | - | - | - | - | - | 30 |
| Exchange differences and other changes | -1 | 686 | 2 | -16 | 46 | 70 | 1 | 5 |
| Changes in the scope of consolidation | - | 15 | - | 143 | - | - | - | - |
| Addition of subsidiaries | - | 15 | - | 143 | - | - | - | - |
| Balance as at Dec. 31, 2022 | 266 | 388,040 | 548 | 38,094 | 1,185 | 2,716 | 18 | 142 |
| Addition/increase in loan drawdowns | 173 | 28,172,045 | 125 | 39,817 | 788 | 2,626 | 2 | 159 |
| Change to financial assets due to transfer between stages | 214 | -8,095 | -363 | 6,506 | 148 | 1,588 | - | - |
| Transfer from stage 1 | -56 | -14,384 | 55 | 14,250 | 2 | 134 | - | - |
| Transfer from stage 2 | 265 | 6,250 | -444 | -7,982 | 179 | 1,732 | - | - |
| Transfer from stage 3 | 5 | 40 | 27 | 238 | -32 | -278 | - | - |
| Use of loss allowances/directly recognized impairment losses | - | - | -2 | - | -199 | -47 | -5 | -8 |
| Reclassifications to non-current assets and disposal groups classified as held for sale | -8 | -1,560 | -2 | -115 | -15 | -30 | - | - |
| Derecognitions and repayments | -147 | -28,152,706 | -170 | -42,427 | -775 | -3,544 | -10 | -199 |
| Changes to models/risk parameters | -234 | - | 370 | - | 306 | - | 18 | - |
| Additions | 130 | - | 796 | - | 534 | - | 29 | - |
| Reversals | -364 | - | -426 | - | -228 | - | -11 | - |
| Modifications | - | -1 | - | 2 | 1 | 1 | - | - |
| Modification gains | - | 2 | - | 2 | 2 | 2 | - | - |
| Modification losses | - | -3 | - | -1 | - | - | - | - |
| Amortization, fair value changes, and other changes in measurement | - | -68 | - | -9 | - | -10 | - | - |
| Positive change in fair value of POCI assets | - | - | - | - | - | - | - | 34 |
| Exchange differences and other changes | -3 | -55 | -1 | -8 | 17 | 24 | -5 | 5 |
| Changes in the scope of consolidation | - | 7 | - | 107 | - | - | - | - |
| Addition of subsidiaries | - | 7 | - | 107 | - | - | - | - |
| **Balance as at Dec. 31, 2023** | **263** | **397,607** | **506** | **41,967** | **1,457** | **3,325** | **18** | **133** |

The undiscounted expected credit losses on purchased or originated credit-impaired assets that were recognized for the first time during the reporting period totaled €163 million (2022: €181 million).

## Finance leases

| € million | Stage 1 Loss allowances | Stage 1 Gross carrying amount | Stage 2 Loss allowances | Stage 2 Gross carrying amount | Stage 3 Loss allowances | Stage 3 Gross carrying amount |
|---|---|---|---|---|---|---|
| Balance as at Jan. 1, 2022 | 2 | 548 | 6 | 176 | 14 | 29 |
| Addition/increase in loan drawdowns | 3 | 151 | 5 | 7 | 14 | 2 |
| Change to finance leases due to transfer between stages | - | -6 | -1 | 6 | -1 | - |
| Transfer from stage 1 | -1 | -101 | 1 | 100 | - | 1 |
| Transfer from stage 2 | 1 | 95 | -2 | -102 | 2 | 7 |
| Transfer from stage 3 | - | 1 | 1 | 7 | -3 | -8 |
| Derecognitions and repayments | -3 | -258 | -7 | -77 | -18 | -11 |
| Balance as at Dec. 31, 2022 | 1 | 435 | 3 | 111 | 9 | 19 |
| Addition/increase in loan drawdowns | 2 | 154 | 3 | 6 | 3 | 1 |
| Change to finance leases due to transfer between stages | - | 15 | 1 | -8 | -1 | -6 |
| Transfer from stage 1 | - | -76 | - | 75 | - | - |
| Transfer from stage 2 | 1 | 90 | -1 | -97 | 1 | 7 |
| Transfer from stage 3 | - | - | 2 | 13 | -2 | -13 |
| Reclassifications to non-current assets and disposal groups classified as held for sale | - | -1 | - | - | - | - |
| Derecognitions and repayments | -2 | -209 | -4 | -45 | -8 | -8 |
| **Balance as at Dec. 31, 2023** | **1** | **394** | **3** | **63** | **3** | **6** |

## Financial guarantee contracts and loan commitments

| € million | Stage 1 Loss allowances | Stage 1 Nominal amount | Stage 2 Loss allowances | Stage 2 Nominal amount | Stage 3 Loss allowances | Stage 3 Nominal amount | POCI assets Loss allowances | POCI assets Nominal amount |
|---|---|---|---|---|---|---|---|---|
| Balance as at Jan. 1, 2022 | 63 | 79,176 | 39 | 3,155 | 110 | 271 | 1 | 2 |
| Addition/increase in loan drawdowns | 83 | 105,380 | 69 | 7,101 | 68 | 342 | 5 | 8 |
| Change to financial guarantee contracts and loan commitments due to transfer between stages | 1 | -3,947 | -2 | 3,866 | 1 | 81 | - | - |
| Transfer from stage 1 | -9 | -4,764 | 8 | 4,736 | - | 28 | - | - |
| Transfer from stage 2 | 9 | 811 | -11 | -874 | 1 | 64 | - | - |
| Transfer from stage 3 | - | 6 | - | 4 | -1 | -10 | - | - |
| Derecognitions and repayments | -80 | -100,024 | -49 | -6,466 | -106 | -450 | -5 | -9 |
| Changes to models/risk parameters | -14 | - | 37 | - | 22 | - | -1 | - |
| Additions | 23 | - | 70 | - | 64 | - | 2 | - |
| Reversals | -37 | - | -34 | - | -42 | - | -3 | - |
| Amortization, fair value changes, and other changes in measurement | - | 101 | - | 8 | - | -3 | - | - |
| Exchange differences and other changes | - | -214 | - | 240 | -5 | 1 | - | - |
| Balance as at Dec. 31, 2022 | 53 | 80,472 | 95 | 7,903 | 89 | 242 | - | 2 |
| Addition/increase in loan drawdowns | 68 | 90,750 | 78 | 9,601 | 63 | 262 | 2 | 11 |
| Change to financial guarantee contracts and loan commitments due to transfer between stages | 23 | -4,909 | -39 | 4,723 | 16 | 186 | - | - |
| Transfer from stage 1 | -12 | -5,943 | 12 | 5,914 | - | 28 | - | - |
| Transfer from stage 2 | 35 | 1,031 | -51 | -1,194 | 16 | 163 | - | - |
| Transfer from stage 3 | - | 2 | - | 3 | -1 | -5 | - | - |
| Reclassifications to liabilities included in disposal groups classified as held for sale | - | -14 | - | - | - | - | - | - |
| Derecognitions and repayments | -83 | -85,459 | -51 | -10,176 | -81 | -356 | -2 | -5 |
| Changes to models/risk parameters | -8 | - | 3 | - | 16 | - | - | - |
| Additions | 34 | - | 74 | - | 49 | - | - | - |
| Reversals | -42 | - | -71 | - | -33 | - | - | - |
| Amortization, fair value changes, and other changes in measurement | - | -69 | - | -5 | - | -2 | - | - |
| Exchange differences and other changes | - | 160 | -1 | 12 | 2 | - | - | - |
| **Balance as at Dec. 31, 2023** | **54** | **80,932** | **85** | **12,056** | **104** | **332** | **-** | **7** |

## Contractual modifications and derecognitions

The negotiation or modification of contractually agreed cash flows relating to a financial asset leads to a modified asset.

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 in profit or loss as a modification gain or loss in the amount of the difference between the original gross carrying amount (taking account of any amortization or impairment) and the modified present value, calculated on the basis of the modified cash flows discounted with the original effective interest rate. If contractual modifications are credit-risk-related non-substantial contractual modifications, previously recognized loss allowances are used in the first instance. Any remaining difference is recognized under gains/losses from loss allowances. Gains/losses from market-related non-substantial contractual modifications are recognized as a modification gain or loss within net interest income.

If substantial modifications are made to the contract for a financial asset, the existing financial asset is derecognized and a new financial asset is recognized. These modifications are recognized in gains/losses from loss allowances. When the financial asset is derecognized, the previously recognized loss allowance is then used. The derecognition may potentially result in gains or losses on derecognition.

In 2023, contractually agreed cash flows from financial assets allocated to stage 2 or stage 3 of the impairment model were modified. The amortized costs of these financial assets amounted to €633 million (2022: €341 million). The modifications resulted in a modification loss of €1 million (2022: modification gain of €2 million).

The gross carrying amount of financial assets whose contractually agreed cash flows were modified and that had been allocated to stage 2 or stage 3 in the impairment model since initial recognition but were transferred to stage 1 during the reporting period amounted to €15 million (December 31, 2022: €124 million). Across all classes, the outstanding contractually agreed amount for financial assets on which impairment was recognized in the reporting year and that are still subject to enforcement measures stood at €97 million as at the reporting date (December 31, 2022: €78 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, 2023

| € million | Maximum exposure to credit risk | |
|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | **160,614** | |
| **Financial assets measured at fair value through profit or loss** | **52,534** | |
| Financial assets mandatorily measured at fair value through profit or loss | 47,519 | |
| Financial assets designated as at fair value through profit or loss | 5,015 | |
| **Financial assets measured at fair value through other comprehensive income** | **108,080** | |
| Financial assets mandatorily measured at fair value through other comprehensive income | 108,080 | |
| of which credit-impaired | | |
| **FINANCIAL ASSETS MEASURED AT AMORTIZED COST** | **438,399** | |
| of which credit-impaired | | |
| **FINANCE LEASES** | **456** | |
| of which credit-impaired | | |
| **FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS** | **93,873** | |
| of which credit-impaired | | |

AS AT DECEMBER 31, 2023

| € million | Maximum exposure to credit risk | |
|---|---|---|
| Non-current assets and disposal groups classified as held for sale from financial assets measured at fair value | 48 | |
| Non-current assets and disposal groups classified as held for sale from financial assets measured at amortized cost | 1,680 | |
| Non-current assets and disposal groups classified as held for sale from finance leases | 1 | |
| Liabilities included in disposal groups classified as held for sale from financial guarantee contracts and loan commitments | 14 | |

| | 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 |
| | **1,749** | **-** | **13,368** | **428** | **4,528** | **1,455** |
| | **304** | **-** | **1** | **7** | **382** | **1** |
| | 29 | - | 1 | 7 | 382 | - |
| | 275 | - | - | - | - | 1 |
| | **1,445** | **-** | **13,367** | **421** | **4,146** | **1,454** |
| | 1,445 | - | 13,367 | 421 | 4,146 | 1,454 |
| | - | - | 50 | - | - | - |
| | **7,105** | **3,895** | **112,041** | **1,375** | **9,490** | **1,792** |
| | 106 | 276 | 758 | 112 | 67 | 1 |
| | **1** | **-** | **-** | **9** | **-** | **-** |
| | 1 | - | - | 2 | - | - |
| | **220** | **2,063** | **2,385** | **515** | **32** | **8** |
| | 39 | 69 | 33 | 18 | - | - |

| | 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 |
| | - | - | - | - | - | - |
| | - | - | 1,218 | - | 24 | - |
| | - | - | - | - | - | - |
| | - | - | 11 | - | - | - |

AS AT DECEMBER 31, 2022

| € million | Maximum exposure to credit risk | |
|---|---|---|
| **FINANCIAL ASSETS MEASURED AT FAIR VALUE** | 162,547 | |
| **Financial assets measured at fair value through profit or loss** | 66,686 | |
| Financial assets mandatorily measured at fair value through profit or loss | 61,258 | |
| Financial assets designated as at fair value through profit or loss | 5,428 | |
| **Financial assets measured at fair value through other comprehensive income** | 95,861 | |
| Financial assets mandatorily measured at fair value through other comprehensive income | 95,861 | |
| of which credit-impaired | | |
| **FINANCIAL ASSETS MEASURED AT AMORTIZED COST** | 422,802 | |
| of which credit-impaired | | |
| **FINANCE LEASES** | 552 | |
| of which credit-impaired | | |
| **FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS** | 89,246 | |
| of which credit-impaired | | |

AS AT DECEMBER 31, 2022

| € million | Maximum exposure to credit risk | |
|---|---|---|
| Non-current assets and disposal groups classified as held for sale from financial assets measured at fair value | 19 | |

| | | | 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 |
| | **1,490** | **-** | **12,372** | **372** | **3,356** | **932** |
| | **311** | **-** | **1** | **11** | **686** | **-** |
| | 17 | - | 1 | 11 | 686 | - |
| | 294 | - | - | - | - | - |
| | **1,179** | **-** | **12,371** | **361** | **2,670** | **932** |
| | 1,179 | - | 12,371 | 361 | 2,670 | 932 |
| | - | - | 30 | - | - | - |
| | **7,720** | **3,698** | **112,480** | **1,632** | **9,143** | **2,551** |
| | 142 | 219 | 479 | 136 | 61 | 1 |
| | **5** | **-** | **-** | **20** | **-** | **-** |
| | 5 | - | - | 4 | - | - |
| | **178** | **1,846** | **4,382** | **662** | **8** | **4** |
| | 8 | - | 17 | 16 | - | - |

| | | | 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 |
| | - | - | - | - | - | - |

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, 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.

A residual value method is used to determine changes in fair value attributable to changes in credit risk. As a result of changes in credit risk, the fair value of financial assets designated as at fair value through profit or loss had fallen by €43 million at the end of 2023 (December 31, 2022: increase of €40 million). The cumulative gains/losses resulting from the change in fair values attributable to changes in credit risk amounted to a net loss of €78 million (December 31, 2022: net loss of €24 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 €90 million (December 31, 2022: €101 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, 2023

| € million | | Financial sector | Public sector | Corporates | Retail | Industry conglomerates | Other |
|---|---|---|---|---|---|---|---|
| **Investment grade** | | | | | | | |
| Fair value | Stage 1 | 48,931 | 26,779 | 14,711 | 11,002 | 1,587 | 15 |
| | Stage 2 | - | - | 1,349 | - | - | 112 |
| Gross carrying amount | Stage 1 | 234,515 | 13,512 | 46,854 | 61,493 | 6,272 | - |
| | Stage 2 | 1,977 | 4 | 23,350 | 1,075 | 3,978 | - |
| | POCI assets | - | - | 4 | - | - | - |
| Nominal amount | Stage 1 | 35,541 | 246 | 25,286 | 4,039 | 3,884 | 43 |
| | Stage 2 | 17 | - | 7,474 | 4 | 83 | - |
| **Non-investment grade** | | | | | | | |
| Fair value | Stage 1 | - | 763 | 668 | - | - | - |
| | Stage 2 | 14 | 77 | 267 | 16 | - | - |
| | Stage 3 | - | - | 13 | - | - | - |
| Gross carrying amount | Stage 1 | 956 | 169 | 8,008 | 12,674 | 9 | - |
| | Stage 2 | 362 | - | 5,201 | 2,828 | 16 | - |
| | Stage 3 | - | - | 40 | - | - | - |
| | POCI assets | - | - | 3 | - | - | - |
| Nominal amount | Stage 1 | 378 | 389 | 4,297 | 837 | - | - |
| | Stage 2 | 227 | - | 3,581 | 49 | 51 | - |
| | Stage 3 | - | - | 2 | - | - | - |

AS AT DECEMBER 31, 2022

| € million | | Financial sector | Public sector | Corporates | Retail | Industry conglomerates | Other |
|---|---|---|---|---|---|---|---|
| **Investment grade** | | | | | | | |
| Fair value | Stage 1 | 43,547 | 23,122 | 12,770 | 10,045 | 2,013 | 115 |
| | Stage 2 | 210 | - | 177 | - | - | - |
| Gross carrying amount | Stage 1 | 221,793 | 14,823 | 48,128 | 59,847 | 6,019 | - |
| | Stage 2 | 1,407 | - | 19,660 | 1,315 | 5,163 | - |
| | POCI assets | - | - | 5 | - | - | - |
| Nominal amount | Stage 1 | 31,919 | 171 | 24,761 | 5,984 | 3,646 | 51 |
| | Stage 2 | 30 | - | 4,082 | 6 | 60 | - |
| **Non-investment grade** | | | | | | | |
| Fair value | Stage 1 | - | 789 | 557 | 874 | - | - |
| | Stage 2 | 42 | 144 | 196 | 26 | - | - |
| Gross carrying amount | Stage 1 | 1,705 | 134 | 9,504 | 13,270 | 20 | - |
| | Stage 2 | 389 | 230 | 4,635 | 2,771 | 26 | - |
| | Stage 3 | - | - | - | 9 | - | - |
| Nominal amount | Stage 1 | 539 | 159 | 5,574 | 1,466 | - | - |
| | Stage 2 | 161 | 336 | 2,770 | 72 | 57 | - |

## AS AT DECEMBER 31, 2023

| € million | | Financial sector | Public sector | Corporates | Retail | Industry conglomerates | Other |
|---|---|---|---|---|---|---|---|
| **Default** | | | | | | | |
| Fair value | Stage 3 | 12 | - | 105 | 14 | - | - |
| Gross carrying amount | Stage 3 | 268 | 33 | 1,948 | 536 | 87 | - |
| | POCI assets | 1 | - | 57 | - | - | - |
| Nominal amount | Stage 3 | 2 | 72 | 247 | 8 | - | - |
| | POCI assets | - | - | 7 | - | - | - |
| **Not rated** | | | | | | | |
| Fair value | Stage 1 | 906 | 362 | 67 | - | 298 | - |
| | Stage 2 | 15 | - | - | - | - | - |
| Gross carrying amount | Stage 1 | 2,856 | 121 | 2,104 | 8,211 | 246 | - |
| | Stage 2 | 1,008 | 3 | 861 | 1,112 | 224 | 31 |
| | Stage 3 | 1 | - | 11 | 407 | - | - |
| | POCI assets | - | - | - | 68 | - | - |
| Nominal amount | Stage 1 | 933 | - | 1,550 | 3,511 | - | - |
| | Stage 2 | 308 | - | 166 | 94 | - | - |
| | Stage 3 | - | - | - | 1 | - | - |

## AS AT DECEMBER 31, 2022

| € million | | Financial sector | Public sector | Corporates | Retail | Industry conglomerates | Other |
|---|---|---|---|---|---|---|---|
| **Default** | | | | | | | |
| Fair value | Stage 3 | 15 | - | 8 | 9 | - | - |
| Gross carrying amount | Stage 3 | 344 | 7 | 1,345 | 595 | 97 | - |
| | POCI assets | - | - | 77 | - | - | - |
| Nominal amount | Stage 3 | 23 | - | 202 | 13 | - | - |
| | POCI assets | - | - | 2 | - | - | - |
| **Not rated** | | | | | | | |
| Fair value | Stage 1 | 929 | 70 | 50 | - | 152 | - |
| Gross carrying amount | Stage 1 | 2,047 | 181 | 2,625 | 8,274 | 106 | - |
| | Stage 2 | 989 | 43 | 308 | 1,021 | 220 | 27 |
| | Stage 3 | - | - | 6 | 333 | - | - |
| | POCI assets | - | - | - | 61 | - | - |
| Nominal amount | Stage 1 | 1,301 | - | 1,871 | 3,011 | 20 | - |
| | Stage 2 | 34 | - | 196 | 98 | - | - |
| | Stage 3 | - | - | 3 | 1 | - | - |

AS AT DECEMBER 31, 2023

| € million | | Germany | Other industrialized countries | Advanced economies | Emerging markets | Supranational institutions |
|---|---|---|---|---|---|---|
| **Investment grade** | | | | | | |
| Fair value | Stage 1 | 37,453 | 54,483 | 1,658 | 3,496 | 5,934 |
| | Stage 2 | 609 | 829 | - | 23 | - |
| Gross carrying amount | Stage 1 | 325,199 | 33,006 | 1,198 | 2,472 | 772 |
| | Stage 2 | 27,338 | 2,931 | 66 | 50 | - |
| | POCI assets | 4 | - | - | - | - |
| Nominal amount | Stage 1 | 59,800 | 8,421 | 163 | 654 | - |
| | Stage 2 | 6,877 | 682 | 12 | 8 | - |
| **Non-investment grade** | | | | | | |
| Fair value | Stage 1 | 124 | 497 | 12 | 798 | - |
| | Stage 2 | 154 | 118 | - | 102 | - |
| | Stage 3 | - | 13 | - | - | - |
| Gross carrying amount | Stage 1 | 18,214 | 1,032 | 126 | 2,445 | - |
| | Stage 2 | 6,854 | 796 | 29 | 727 | - |
| | Stage 3 | 40 | - | - | - | - |
| | POCI assets | 3 | - | - | - | - |
| Nominal amount | Stage 1 | 3,458 | 1,074 | 172 | 1,196 | - |
| | Stage 2 | 2,146 | 1,336 | 7 | 420 | - |
| | Stage 3 | 2 | - | - | - | - |

AS AT DECEMBER 31, 2022

| € million | | Germany | Other industrialized countries | Advanced economies | Emerging markets | Supranational institutions |
|---|---|---|---|---|---|---|
| **Investment grade** | | | | | | |
| Fair value | Stage 1 | 34,327 | 48,375 | 1,535 | 2,991 | 4,382 |
| | Stage 2 | 229 | 158 | - | - | - |
| Gross carrying amount | Stage 1 | 311,896 | 35,625 | 1,119 | 1,304 | 665 |
| | Stage 2 | 25,774 | 1,701 | 70 | - | - |
| | POCI assets | 5 | - | - | - | - |
| Nominal amount | Stage 1 | 57,751 | 8,101 | 177 | 501 | - |
| | Stage 2 | 4,006 | 172 | - | - | - |
| **Non-investment grade** | | | | | | |
| Fair value | Stage 1 | 540 | 791 | 13 | 877 | - |
| | Stage 2 | 145 | 164 | - | 100 | - |
| Gross carrying amount | Stage 1 | 19,925 | 1,484 | 82 | 3,142 | - |
| | Stage 2 | 6,349 | 701 | 95 | 906 | - |
| | Stage 3 | - | 10 | - | - | - |
| Nominal amount | Stage 1 | 5,899 | 576 | 179 | 1,084 | - |
| | Stage 2 | 1,824 | 873 | 22 | 677 | - |

AS AT DECEMBER 31, 2023

| € million | | Germany | Other industrialized countries | Advanced economies | Emerging markets | Supranational institutions |
|---|---|---|---|---|---|---|
| **Default** | | | | | | |
| Fair value | Stage 3 | 118 | 12 | - | - | - |
| Gross carrying amount | Stage 3 | 2,244 | 173 | 56 | 399 | - |
| | POCI assets | 58 | - | - | - | - |
| Nominal amount | Stage 3 | 210 | - | 21 | 99 | - |
| | POCI assets | 7 | - | - | - | - |
| **Not rated** | | | | | | |
| Fair value | Stage 1 | 127 | 1,198 | 23 | - | 285 |
| | Stage 2 | - | 15 | - | - | - |
| Gross carrying amount | Stage 1 | 10,213 | 2,887 | 19 | 385 | 35 |
| | Stage 2 | 2,295 | 774 | 1 | 168 | - |
| | Stage 3 | 339 | 78 | - | 2 | - |
| | POCI assets | 60 | 7 | - | - | - |
| Nominal amount | Stage 1 | 4,858 | 1,056 | - | 79 | - |
| | Stage 2 | 417 | 77 | - | 76 | - |
| | Stage 3 | 1 | - | - | - | - |

AS AT DECEMBER 31, 2022

| € million | | Germany | Other industrialized countries | Advanced economies | Emerging markets | Supranational institutions |
|---|---|---|---|---|---|---|
| **Default** | | | | | | |
| Fair value | Stage 3 | 9 | 23 | - | - | - |
| Gross carrying amount | Stage 3 | 1,723 | 274 | 66 | 324 | - |
| | POCI assets | 52 | 14 | 7 | 4 | - |
| Nominal amount | Stage 3 | 201 | - | 2 | 35 | - |
| | POCI assets | 2 | - | - | - | - |
| **Not rated** | | | | | | |
| Fair value | Stage 1 | 76 | 1,125 | - | - | - |
| Gross carrying amount | Stage 1 | 10,539 | 2,209 | 3 | 447 | 35 |
| | Stage 2 | 1,754 | 772 | 7 | 77 | - |
| | Stage 3 | 285 | 53 | - | - | - |
| | POCI assets | 56 | 5 | - | - | - |
| Nominal amount | Stage 1 | 5,168 | 814 | - | 221 | - |
| | Stage 2 | 317 | 11 | - | - | - |
| | Stage 3 | 4 | - | - | - | - |

# » 87 Maturity analysis

AS AT DECEMBER 31, 2023

| € million | ≤ 1 month | > 1 month – 3 months | > 3 months – 1 year | > 1 year – 5 years | > 5 years | Indefinite |
|---|---|---|---|---|---|---|
| **Financial assets** | **141,216** | **18,463** | **45,238** | **191,409** | **258,230** | **24,743** |
| Cash and cash equivalents | 101,463 | - | - | - | - | - |
| Loans and advances to banks | 11,640 | 5,138 | 14,931 | 53,244 | 51,440 | - |
| Loans and advances to customers | 21,192 | 7,608 | 21,404 | 84,468 | 94,855 | 19 |
| Derivatives used for hedging (positive fair values) | 19 | 30 | 135 | 386 | 403 | - |
| Financial assets held for trading | 3,696 | 3,195 | 3,018 | 9,882 | 13,842 | 1,718 |
| of which non-derivative financial assets held for trading | 3,342 | 2,749 | 1,860 | 4,613 | 4,531 | 1,718 |
| of which derivatives (positive fair values) | 354 | 446 | 1,157 | 5,269 | 9,311 | - |
| Investments | 713 | 1,285 | 2,481 | 22,589 | 22,440 | 3,293 |
| Investments held by insurance companies | 522 | 1,157 | 3,149 | 20,839 | 75,249 | 19,636 |
| of which non-derivative investments held by insurance companies | 497 | 1,081 | 3,056 | 20,787 | 75,147 | 19,636 |
| of which derivatives (positive fair values) | 25 | 76 | 93 | 52 | 102 | - |
| Other assets | 1,971 | 50 | 120 | 2 | - | 75 |
| **Financial liabilities** | **-137,970** | **-19,037** | **-55,465** | **-116,325** | **-113,417** | **-67,824** |
| Deposits from banks | -64,904 | -6,518 | -18,554 | -45,644 | -41,947 | -433 |
| Deposits from customers | -62,872 | -4,743 | -8,200 | -6,251 | -17,391 | -63,821 |
| Debt certificates issued including bonds | -5,062 | -5,464 | -22,868 | -43,306 | -32,728 | - |
| Derivatives used for hedging (negative fair values) | -8 | -28 | -101 | -253 | -260 | - |
| Financial liabilities held for trading | -4,629 | -1,829 | -5,266 | -18,751 | -16,288 | -1,152 |
| of which non-derivative financial liabilities held for trading | -4,204 | -1,009 | -3,326 | -14,563 | -6,290 | -1,152 |
| of which derivatives (negative fair values) | -425 | -820 | -1,940 | -4,188 | -9,998 | - |
| Other liabilities | -489 | -447 | -227 | -764 | -1,091 | -2,394 |
| of which non-derivative other liabilities | -317 | -436 | -217 | -740 | -1,037 | -2,392 |
| of which derivatives (negative fair values) | -172 | -11 | -10 | -24 | -54 | -2 |
| Subordinated capital | -6 | -9 | -249 | -1,355 | -3,711 | -25 |
| **Financial guarantee contracts and loan commitments** | **-86,755** | **-316** | **-449** | **-1,330** | **-124** | **-4,353** |
| Financial guarantee contracts | -11,278 | -42 | -77 | -21 | -4 | -18 |
| Loan commitments | -75,476 | -274 | -372 | -1,309 | -120 | -4,335 |

AS AT DECEMBER 31, 2022

| € million | ≤ 1 month | > 1 month – 3 months | > 3 months – 1 year | > 1 year – 5 years | > 5 years | Indefinite |
|---|---|---|---|---|---|---|
| **Financial assets** | **150,564** | **17,399** | **44,667** | **173,268** | **257,421** | **23,969** |
| Cash and cash equivalents | 93,405 | - | - | - | - | - |
| Loans and advances to banks | 17,129 | 5,566 | 14,031 | 43,786 | 48,092 | - |
| Loans and advances to customers | 22,276 | 7,210 | 19,375 | 80,322 | 97,506 | 20 |
| Derivatives used for hedging (positive fair values) | - | 6 | 150 | 880 | 666 | - |
| Financial assets held for trading | 13,550 | 2,840 | 4,685 | 9,631 | 17,602 | 1,179 |
| of which non-derivative financial assets held for trading | 13,195 | 1,815 | 2,854 | 3,049 | 5,343 | 1,179 |
| of which derivatives (positive fair values) | 355 | 1,025 | 1,831 | 6,582 | 12,260 | - |
| Investments | 1,466 | 987 | 3,663 | 20,504 | 19,673 | 2,670 |
| Investments held by insurance companies | 710 | 783 | 2,647 | 18,145 | 73,881 | 20,041 |
| of which non-derivative investments held by insurance companies | 680 | 705 | 2,453 | 17,983 | 73,719 | 20,039 |
| of which derivatives (positive fair values) | 31 | 78 | 193 | 162 | 161 | 2 |
| Other assets | 2,027 | 8 | 116 | - | 1 | 60 |
| **Financial liabilities** | **-131,223** | **-24,555** | **-39,929** | **-121,259** | **-113,853** | **-70,685** |
| Deposits from banks | -64,436 | -7,980 | -16,613 | -58,412 | -40,475 | -1,275 |
| Deposits from customers | -59,912 | -6,884 | -6,778 | -7,379 | -15,525 | -66,751 |
| Debt certificates issued including bonds | -4,570 | -7,773 | -10,057 | -31,879 | -30,400 | - |
| Derivatives used for hedging (negative fair values) | -5 | -7 | -81 | -242 | -134 | - |
| Financial liabilities held for trading | -1,635 | -1,615 | -5,452 | -21,437 | -22,685 | -425 |
| of which non-derivative financial liabilities held for trading | -584 | -754 | -3,219 | -13,912 | -6,943 | -425 |
| of which derivatives (negative fair values) | -1,052 | -861 | -2,233 | -7,525 | -15,741 | - |
| Other liabilities | -665 | -259 | -326 | -669 | -984 | -2,208 |
| of which non-derivative other liabilities | -381 | -249 | -306 | -643 | -893 | -2,207 |
| of which derivatives (negative fair values) | -284 | -10 | -20 | -26 | -91 | -1 |
| Subordinated capital | -1 | -37 | -622 | -1,241 | -3,651 | -25 |
| **Financial guarantee contracts and loan commitments** | **-81,837** | **-504** | **-432** | **-2,012** | **-12** | **-3,821** |
| Financial guarantee contracts | -10,402 | -60 | -3 | -108 | -4 | -28 |
| Loan commitments | -71,435 | -444 | -429 | -1,904 | -8 | -3,793 |

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 chapter VII.6.2.5 ‘Risk management’ 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 102.

## » 88 Issuance activity

The following table shows the new issues, early repurchases, and repayments upon maturity in connection with issuance activity for unregistered paper, broken down by line item.

| | 2023 | | | 2022 | | |
|---|---|---|---|---|---|---|
| € million | New issues | Repur-chases | Repayments | New issues | Repur-chases | Repayments |
| **DEBT CERTIFICATES ISSUED INCLUDING BONDS** | **108,948** | **-2,085** | **-86,464** | 43,753 | -2,250 | -36,388 |
| **Bonds issued** | **29,321** | **-2,075** | **-8,532** | 12,243 | -2,235 | -6,409 |
| Mortgage Pfandbriefe | 4,408 | -57 | -1,806 | 3,808 | -67 | -2,119 |
| Public-sector Pfandbriefe | 590 | - | -223 | - | - | -461 |
| Other bonds | 24,322 | -2,019 | -6,502 | 8,435 | -2,169 | -3,830 |
| **Other debt certificates issued** | **79,627** | **-10** | **-77,933** | 31,510 | -14 | -29,978 |
| **FINANCIAL LIABILITIES HELD FOR TRADING** | **10,129** | **-552** | **-9,048** | 6,679 | -1,961 | -6,238 |
| **SUBORDINATED CAPITAL** | **253** | **-4** | **-263** | 1,320 | -3 | -143 |
| **Total** | **119,330** | **-2,642** | **-95,775** | 51,752 | -4,214 | -42,768 |

The transactions shown under other debt certificates issued all relate to commercial paper. The transactions presented under financial liabilities held for trading are carried out using bonds issued, including share certificates, index-linked certificates, and other debt certificates. The transactions under subordinated capital are mainly carried out using subordinated bearer bonds.

# F Insurance business disclosures

## » 89 Insurance revenue

| € million | 2023 | 2022 |
|---|---|---|
| **INSURANCE REVENUE NOT UNDER THE PREMIUM ALLOCATION APPROACH** | **4,061** | **4,670** |
| **Changes to the liability for remaining coverage that are recognized in profit or loss** | **3,662** | **4,239** |
| Reversal of expected incurred claims and other insurance service expenses through profit or loss | 2,293 | 2,347 |
| Release of the risk adjustment through profit or loss | 103 | 87 |
| Recognition of the CSM in profit or loss based on provision of service | 521 | 436 |
| Experience adjustment for premium receipts | 745 | 1,369 |
| **Amortization of insurance acquisition cash flows** | **398** | **431** |
| **INSURANCE REVENUE UNDER THE PREMIUM ALLOCATION APPROACH** | **8,256** | **7,754** |
| **Total** | **12,317** | **12,424** |

## » 90 Presentation of income and expense in the insurance business

### Insurance finance income or expenses, recognized in profit or loss and in other comprehensive income, from insurance contracts and reinsurance contracts

| € million | 2023 | 2022 |
|---|---|---|
| **Insurance finance income or expenses from insurance contracts** | **-7,845** | **20,453** |
| Changes in the fair value of underlying items relating to insurance contracts with direct participation features | -5,480 | 18,620 |
| Interest accretion effects | -1,994 | 492 |
| Effects of changes in the discount rate | -393 | 1,297 |
| Foreign exchange gains and losses, net | 22 | 43 |
| **Insurance finance income or expenses from reinsurance contracts held** | **12** | **-** |
| Interest accretion effects | 12 | - |
| **Total** | **-7,832** | **20,453** |
| of which recognized in profit or loss | -4,087 | 2,001 |
| of which recognized in other comprehensive income | -3,745 | 18,452 |

The portion of the net foreign exchange gains and losses recognized in profit or loss, which amounted to a net gain of €20 million (2022: net gain of €50 million), is included in other non-insurance gains and losses within gains and losses on investments held by insurance companies and other insurance company gains and losses in the income statement.

For insurance contracts with direct participation features, the option pursuant to IFRS 17.89(b) is exercised in order to minimize volatilities recognized in profit or loss by recognizing the pro rata insurance finance income or expenses in other comprehensive income. This is in line with the classification of investments held by insurance companies in accordance with IFRS 9, which are predominantly assigned to the category 'financial assets measured at fair value through other comprehensive income'. Subsequent measurement of the underlying items provides the basis of calculation for recognition in other comprehensive income. With the gains and losses on the underlying items amounting to a net gain of €3,497 million (2022: net loss of €3,646 million), the amount recognized came to an expense of €2,951 million (2022: income of €3,307 million).

Measurement in other comprehensive income in accordance with IFRS 17.C19(b)(i) for insurance contracts without direct participation features comprises the change in the interest-rate structure of the locked-in yield curve compared with the yield curve as at the reporting date. Exercising the option of recognition in the reserve from other comprehensive income reduces the impact of the measurement-related volatilities of equity and liabilities on the income statement.

The effects recognized in profit or loss include, firstly, the effect of the time value of money resulting from discounting with the locked-in yield curve for insurance contracts without direct participation features and, secondly, the effect of changes in the time value of money resulting from insurance contracts with direct participation features whose underlying items are assigned to the category 'financial assets measured at fair value through profit or loss'. Insurance finance income or expenses also include the difference between the expected future payments covered by the liability for remaining coverage and the payments made in the financial year from business involving contracts with direct participation features.

## Investment income recognized in other comprehensive income in connection with insurance contracts measured under the modified retrospective approach or the fair value approach

The reserve from other comprehensive income changed as a result of investment income in connection with insurance contracts measured under the modified retrospective approach or the fair value approach as follows:

| € million | 2023 | 2022 |
|---|---|---|
| Balance as at Jan. 1 | -7,442 | 3,506 |
| Net change in fair value recognized in other comprehensive income | 2,750 | -16,282 |
| Reclassified to the income statement in the reporting period | 241 | 355 |
| Deferred taxes for the reporting period | -935 | 4,979 |
| **Balance as at Dec. 31** | **-5,385** | **-7,442** |

## » 91 Change in the carrying amounts of insurance contract liabilities

The following tables show the change in the carrying amounts of the liability for remaining coverage and the liability for incurred claims:

| € million | Liability for remaining coverage: Excluding the loss component | Liability for remaining coverage: Loss component | Liability for incurred claims: No premium allocation approach | Liability for incurred claims: Premium allocation approach: present value of expected cash flows | Liability for incurred claims: Premium allocation approach: risk adjustment | Total |
|---|---|---|---|---|---|---|
| Carrying amount of insurance contract assets as at Jan. 1, 2023 | -3 | - | 2 | - | - | -2 |
| Carrying amount of insurance contract liabilities as at Jan. 1, 2023 | 86,353 | 387 | 3,842 | 7,655 | 90 | 98,328 |
| Balance as at Jan. 1, 2023 | 86,350 | 387 | 3,843 | 7,655 | 90 | 98,326 |
| **OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME** | **-4,551** | **77** | **2,820** | **7,342** | **2** | **5,691** |
| **Insurance service result from insurance contracts** | **-11,138** | **77** | **2,128** | **6,871** | **-12** | **-2,072** |
| ***Insurance revenue*** | ***-12,317*** | - | - | - | - | ***-12,317*** |
| Insurance contracts measured using the modified retrospective approach at the transition date | -4,041 | - | - | - | - | -4,041 |
| Insurance contracts measured using the fair value approach at the transition date | -259 | - | - | - | - | -259 |
| All other insurance contracts | -8,018 | - | - | - | - | -8,018 |
| ***Insurance service expenses*** | ***1,179*** | ***77*** | ***2,128*** | ***6,871*** | ***-12*** | ***10,245*** |
| Incurred claims and other insurance service expenses | -72 | - | 2,013 | 6,204 | -16 | 8,129 |
| Amortization of insurance acquisition cash flows | 1,251 | - | - | - | - | 1,251 |
| Changes in the fulfillment cash flows relating to the liability for incurred claims | - | - | 116 | 668 | 4 | 787 |
| Changes that relate to future service under onerous contracts | - | 77 | - | - | - | 77 |
| **Expenses for/income from investment components** | **499** | - | **440** | **80** | - | **1,019** |
| **Insurance finance income or expenses** | **6,233** | **1** | **201** | **399** | **15** | **6,848** |
| **Other** | **-145** | **-1** | **51** | **-9** | **-1** | **-104** |
| **CONSOLIDATION EFFECTS** | **22** | - | - | - | - | **22** |
| **CHANGES RESULTING FROM CASH FLOWS** | **10,747** | - | **-2,809** | **-6,827** | - | **1,110** |
| Premium income | 18,116 | - | - | - | - | 18,116 |
| Insurance acquisition cash flows | -1,407 | - | - | - | - | -1,407 |
| Incurred claims paid and other insurance service expenses paid | -5,962 | - | -2,809 | -6,827 | - | -15,599 |
| **Balance as at Dec. 31, 2023** | **92,568** | **464** | **3,854** | **8,170** | **92** | **105,149** |
| Carrying amount of insurance contract assets as at Dec. 31, 2023 | -1 | - | - | - | - | -1 |
| Carrying amount of insurance contract liabilities as at Dec. 31, 2023 | 92,568 | 464 | 3,854 | 8,170 | 92 | 105,150 |

| € million | Liability for remaining coverage | | Liability for incurred claims | | | Total |
|---|---|---|---|---|---|---|
| | Excluding the loss component | Loss component | No premium allocation approach | Premium allocation approach: present value of expected cash flows | Premium allocation approach: risk adjustment | |
| Carrying amount of insurance contract assets as at Jan. 1, 2022 | -2 | - | 2 | - | - | - |
| Carrying amount of insurance contract liabilities as at Jan. 1, 2022 | 105,257 | 436 | 4,201 | 8,122 | 97 | 118,113 |
| Balance as at Jan. 1, 2022 | 105,255 | 436 | 4,202 | 8,122 | 97 | 118,112 |
| **OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME** | **-31,083** | **-49** | **2,626** | **5,938** | **-7** | **-22,574** |
| **Insurance service result from insurance contracts** | -11,263 | -51 | 2,697 | 6,415 | 3 | **-2,199** |
| ***Insurance revenue*** | *-12,424* | - | - | - | - | ***-12,424*** |
| Insurance contracts measured using the modified retrospective approach at the transition date | -9,554 | - | - | - | - | -9,554 |
| Insurance contracts measured using the fair value approach at the transition date | -62 | - | - | - | - | -62 |
| All other insurance contracts | -2,808 | - | - | - | - | -2,808 |
| ***Insurance service expenses*** | *1,161* | *-51* | *2,697* | *6,415* | *3* | ***10,225*** |
| Incurred claims and other insurance service expenses | -10 | - | 2,396 | 5,727 | -1 | 8,113 |
| Amortization of insurance acquisition cash flows | 1,170 | - | - | - | - | 1,170 |
| Changes in the fulfillment cash flows relating to the liability for incurred claims | - | - | 301 | 688 | 4 | 992 |
| Changes that relate to future service under onerous contracts | - | -51 | - | - | - | -51 |
| **Expenses for/income from investment components** | -539 | - | 432 | 94 | - | **-14** |
| **Insurance finance income or expenses** | -19,359 | 1 | -424 | -604 | -9 | **-20,395** |
| **Other** | 79 | 1 | -79 | 33 | - | **34** |
| **CONSOLIDATION EFFECTS** | **96** | - | - | - | - | **96** |
| **CHANGES RESULTING FROM CASH FLOWS** | **12,082** | - | **-2,985** | **-6,406** | - | **2,692** |
| Premium income | 18,039 | - | - | - | - | 18,039 |
| Insurance acquisition cash flows | -1,439 | - | - | - | - | -1,439 |
| Incurred claims paid and other insurance service expenses paid | -4,518 | - | -2,985 | -6,406 | - | -13,909 |
| **Balance as at Dec. 31, 2022** | **86,350** | **387** | **3,843** | **7,655** | **90** | **98,326** |
| Carrying amount of insurance contract assets as at Dec. 31, 2022 | -3 | - | 2 | - | - | -2 |
| Carrying amount of insurance contract liabilities as at Dec. 31, 2022 | 86,353 | 387 | 3,842 | 7,655 | 90 | 98,328 |

The following tables show the change in the carrying amounts of the reinsurance contract assets relating to the liability for remaining coverage and the liability for incurred claims:

| | Liability for remaining coverage | | Liability for incurred claims | | | Total |
|---|---|---|---|---|---|---|
| € million | Excluding the loss component | Loss component | No premium allocation approach | Premium allocation approach: present value of expected cash flows | Premium allocation approach: risk adjustment | |
| Carrying amount of reinsurance contract assets as at Jan. 1, 2023 | 36 | - | 3 | 507 | 15 | 560 |
| Carrying amount of reinsurance contract liabilities as at Jan. 1, 2023 | -1 | - | - | - | - | - |
| Balance as at Jan. 1, 2023 | 35 | - | 3 | 507 | 15 | 559 |
| **Overall change recognized in profit or loss and in other comprehensive income** | **-285** | **-** | **24** | **195** | **-8** | **-73** |
| Net income/expenses from reinsurance contracts held | -284 | - | 24 | 190 | -8 | -78 |
| Change in reinsurers' credit risk | - | - | - | -8 | - | -8 |
| Insurance finance income or expenses from reinsurance contracts held | -1 | - | - | 13 | - | 12 |
| **Changes resulting from cash flows** | **282** | **-** | **-24** | **-378** | **-** | **-120** |
| Premiums paid for reinsurance contracts held | 282 | - | - | - | - | 282 |
| Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held | - | - | -24 | -378 | - | -402 |
| **Balance as at Dec. 31, 2023** | **32** | **-** | **3** | **324** | **8** | **366** |
| Carrying amount of reinsurance contract assets as at Dec. 31, 2023 | 34 | - | 3 | 324 | 8 | 368 |
| Carrying amount of reinsurance contract liabilities as at Dec. 31, 2023 | -2 | - | - | - | - | -1 |

| | Liability for remaining coverage | | Liability for incurred claims | | | Total |
|---|---|---|---|---|---|---|
| € million | Excluding the loss component | Loss component | No premium allocation approach | Premium allocation approach: present value of expected cash flows | Premium allocation approach: risk adjustment | |
| Carrying amount of reinsurance contract assets as at Jan. 1, 2022 | 30 | - | 1 | 791 | 16 | 838 |
| Carrying amount of reinsurance contract liabilities as at Jan. 1, 2022 | -6 | - | - | - | - | -6 |
| Balance as at Jan. 1, 2022 | 23 | - | 1 | 791 | 16 | 832 |
| **Overall change recognized in profit or loss and in other comprehensive income** | **-214** | **-** | **18** | **74** | **-1** | **-123** |
| Net income/expenses from reinsurance contracts held | -235 | - | 18 | 94 | - | -123 |
| Insurance finance income or expenses from reinsurance contracts held | 21 | - | - | -20 | -1 | - |
| **Changes resulting from cash flows** | **226** | **-** | **-17** | **-359** | **-** | **-150** |
| Premiums paid for reinsurance contracts held | 226 | - | - | - | - | 226 |
| Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held | - | - | -17 | -359 | - | -376 |
| **Balance as at Dec. 31, 2022** | **35** | **-** | **3** | **507** | **15** | **559** |
| Carrying amount of reinsurance contract assets as at Dec. 31, 2022 | 36 | - | 3 | 507 | 15 | 560 |
| Carrying amount of reinsurance contract liabilities as at Dec. 31, 2022 | -1 | - | - | - | - | - |

The following tables show the change in the insurance contracts for which the premium allocation approach is not applied:

| € million | Present value of expected cash flows | Risk adjustment | CSM | **Total** |
|---|---|---|---|---|
| Carrying amount of insurance contract assets as at Jan. 1, 2023 | -1 | - | 1 | - |
| Carrying amount of insurance contract liabilities as at Jan. 1, 2023 | 84,472 | 955 | 4,788 | 90,214 |
| Balance as at Jan. 1, 2023 | 84,471 | 955 | 4,788 | 90,214 |
| **OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME** | **5,045** | **-145** | **633** | **5,533** |
| **Insurance service result** | **1,606** | **-193** | **-3,040** | **-1,626** |
| ***Changes that relate to current service*** | ***-1,070*** | ***-125*** | ***-521*** | ***-1,717*** |
| Amortization of the CSM in profit or loss based on provision of service | - | - | -521 | -521 |
| Release of the risk adjustment through profit or loss | - | -125 | - | -125 |
| Deviation from budgeted figures | -1,070 | - | - | -1,070 |
| ***Changes that relate to future service*** | ***2,547*** | ***-54*** | ***-2,519*** | ***-25*** |
| New business | -603 | 114 | 584 | 96 |
| Changes in estimates that adjust the CSM | 3,272 | -169 | -3,103 | - |
| Changes in estimates that result in losses on onerous contracts or reversals of such losses | -122 | 1 | - | -121 |
| ***Changes that relate to past service*** | ***129*** | ***-14*** | ***-*** | ***116*** |
| Change in the liability for incurred claims | 129 | -14 | - | 116 |
| **Insurance finance income or expenses** | **3,748** | **36** | **3,676** | **7,460** |
| **Other** | **-309** | **12** | **-4** | **-301** |
| **CHANGES RESULTING FROM CASH FLOWS** | **647** | **-** | **-** | **647** |
| Premium income | 10,042 | - | - | 10,042 |
| Insurance acquisition cash flows | -624 | - | - | -624 |
| Incurred claims paid and other insurance service expenses paid | -8,772 | - | - | -8,772 |
| **Balance as at Dec. 31, 2023** | **90,163** | **810** | **5,421** | **96,394** |
| Carrying amount of insurance contract assets as at Dec. 31, 2023 | - | - | - | - |
| Carrying amount of insurance contract liabilities as at Dec. 31, 2023 | 90,163 | 810 | 5,421 | 96,394 |

Of the amortization of the CSM, an approximated amount of €146 million was attributable to contracts measured on a modified retrospective basis on the date of transition to IFRS 17 and €12 million to contracts measured using the fair value approach.

| € million | Present value of expected cash flows | Risk adjustment | CSM | **Total** |
|---|---|---|---|---|
| Carrying amount of insurance contract assets as at Jan. 1, 2022 | -1 | - | - | - |
| Carrying amount of insurance contract liabilities as at Jan. 1, 2022 | 103,615 | 674 | 5,147 | 109,437 |
| Balance as at Jan. 1, 2022 | 103,614 | 674 | 5,148 | 109,436 |
| **OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME** | **-21,403** | **281** | **-360** | **-21,482** |
| **Insurance service result** | **-16,583** | **301** | **14,821** | **-1,462** |
| ***Changes that relate to current service*** | ***-1,332*** | ***-85*** | ***-436*** | ***-1,853*** |
| Amortization of the CSM in profit or loss based on provision of service | - | - | -436 | -436 |
| Release of the risk adjustment through profit or loss | - | -85 | - | -85 |
| Deviation from budgeted figures | -1,332 | - | - | -1,332 |
| ***Changes that relate to future service*** | ***-15,551*** | ***385*** | ***15,257*** | ***90*** |
| New business | -784 | 113 | 774 | 103 |
| Changes in estimates that adjust the CSM | -14,752 | 269 | 14,482 | - |
| Changes in estimates that result in losses on onerous contracts or reversals of such losses | -15 | 2 | - | -13 |
| ***Changes that relate to past service*** | ***299*** | ***1*** | ***-*** | ***301*** |
| Change in the liability for incurred claims | 299 | 1 | - | 301 |
| **Insurance finance income or expenses** | **-4,584** | **-18** | **-15,178** | **-19,780** |
| **Other** | **-235** | **-2** | **-3** | **-240** |
| **CHANGES RESULTING FROM CASH FLOWS** | **2,260** | **-** | **-** | **2,260** |
| Premium income | 10,454 | - | - | 10,454 |
| Insurance acquisition cash flows | -691 | - | - | -691 |
| Incurred claims paid and other insurance service expenses paid | -7,503 | - | - | -7,503 |
| **Balance as at Dec. 31, 2022** | **84,471** | **955** | **4,788** | **90,214** |
| Carrying amount of insurance contract assets as at Dec. 31, 2022 | -1 | - | 1 | - |
| Carrying amount of insurance contract liabilities as at Dec. 31, 2022 | 84,472 | 955 | 4,788 | 90,214 |

Of the amortization of the CSM, an approximated amount of €140 million was attributable to contracts measured on a modified retrospective basis on the date of transition to IFRS 17 and €20 million to contracts measured using the fair value approach.

The following tables show the change in the reinsurance contracts for which the premium allocation approach is not applied:

| € million | Present value of expected cash flows | Risk adjustment | CSM | **Total** |
|---|---|---|---|---|
| Carrying amount of reinsurance contract assets as at Jan. 1, 2023 | -41 | 4 | 65 | 29 |
| Balance as at Jan. 1, 2023 | -41 | 4 | 65 | 29 |
| **OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME** | **-3** | **-** | **17** | **15** |
| **Insurance service result** | **1** | **-** | **15** | **16** |
| ***Changes that relate to current service*** | ***18*** | ***-*** | ***-2*** | ***16*** |
| CSM recognized in profit or loss | - | - | -2 | -2 |
| Deviation from budgeted figures | 18 | - | - | 18 |
| ***Changes that relate to future service*** | ***-17*** | ***1*** | ***17*** | ***-*** |
| Changes in estimates that adjust the CSM | -14 | - | 14 | - |
| New business | -3 | 1 | 2 | - |
| **Insurance finance income or expenses** | **-4** | **-** | **3** | **-2** |
| **CHANGES RESULTING FROM CASH FLOWS** | **-11** | **-** | **-** | **-11** |
| Premiums paid for reinsurance contracts held | 13 | - | - | 13 |
| Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held | -24 | - | - | -24 |
| **Balance as at Dec. 31, 2023** | **-55** | **5** | **83** | **33** |
| Carrying amount of reinsurance contract assets as at Dec. 31, 2023 | -55 | 5 | 83 | 33 |

Of the reversal of the gains and losses on reinsurance contracts, an approximated amount of €2 million was attributable to contracts measured on a modified retrospective basis on the date of transition to IFRS 17 and €0 million to contracts measured using the fair value approach.

| € million | Present value of expected cash flows | Risk adjustment | CSM | **Total** |
|---|---|---|---|---|
| Carrying amount of reinsurance contract assets as at Jan. 1, 2022 | -4 | 6 | 11 | 13 |
| Carrying amount of reinsurance contract liabilities as at Jan. 1, 2022 | -59 | - | 55 | -5 |
| Balance as at Jan. 1, 2022 | -64 | 6 | 66 | 8 |
| **OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME** | **7** | **-2** | **-** | **5** |
| **Insurance service result** | **-9** | **-2** | **-3** | **-13** |
| ***Changes that relate to current service*** | ***-7*** | ***-*** | ***-4*** | ***-11*** |
| CSM recognized in profit or loss | - | - | -4 | -4 |
| Deviation from budgeted figures | -7 | - | - | -7 |
| ***Changes that relate to future service*** | ***-*** | ***-1*** | ***1*** | ***-*** |
| Changes in estimates that adjust the CSM | 3 | -2 | -1 | - |
| New business | -3 | 1 | 2 | - |
| ***Changes that relate to past service*** | ***-2*** | ***-*** | ***-*** | ***-2*** |
| Change in the liability for incurred claims | -2 | - | - | -2 |
| **Insurance finance income or expenses** | **17** | **-** | **3** | **19** |
| **Other** | **-1** | **-** | **-** | **-1** |
| **CHANGES RESULTING FROM CASH FLOWS** | **16** | **-** | **-** | **16** |
| Premiums paid for reinsurance contracts held | 33 | - | - | 33 |
| Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held | -17 | - | - | -17 |
| **Balance as at Dec. 31, 2022** | **-41** | **4** | **65** | **29** |
| Carrying amount of reinsurance contract assets as at Dec. 31, 2022 | -41 | 4 | 65 | 29 |

Of the reversal of the gains and losses on reinsurance contracts, an approximated amount of €1 million was attributable to contracts measured on a modified retrospective basis on the date of transition to IFRS 17 and €4 million to contracts measured using the fair value approach.

## » 92 Fair values of underlying items relating to contracts with direct participation features

The following table shows the fair values of the underlying items:

| € million | Dec. 31, 2023 Contracts with direct participation features | Dec. 31, 2023 Other contracts | Dec. 31, 2023 Total | Dec. 31, 2022 Contracts with direct participation features | Dec. 31, 2022 Other contracts | Dec. 31, 2022 Total |
|---|---|---|---|---|---|---|
| **Investments** | **89,969** | **944** | **90,913** | **83,000** | **784** | **83,784** |
| Investment property | 3,078 | - | 3,078 | 3,287 | - | 3,287 |
| Investments in subsidiaries | 420 | 1 | 421 | 425 | - | 425 |
| Investments in joint ventures | 55 | - | 55 | 59 | - | 59 |
| Mortgage loans | 10,309 | - | 10,310 | 9,485 | - | 9,485 |
| Promissory notes and loans | 4,863 | - | 4,863 | 4,846 | - | 4,846 |
| Registered bonds | 4,692 | - | 4,692 | 4,372 | - | 4,372 |
| Other loans | 169 | 21 | 190 | 178 | 6 | 184 |
| Variable-yield securities | 9,664 | 413 | 10,077 | 10,585 | 398 | 10,983 |
| Fixed-income securities | 38,585 | 509 | 39,095 | 34,359 | 379 | 34,738 |
| Derivatives (positive fair values) | 157 | - | 157 | 219 | - | 219 |
| Other investments | 32 | - | 32 | 50 | - | 50 |
| Assets related to unit-linked contracts | 17,944 | - | 17,944 | 15,135 | - | 15,135 |
| **Income tax assets** | **9** | **-** | **9** | **12** | **-** | **12** |
| **Other assets held by insurance companies** | **668** | **4** | **672** | **888** | **4** | **892** |
| Intangible assets (excluding goodwill) | 15 | - | 15 | 16 | - | 16 |
| Other receivables of insurance companies | 87 | - | 87 | 107 | - | 107 |
| Credit balances with banks, checks and cash on hand | 140 | - | 140 | 363 | - | 363 |
| Property, plant and equipment and right-of-use assets | 7 | - | 7 | 9 | - | 9 |
| Residual other assets held by insurance companies | 418 | 4 | 421 | 393 | 4 | 397 |
| **Income tax liabilities** | **25** | **-** | **25** | **23** | **-** | **23** |
| **Other liabilities of insurance companies** | **342** | **-** | **342** | **446** | **-** | **446** |
| Provisions of insurance companies | 29 | - | 29 | 32 | - | 32 |
| Payables and residual other liabilities of insurance companies | 313 | - | 313 | 414 | - | 414 |

As at the reporting date, the underlying items relating to investment contracts with direct participation features mainly consisted of a share of the total investment portfolio of each insurance company. An exact assignment of the investments to the insurance contract liabilities for the total portfolio or individual subportfolios is neither possible nor envisaged in the German insurance market, with the exception of unit-linked insurance contracts. Consequently, the amounts of the underlying items in life insurance are determined using the insurance cash flows pursuant to IFRS 17, i.e. the fulfillment cash flows less the risk adjustment, and the present value of the companies' future share of gross profit plus costs that cannot be attributed directly. In health insurance, equity calculated in accordance with commercial law is also taken into account owing to the rules on policyholder participation. These components thus contain all future payments from the underlying items.

The 'Other contracts' column shows investments for which the underlying contracts do not have direct participation features.

## » 93 Effects of initial measurement

The following table shows the effects on the measurement components of the insurance and reinsurance contracts recognized for the first time in the financial year for which the premium allocation approach is not applied:

| € million | 2023 Non-onerous contracts | 2023 Onerous contracts | 2022 Non-onerous contracts | 2022 Onerous contracts |
|---|---|---|---|---|
| **LOSSES RECOGNIZED AT INITIAL MEASUREMENT OF INSURANCE CONTRACTS** | - | 96 | - | 103 |
| **Present value of claims/costs/insurance acquisition cash flows** | 5,563 | 2,024 | 6,392 | 3,429 |
| Insurance acquisition cash flows | 412 | 208 | 434 | 120 |
| Incurred claims and other insurance service expenses | 5,151 | 1,816 | 5,958 | 3,309 |
| **Present value of premiums** | -6,234 | -1,955 | -7,249 | -3,357 |
| **Risk adjustment** | 87 | 27 | 82 | 31 |
| **CSM** | 584 | - | 774 | - |
| **LOSSES RECOGNIZED AT INITIAL MEASUREMENT OF REINSURANCE CONTRACTS** | - | - | - | - |
| Present value of claims/costs/insurance acquisition cash flows | -6 | - | -7 | - |
| Present value of premiums | 9 | - | 10 | - |
| Risk adjustment | -1 | - | -1 | - |
| CSM | -2 | - | -2 | - |

## » 94 Expected recognition of the contractual service margin in profit or loss

The following table shows when the remaining CSM recognized as at the reporting date is likely to be recognized in profit or loss:

| € million | Dec. 31, 2023 Insurance contracts | Dec. 31, 2023 Reinsurance contracts | Dec. 31, 2022 Insurance contracts | Dec. 31, 2022 Reinsurance contracts |
|---|---|---|---|---|
| ≤ 1 year | 360 | -5 | 305 | -3 |
| > 1 year – 2 years | 289 | -5 | 248 | -4 |
| > 2 years – 3 years | 271 | -5 | 235 | -4 |
| > 3 years – 4 years | 255 | -5 | 223 | -3 |
| > 4 years – 5 years | 242 | -5 | 212 | -3 |
| > 5 years – 10 years | 1,033 | -17 | 911 | -13 |
| > 10 years – 20 years | 1,433 | -22 | 1,264 | -18 |
| > 20 years – 30 years | 817 | -11 | 725 | -10 |
| > 30 years – 40 years | 417 | -5 | 374 | -4 |
| > 40 years – 50 years | 200 | -2 | 185 | -2 |
| > 50 years | 106 | -1 | 107 | -1 |

# » 95 Claims rate trend

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

The following table shows the change in the gross liability for incurred claims in direct business and payments made against the original liability:

| € million | Total | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gross liability for incurred claims** | | | | | | | | | | | |
| At the end of the year | | 5,237 | 4,779 | 5,067 | | | | | | | |
| 1 year later | | | 4,882 | 5,152 | 3,930 | | | | | | |
| 2 years later | | | | 5,196 | 3,885 | 4,074 | | | | | |
| 3 years later | | | | | 3,865 | 4,057 | 3,927 | | | | |
| 4 years later | | | | | | 4,027 | 3,904 | 3,583 | | | |
| 5 years later | | | | | | | 3,896 | 3,574 | 3,574 | | |
| 6 years later | | | | | | | | 3,559 | 3,559 | 3,240 | |
| 7 years later | | | | | | | | | 3,531 | 3,231 | 3,059 |
| 8 years later | | | | | | | | | | 3,220 | 3,044 |
| 9 years later | | | | | | | | | | | 3,038 |
| **Total claim payments made** | **34,172** | **2,531** | **3,853** | **4,468** | **3,430** | **3,681** | **3,579** | **3,332** | **3,322** | **3,072** | **2,904** |
| **Liability for incurred claims in respect of claims that occurred in 2014 to 2023** | **6,279** | **2,706** | **1,029** | **728** | **435** | **346** | **317** | **227** | **209** | **148** | **134** |
| Liability for incurred claims in respect of claims that occurred before 2014 | 1,031 | | | | | | | | | | |
| Effect of discounting | -953 | | | | | | | | | | |
| Risk adjustment | 82 | | | | | | | | | | |
| **Gross liability for incurred claims** | **6,439** | | | | | | | | | | |

The following table shows the change in the net liability for incurred claims in direct business and payments made against the original liability:

| € million | Total | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Net liability for incurred claims** | | | | | | | | | | | |
| At the end of the year | | 5,099 | 4,762 | 5,057 | | | | | | | |
| 1 year later | | | 4,864 | 5,142 | 3,948 | | | | | | |
| 2 years later | | | | 5,072 | 3,900 | 4,078 | | | | | |
| 3 years later | | | | | 3,882 | 4,061 | 3,946 | | | | |
| 4 years later | | | | | | 4,029 | 3,922 | 3,588 | | | |
| 5 years later | | | | | | | 3,914 | 3,578 | 3,604 | | |
| 6 years later | | | | | | | | 3,562 | 3,589 | 3,247 | |
| 7 years later | | | | | | | | | 3,561 | 3,238 | 3,061 |
| 8 years later | | | | | | | | | | 3,227 | 3,048 |
| 9 years later | | | | | | | | | | | 3,043 |
| **Total claim payments made** | **34,184** | **2,462** | **3,843** | **4,465** | **3,449** | **3,686** | **3,599** | **3,339** | **3,354** | **3,079** | **2,908** |
| **Liability for incurred claims in respect of claims that occurred in 2014 to 2023** | **6,069** | **2,637** | **1,021** | **607** | **433** | **343** | **315** | **223** | **207** | **148** | **135** |
| Liability for incurred claims in respect of claims that occurred before 2014 | 1,008 | | | | | | | | | | |
| Effect of discounting | -943 | | | | | | | | | | |
| Risk adjustment | 78 | | | | | | | | | | |
| **Net liability for incurred claims** | **6,212** | | | | | | | | | | |

# Claims rate trend for inward reinsurance business

The following table shows the change in the gross liability for incurred claims in inward reinsurance business and payments made against the original liability:

| € million | Total | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gross liability for incurred claims** | | | | | | | | | | | |
| At the end of the year | | 1,937 | 1,989 | 2,079 | | | | | | | |
| 1 year later | | | 2,385 | 2,512 | 2,944 | | | | | | |
| 2 years later | | | | 2,543 | 2,974 | 2,688 | | | | | |
| 3 years later | | | | | 2,922 | 2,749 | 2,352 | | | | |
| 4 years later | | | | | | 2,748 | 2,364 | 2,355 | | | |
| 5 years later | | | | | | | 2,363 | 2,379 | 1,631 | | |
| 6 years later | | | | | | | | 2,367 | 1,637 | 1,391 | |
| 7 years later | | | | | | | | | 1,616 | 1,380 | 1,225 |
| 8 years later | | | | | | | | | | 1,364 | 1,237 |
| 9 years later | | | | | | | | | | | 1,218 |
| **Total claim payments made** | **15,591** | **325** | **1,253** | **1,695** | **2,250** | **2,284** | **2,001** | **2,050** | **1,404** | **1,208** | **1,121** |
| **Liability for incurred claims in respect of claims that occurred in 2014 to 2023** | **5,872** | **1,612** | **1,132** | **848** | **672** | **464** | **362** | **317** | **212** | **156** | **97** |
| Liability for incurred claims in respect of claims that occurred before 2014 | 360 | | | | | | | | | | |
| Effect of discounting | -959 | | | | | | | | | | |
| Risk adjustment | 72 | | | | | | | | | | |
| **Gross liability for incurred claims** | **5,345** | | | | | | | | | | |

The following table shows the change in the net liability for incurred claims in inward reinsurance business and payments made against the original liability:

| € million | Total | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Net liability for incurred claims** | | | | | | | | | | | |
| At the end of the year | | 1,893 | 1,978 | 1,942 | | | | | | | |
| 1 year later | | | 2,374 | 2,369 | 2,947 | | | | | | |
| 2 years later | | | | 2,391 | 2,974 | 2,686 | | | | | |
| 3 years later | | | | | 2,924 | 2,747 | 2,350 | | | | |
| 4 years later | | | | | | 2,745 | 2,362 | 2,353 | | | |
| 5 years later | | | | | | | 2,361 | 2,377 | 1,632 | | |
| 6 years later | | | | | | | | 2,366 | 1,639 | 1,389 | |
| 7 years later | | | | | | | | | 1,618 | 1,378 | 1,225 |
| 8 years later | | | | | | | | | | 1,362 | 1,237 |
| 9 years later | | | | | | | | | | | 1,218 |
| **Total claim payments made** | **15,489** | **324** | **1,248** | **1,601** | **2,253** | **2,282** | **1,999** | **2,049** | **1,406** | **1,207** | **1,120** |
| **Liability for incurred claims in respect of claims that occurred in 2014 to 2023** | **5,763** | **1,569** | **1,126** | **790** | **671** | **463** | **362** | **317** | **212** | **155** | **98** |
| Liability for incurred claims in respect of claims that occurred before 2014 | 358 | | | | | | | | | | |
| Effect of discounting | -954 | | | | | | | | | | |
| Risk adjustment | 71 | | | | | | | | | | |
| **Net liability for incurred claims** | **5,238** | | | | | | | | | | |

## » 96 Yield curves

The following table shows the yield curves as at the latest measurement date used to measure the cash flows for insurance contracts and for reinsurance contracts held:

| | 1 year | | 5 years | | 10 years | | 15 years | | 20 years | |
|---|---|---|---|---|---|---|---|---|---|---|
| Percent | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 | Dec. 31, 2023 | Dec. 31, 2022 |
| EUR | 4.02 | 4.12 | 3.26 | 4.02 | 3.28 | 3.94 | 3.36 | 3.87 | 3.29 | 3.61 |
| GBP | 5.29 | 5.28 | 4.19 | 4.87 | 4.06 | 4.46 | 4.17 | 4.37 | 4.21 | 4.28 |
| JPY | 0.63 | 0.93 | 1.30 | 1.36 | 1.65 | 1.64 | 1.96 | 1.86 | 2.19 | 2.03 |
| USD | 5.33 | 5.96 | 4.34 | 4.78 | 4.23 | 4.54 | 4.27 | 4.52 | 4.24 | 4.43 |
| ZAR | 8.68 | 8.54 | 8.91 | 9.11 | 10.26 | 10.23 | 11.01 | 10.50 | 11.01 | 10.36 |

## » 97 Risk and capital management

Disclosures pursuant to IFRS 17.132(b) and IFRS 17.132(c) can be found in this note in the notes to the consolidated financial statements. With the exception of the disclosures on maturity analysis pursuant to IFRS 17.132(b) and IFRS 17.132(c), further disclosures on the nature and extent of risks arising from insurance contracts (IFRS 17.121-132) are included in the group management report in chapter VII 'Risk report', sections 6 'Liquidity adequacy' and 8 'Credit risk' and for the Insurance sector in sections 16 'Actuarial risk' and 17 'Market risk'.

The disclosures published in the risk report form part of the content of these notes to the consolidated financial statements.

### Maturity analysis

The following table contains an analysis of the remaining undiscounted contractual net cash flows for insurance contracts, by estimated maturity. Liabilities for remaining coverage measured under the premium allocation approach are excluded from this analysis.

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| ≤ 1 year | 5,768 | 5,913 |
| > 1 year – 2 years | 3,517 | 3,461 |
| > 2 years – 3 years | 3,145 | 2,817 |
| > 3 years – 4 years | 2,549 | 2,972 |
| > 4 years – 5 years | 2,727 | 2,610 |
| > 5 years – 10 years | 17,808 | 17,618 |
| > 10 years – 20 years | 32,449 | 32,892 |
| > 20 years – 30 years | 34,501 | 36,269 |
| > 30 years – 40 years | 26,134 | 27,845 |
| > 40 years – 50 years | 18,805 | 19,202 |
| > 50 years | 24,604 | 27,350 |

The insurance contract liabilities repayable on demand amounted to €61,991 million (December 31, 2022: €56,083 million).

### Sensitivity analysis

For internal and external reporting purposes, sensitivity analyses are carried out in accordance with IFRS 17.125 in conjunction with IFRS 17.128 in order to quantify the impact on equity and on profit or loss. This sensitivity analysis contains 4 scenarios that simulate the potential impact on insurance assets and liabilities measured in accordance with IFRS 17.

#### Interest-rate scenario

Expert appraisals from the Economic Roundtable dated November 7, 2023 are used as the basis for determining the ranges to be examined in the interest-rate scenario. The information from the Economic Roundtable is analyzed on an ongoing basis to ascertain whether any adjustments are needed for future reporting-date-related sensitivity analyses.

For 10-year government bonds of the Federal Republic of Germany, an interest rate of 3.00 percent is expected in the main scenario and an interest rate of 2.50 percent in the risk scenario for 2023. Based on the analyses and findings of the Economic Roundtable, sensitivity analyses with a shift in interest rates of plus or minus 50 basis points are calculated.

#### Currency scenario

The basis for determining the ranges to be examined in the currency scenario is the assumption that the exchange rate for the US dollar – which acts as a reserve currency, especially in international reinsurance business – will change by plus or minus 10 percent.

#### Equity scenario

The basis for determining the ranges to be examined in the equity scenario is the assumption that the prices of the equities held as at the reporting date will change by plus or minus 10 percent. This scenario is mainly relevant to personal insurance, in which the variable fee approach is used for the stochastic modeling of future policyholder participation and any changes in share prices affect both the measurement of liabilities under IFRS 17 and the amount of other comprehensive income/loss.

#### Claims scenario

The claims scenario is based on the assumption that direct insurance business and inward reinsurance business in the non-life segment are affected, in particular, by a change in the cash flows of the liability for incurred claims of plus or minus 1 percent. For the liability for remaining coverage and the fulfilment cash flows for the loss component, the claims rate is adjusted by plus or minus 1 percent. This results in, for example, an increase or decrease in claim payments, leading to measurement effects on the insurance contract assets and liabilities measured using the premium allocation approach or under the general measurement model in profit or loss and in other comprehensive income.

The following table shows the sensitivity of profit or loss before taxes and equity before taxes to a change in the underlying parameters. Correlation effects between individual parameters are not considered.

| | Dec. 31, 2023 | |
|---|---|---|
| € million | Change in profit or loss before taxes | Change in equity before taxes |
| Increase in interest-rate risk of 50 basis points | -13 | 37 |
| Decrease in interest-rate risk of 50 basis points | 4 | -53 |
| Increase in equity risk of 10 percent | -3 | 6 |
| Decrease in equity risk of 10 percent | - | -8 |
| Increase in currency risk of 10 percent | -110 | -112 |
| Decrease in currency risk of 10 percent | 110 | 112 |
| Increase in claims risk of 1 percent | -142 | -147 |
| Decrease in claims risk of 1 percent | 144 | 148 |

# G Other disclosures

## » 98 Contingent liabilities

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| Contingent liabilities arising from contributions to the resolution fund for CRR credit institutions | 169 | 137 |
| Contingent liabilities in respect of litigation risk | 10 | 4 |
| **Total** | **179** | **141** |

The contingent liabilities arising from contributions to the resolution fund for CRR credit institutions consist of irrevocable payment commitments (IPCs) that the Single Resolution Board (SRB) approved in response to applications that were made to furnish collateral in partial settlement of the contribution to the European bank levy. The DZ BANK Group has pledged cash collateral of the same amount. The pledged collateral is included within other loans and advances under other assets on the balance sheet. In light of a non-binding judgment of the European General Court (EGC) dated October 25, 2023 in a legal dispute between the SRB and a French bank, there is legal uncertainty as to whether the irrevocable payment commitments are annulled if a bank leaves the Single Resolution Mechanism (in particular if a banking license is handed back) and whether the cash collateral provided by the bank is returned to the bank without it having to pay the irrevocably committed amount. The case is pending a decision by the EGC.

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 have to be recognized.

## » 99 Financial guarantee contracts and loan commitments

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Financial guarantee contracts** | **11,441** | **10,606** |
| Loan guarantees | 5,345 | 5,076 |
| Letters of credit | 912 | 781 |
| Other guarantees and warranties | 5,184 | 4,749 |
| **Loan commitments** | **81,886** | **78,012** |
| Credit facilities to banks | 30,073 | 27,579 |
| Credit facilities to customers | 37,644 | 38,481 |
| Guarantee credits | 1,751 | 1,144 |
| Letters of credit | 297 | 288 |
| Global limits | 12,120 | 10,520 |
| **Total** | **93,327** | **88,618** |

The amounts shown for financial guarantee contracts and loan commitments are the nominal values of the commitment in each case.

## » 100 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Trust assets** | **1,944** | **2,171** |
| Loans and advances to banks | 1,836 | 2,095 |
| Loans and advances to customers | 41 | 9 |
| Investments | 67 | 67 |
| **Trust liabilities** | **1,944** | **2,171** |
| Deposits from banks | 1,663 | 1,957 |
| Deposits from customers | 280 | 214 |

Trust assets and trust liabilities each include trust loans amounting to €1,663 million (December 31, 2022: €1,957 million).

## » 101 Business combinations

In 2023, an impairment loss of €52 million was recognized in the income statement for intangible assets identified in the past in connection with business combinations (2022: €0 million).

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 €155 million was allocated to the UMH subgroup operating segment (December 31, 2022: €155 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 cash-generating unit is, by definition, compared with the relevant recoverable amount. The carrying amount is equivalent to the equity attributable to the goodwill-bearing cash-generating unit. 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 assessments of future market trends. The macroeconomic scenario used as the basis for the 4-year plan assumes that economic growth in Germany and the rest of Europe will remain weak for the time being. It also assumes that key interest rates in the eurozone will continue to rise until the end of 2024. The ECB is then expected to shift course toward the end of 2024, resulting in a gradual lowering of the key interest rates to 2.5 percent by the end of 2027. In Germany, average inflation is predicted to fall slightly as energy prices went down in 2023, in some cases significantly. Inflationary pressure is also likely to gradually ease in the eurozone as a whole and in the USA. The share forecasts for the EURO STOXX 50 and the DAX have been raised for 2024 as the USA has avoided a recession. The scenario anticipates virtually unchanged or slightly lower spreads on government bonds issued by the peripheral countries of the eurozone.

Cash flows beyond the end of the 4-year period were estimated using a constant rate of growth of 0.5 percent (2022: 0.5 percent) for the UMH subgroup operating segment. 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 2023, which was determined on the basis of the capital asset pricing model, was 17.1 percent (2022: 16.0 percent).

There were no impairment losses in the reporting year or in the previous year.

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 arose in the UMH subgroup operating segment in any of the scenarios.

# » 102 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, IT and office equipment, production machinery, medical technology devices, and photovoltaic installations. Software is the most significant item under intangible assets.

### Finance leases

Within the DZ BANK Group, the VR Smart Finanz subgroup is also active as a lessor. The companies in the VR Smart Finanz subgroup enter into leases with customers, for example for motor vehicles, production machinery, and photovoltaic installations. In addition to office equipment, software is also leased. 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Gross investment** | **494** | 595 |
| Up to 1 year | 170 | 225 |
| More than 1 year and up to 2 years | 117 | 149 |
| More than 2 years and up to 3 years | 89 | 93 |
| More than 3 years and up to 4 years | 58 | 65 |
| More than 4 years and up to 5 years | 32 | 32 |
| More than 5 years | 28 | 31 |
| **less unearned finance income** | **-32** | -29 |
| Net investment | 463 | 565 |
| **less present value of unguaranteed residual values** | **-13** | -17 |
| **Present value of minimum lease payment receivables** | **449** | 548 |

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.

Gains on disposals of €2 million were recognized in 2023 (2022: €2 million). Losses on disposals amounted to €1 million (2022: €2 million). They are reported under interest income in note 34 together with the financial income derived from the net investment in the lease.

### 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| Land and buildings | 4,276 | 4,336 |
| Office furniture and equipment | 11 | 13 |
| **Total** | **4,287** | **4,349** |

Income from operating leases amounted to €309 million in the reporting year (2022: €290 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 non-cancelable operating leases in the future was as follows:

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Total future minimum lease payments under non-cancelable leases** | **1,318** | **1,366** |
| Up to 1 year | 289 | 290 |
| More than 1 year and up to 2 years | 178 | 177 |
| More than 2 years and up to 3 years | 147 | 148 |
| More than 3 years and up to 4 years | 131 | 127 |
| More than 4 years and up to 5 years | 104 | 112 |
| More than 5 years | 469 | 510 |

## 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, bicycles, and workplace equipment. The lease terms are up to 7 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, 2022 | 573 | 33 |
| Additions | 83 | 14 |
| Revaluation | 96 | 4 |
| Depreciation | -89 | -19 |
| Disposals | -10 | -1 |
| Changes attributable to currency translation | 3 | - |
| Carrying amounts as at Dec. 31, 2022 | 655 | 31 |
| Additions | 37 | 27 |
| Revaluation | 11 | 1 |
| Reclassifications | -10 | - |
| Depreciation | -93 | -20 |
| Impairment losses | -3 | - |
| Disposals | -13 | -2 |
| Changes attributable to currency translation | -1 | - |
| **Carrying amounts as at Dec. 31, 2023** | **582** | **36** |

Lease liabilities of €652 million were recognized under other liabilities and insurance companies' other liabilities (December 31, 2022: €717 million).

The interest expense for lease liabilities is disclosed in notes 34 and 40.

The following table shows a breakdown of the contractual maturities for lease liabilities:

| € million | **Dec. 31, 2023** | Dec. 31, 2022 |
|---|---|---|
| Up to 1 year | **97** | 94 |
| More than 1 year and up to 3 years | **173** | 181 |
| More than 3 years and up to 5 years | **159** | 162 |
| More than 5 years | **262** | 319 |

The total cash outflows for lease liabilities in 2023 amounted to €149 million (2022: €157 million).

The following income and expenses have been recognized in the income statement for rights to use underlying assets in leases:

| € million | **2023** | 2022 |
|---|---|---|
| Expenses relating to short-term leases | **-1** | -1 |
| Expenses relating to leases for low-value assets | **-19** | -22 |
| Expenses relating to variable lease payments not included in the lease liability | **-11** | -11 |
| Income from subleasing right-of-use assets | **13** | 13 |

The expenses relating to short-term leases relate primarily to leases for motor vehicles 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.

The lease commitments could give rise to potential future cash outflows as a result of variable lease payments, extension options, or termination options. 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 €529 million (2022: €540 million).As at the reporting date, there were also future commitments amounting to €17 million (December 31, 2022: €0 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 relate to real estate used for the group's own business operations.

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.

# » 103 Disclosures on revenue from contracts with customers

## Effects in the income statement

### Disclosures on revenue from contracts with customers, broken down by operating segment

**2023**

| € million | BSH | R+V | TeamBank | |
|---|---|---|---|---|
| **Income type** | | | | |
| Fee and commission income from securities business | 1 | - | - | |
| 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 | 35 | - | - | |
| Other fee and commission income | 64 | - | 29 | |
| Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses | - | 61 | - | |
| Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses | - | 82 | - | |
| Other operating income | 50 | - | 7 | |
| **Total** | **150** | **143** | **40** | |
| **Main geographical markets** | | | | |
| Germany | 140 | 137 | 40 | |
| Rest of Europe | 10 | 6 | - | |
| **Total** | **150** | **143** | **40** | |
| **Type of revenue recognition** | | | | |
| At a point in time | 110 | 5 | 40 | |
| Over a period of time | 40 | 138 | - | |
| **Total** | **150** | **143** | **40** | |

| | UMH | DZ BANK – CICB | DZ HYP | DZ PRIVAT-BANK | VR Smart Finanz | Other/ Consolidation | **Total** |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | 3,387 | 463 | - | 214 | - | -100 | 3,964 |
| | 24 | - | - | 315 | - | -5 | 334 |
| | - | 306 | - | 2 | - | 60 | 368 |
| | - | 109 | 8 | - | - | 57 | 178 |
| | - | 93 | 6 | - | - | -3 | 96 |
| | - | 13 | - | - | - | - | 13 |
| | - | - | - | - | - | - | 35 |
| | - | 64 | - | 5 | 6 | 9 | 177 |
| | - | - | - | - | - | -3 | 58 |
| | - | - | - | - | - | - | 82 |
| | 13 | - | - | - | - | 12 | 84 |
| | **3,424** | **1,047** | **14** | **536** | **6** | **28** | **5,389** |
| | | | | | | | |
| | 2,559 | 1,047 | 14 | 54 | 6 | 14 | 4,011 |
| | 865 | - | - | 482 | - | 14 | 1,377 |
| | **3,424** | **1,047** | **14** | **536** | **6** | **28** | **5,389** |
| | | | | | | | |
| | 359 | 377 | 11 | 62 | 6 | 30 | 1,000 |
| | 3,066 | 670 | 4 | 474 | - | -1 | 4,390 |
| | **3,424** | **1,047** | **14** | **536** | **6** | **28** | **5,389** |

**2022**

| € 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 | 45 | - | - | |
| Other fee and commission income | 88 | - | 98 | |
| Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses | - | 73 | - | |
| Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses | - | 77 | - | |
| Other operating income | 49 | - | 9 | |
| **Total** | **181** | **149** | **111** | |
| **Main geographical markets** | | | | |
| Germany | 172 | 136 | 111 | |
| Rest of Europe | 9 | 13 | - | |
| **Total** | **181** | **149** | **111** | |
| **Type of revenue recognition** | | | | |
| At a point in time | 159 | 12 | 111 | |
| Over a period of time | 23 | 137 | - | |
| **Total** | **181** | **149** | **111** | |

| | UMH | DZ BANK – CICB | DZ HYP | DZ PRIVAT-BANK | VR Smart Finanz | Other/ Consolidation | **Total** |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | 3,470 | 498 | - | 219 | - | -98 | 4,089 |
| | 23 | - | - | 325 | - | -5 | 344 |
| | - | 269 | - | 2 | - | 61 | 332 |
| | - | 109 | 7 | - | - | 42 | 162 |
| | - | 69 | 5 | - | - | -3 | 72 |
| | - | 13 | - | - | - | - | 13 |
| | - | - | - | - | - | - | 45 |
| | - | 62 | 11 | 3 | 4 | -76 | 190 |
| | - | - | - | - | - | - | 73 |
| | - | - | - | - | - | - | 77 |
| | 12 | - | - | - | - | 31 | 102 |
| | **3,506** | **1,020** | **23** | **550** | **4** | **-47** | **5,498** |
| | | | | | | | |
| | 2,634 | 1,020 | 23 | 50 | 4 | -64 | 4,087 |
| | 872 | - | - | 499 | - | 16 | 1,410 |
| | **3,506** | **1,020** | **23** | **550** | **4** | **-47** | **5,498** |
| | | | | | | | |
| | 509 | 367 | 20 | 66 | 4 | -54 | 1,195 |
| | 2,996 | 653 | 4 | 484 | - | 6 | 4,303 |
| | **3,506** | **1,020** | **23** | **550** | **4** | **-47** | **5,498** |

## 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.

### Changes in receivables from contracts with customers

| € million | Loans and advances to banks | Loans and advances to customers | Other receivables (other assets) |
|---|---|---|---|
| Balance as at Jan. 1, 2022 | 12 | 139 | 231 |
| Additions | 147 | 595 | 3,084 |
| Derecognitions | -138 | -602 | -3,109 |
| Other | - | - | 3 |
| Balance as at Dec. 31, 2022 | 22 | 132 | 209 |
| Additions | 151 | 547 | 3,110 |
| Derecognitions | -147 | -553 | -3,102 |
| **Balance as at Dec. 31, 2023** | **26** | **127** | **217** |

## 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.

## » 104 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 participates in the program as part of a bidder group comprising DZ BANK, TeamBank, and DZ HYP. The bidder group's total volume of €472 million (December 31, 2022: €11,000 million) is recognized under deposits from banks on the balance sheet.

The basic interest rate in the period January 1, 2022 to June 23, 2022 was minus 0.5 percent. For the period from after June 23, 2022 to November 22, 2022, the interest rate to be applied was the average deposit facility rate for the period from the start of the relevant TLTRO III tranche to November 22, 2022. From November 23, 2022 until maturity or early repayment of the relevant outstanding TLTRO III tranche, the basic interest rate is pegged to the average deposit facility rate for this period. The basic interest rate was recognized in net interest income in an amount of €306 million (2022: €99 million).

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 net lending volume of the bidder group was higher than the required reference volume in the period October 1, 2020 to December 31, 2021, so a 0.5 percentage point lower interest rate applied in the period June 24, 2021 to June 23, 2022. As an additional interest-rate advantage was therefore granted by the ECB, which is a government agency within the meaning of IAS 20.3, this additional interest-rate advantage achieved was accounted for as a government grant in accordance with IAS 20 in 2022. As a result, additional income of €78 million was recognized in net interest income in 2022. Unlike in 2022, no interest-rate advantage was granted in 2023.

In addition to the TLTRO III program, government grants of €28 million were deducted from the carrying amount of investment property held by insurance companies (December 31, 2022: €25 million). The grants are non-interest-bearing, low-interest or forgivable loans. In addition, income subsidies of €1 million were recognized in profit or loss (2022: €1 million).

## » 105 Letters of comfort

DZ BANK has issued letters of comfort for its subsidiaries DZ PRIVATBANK S.A. and DZ HYP. Except in the event of political risk, DZ BANK has thus undertaken to ensure, in proportion to its shareholding, that these companies are able to meet their contractual obligations.

The following letters of comfort have also been issued:

| Entity covered by the letter of comfort | Subject of the undertaking |
|---|---|
| Alchemy Parts (Malta) Ltd. i.L., Floriana, Malta | Liabilities that are due up to the date of liquidation |
| DCII (Malta) Ltd. i.L., Floriana, Malta | Liabilities in connection with the 2022 annual financial statements and liabilities up to USD 240,000 that are due up to the date of liquidation if equity is negative |
| Delfco Leasing (Malta) Ltd., Floriana, Malta | Liabilities in connection with the 2022 annual financial statements and liabilities up to USD 280,000 that are due up to the date of liquidation if equity is negative |
| FPAC (Malta) Ltd. i.L., Floriana, Malta | Liabilities in connection with the 2022 annual financial statements and liabilities up to USD 210,000 that are due up to the date of liquidation if equity is negative |
| Lodestone Parts (Malta) Ltd. i.L., Floriana, Malta | Liabilities in connection with the 2022 annual financial statements and liabilities up to USD 220,000 that are due up to the date of liquidation if equity is negative |
| PW 4168 Solutions (Malta) Ltd., Floriana, Malta | Liabilities in connection with the 2022 annual financial statements and liabilities up to USD 210,000 that are due up to the date of liquidation if equity is negative |

These entities are identified in the list of DZ BANK’s shareholdings (note 115) as being covered by a letter of comfort.

## » 106 Employees

Average number of employees by employee group:

| | 2023 | 2022 |
|---|---|---|
| Full-time employees | 26,179 | 25,863 |
| Part-time employees | 7,443 | 7,122 |
| **Total** | **33,622** | **32,985** |

## » 107 Provisions for defined benefit plans

The provisions for defined benefit plans, which are recognized under provisions and other liabilities (provisions for defined benefit plans of insurance companies), predominantly result from pension plans that no further employees can join (closed plans). There are also defined benefit pension plans for members of boards of managing directors. The majority of new employees in Germany are offered defined contribution pension plans, for which it is not generally necessary to recognize a provision. The expense for defined contribution pension plans attributable to provisions and to other liabilities came to €20 million (2022: €19 million) and €20 million (2022: €18 million) respectively in 2023. Outside Germany, there continue to be both defined contribution and defined benefit plans that are open to new employees. The proportion of the group's total obligations accounted for by obligations outside Germany is not material, as can be seen from the table below.

### Present value of defined benefit obligations

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

| | Provisions | | Other liabilities | |
|---|---|---|---|---|
| € million | **Dec. 31, 2023** | Dec. 31, 2022 | **Dec. 31, 2023** | Dec. 31, 2022 |
| **Final-salary-dependent plans** | **2,302** | 2,165 | **-** | - |
| Germany | 2,215 | 2,071 | - | - |
| Other countries | 88 | 95 | - | - |
| **Defined benefit contributory plans** | **1,026** | 952 | **1,573** | 1,497 |
| Germany | 798 | 733 | 1,570 | 1,495 |
| Other countries | 228 | 219 | 2 | 2 |
| **Accessorial plans** | **87** | 82 | **-** | - |
| Germany | 87 | 82 | - | - |
| **Total** | **3,416** | **3,199** | **1,573** | **1,497** |

The level of market interest rates for investment-grade fixed-income corporate bonds is a significant risk factor for all plans because the discount rate determined from these rates significantly affects the amount of the obligations.

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 lifelong payment obligation. Section 16 (1) of the German Occupational Pensions Act (BetrAVG) requires employers in Germany to review every 3 years whether the pension amount needs to be adjusted to reflect the change in consumer prices or net wages (adjustment review obligation). The main risk factors in the measurement of final-salary-dependent pension plans are longevity, changes in salary, inflation risk, and the discount rate. Longevity, changes in salary, and inflation risk affect the amount of benefits.

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. With the exception of the obligations managed through R+V Pensionsversicherung a.G., the contributions for most obligations are linked to remuneration. The majority of these plans are closed.

A considerable share of the volume is attributable to obligations managed through R+V Pensionsversicherung a.G., which have been treated as defined benefit pension plans since December 31, 2021. The phase of low interest rates, which prevailed until part way through 2022, and the related granting of initial fund loans by companies in the DZ BANK Group to R+V Pensionsversicherung a.G. in 2021 had necessitated a reassessment of the probability of drawdown by the pension providers on the basis of their subsidiary liability. Furthermore, a change to the accounting treatment had been required due to the rules of IDW AcP HFA 50 – IAS 19 – M1. If the value of the plan assets exceeds the present value of the defined benefit obligations, the notional surplus is not recognized as an asset and instead reduces the plan assets to the present value of the defined benefit obligations via the asset ceiling mechanism. This is because the plan assets cannot flow back to the extended initial fund's sponsor entities.

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. Provided that economic conditions remain favorable, 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.

## Actuarial assumptions

The 2018 G mortality tables published by Professor Dr. Klaus Heubeck are used to estimate average life expectancy in the context of measuring defined benefit obligations in Germany. Outside Germany, the measurement of defined benefit obligations is based on the Pri-2012 Private Retirement Plans Mortality Table in the United States, the S3PMA LT for males and S3PFA LT for females in the United Kingdom, the mortality tables pursuant to BVG 2020 GT in Switzerland, and the Dutch Prognosis Table AG2022 in the Netherlands. The following actuarial assumptions are also used:

| | Provisions | | Other liabilities | |
|---|---|---|---|---|
| Percent | **Dec. 31, 2023** | Dec. 31, 2022 | **Dec. 31, 2023** | Dec. 31, 2022 |
| Weighted salary increases | **2.12** | 2.16 | **2.50** | 2.50 |
| Weighted pension increases | **2.04** | 2.09 | **2.30** | 2.30 |

The uniform discount rate used was 3.20 percent (December 31, 2022: 3.70 percent).

## 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.

| | Provisions | | Other liabilities | |
|---|---|---|---|---|
| € million | **Dec. 31, 2023** | Dec. 31, 2022 | **Dec. 31, 2023** | Dec. 31, 2022 |
| Change in the present value of defined benefit obligations as at balance sheet date if | | | | |
| the discount rate were 50 basis points higher | **-189** | -184 | **-97** | -88 |
| the discount rate were 50 basis points lower | **209** | 207 | **109** | 102 |
| the future salary increase were 50 basis points higher | **21** | 30 | **1** | 1 |
| the future salary increase were 50 basis points lower | **-21** | -30 | **-1** | -1 |
| the future pension increase were 25 basis points higher | **61** | 58 | **7** | 6 |
| the future pension increase were 25 basis points lower | **-59** | -55 | **-7** | -6 |
| the life expectancy of a 65-year-old man were 1 year higher | **116** | 114 | **43** | 39 |
| the life expectancy of a 65-year-old man were 1 year lower | **-118** | -104 | **-45** | -41 |

The duration of the defined benefit obligations as at December 31, 2023 was 12.45 years under provisions (December 31, 2022: 12.45 years) and 13.34 years under other liabilities (December 31, 2022: 13.34 years).

## Plan assets

Defined benefit obligations are offset by plan assets. The changes in the funded status of the defined benefit obligations were as follows:

| | Provisions | | Other liabilities | |
|---|---|---|---|---|
| € million | **Dec. 31, 2023** | Dec. 31, 2022 | **Dec. 31, 2023** | Dec. 31, 2022 |
| Present value of defined benefit obligations funded by plan assets | 2,835 | 2,664 | 1,517 | 1,439 |
| Present value of defined benefit obligations not funded by plan assets | 580 | 535 | 56 | 58 |
| **Present value of defined benefit obligations** | **3,416** | **3,199** | **1,573** | **1,497** |
| less fair value of plan assets | -2,440 | -2,352 | -1,715 | -1,653 |
| Asset ceiling | 51 | 55 | 267 | 275 |
| Defined benefit obligations (net) | 1,027 | 903 | 125 | 119 |
| Recognized surplus | 18 | 19 | - | - |
| **Provisions for defined benefit obligations** | **1,045** | **922** | **125** | **119** |
| Reimbursement rights recognized as assets | 4 | 4 | 3 | 3 |

Of the plan assets under provisions, assets of €1,490 million (December 31, 2022: €1,450 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 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 plan assets under other liabilities consist of assets at pension providers and in reinsured pension schemes.

The asset ceiling equates entirely to the amount of the notional surplus, i.e. the amount by which the fair value of the plan assets exceeds the present value of the defined benefit obligations resulting from the pension obligations managed through R+V Pensionsversicherung a.G.

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

AS AT DECEMBER 31, 2023

| € million | Provisions: With quoted market price in an active market | Provisions: Without quoted market price in an active market | Other liabilities: With quoted market price in an active market | Other liabilities: Without quoted market price in an active market |
|---|---|---|---|---|
| Cash and money market investments | - | 49 | - | - |
| Bonds and other fixed-income securities | 1,139 | - | - | - |
| Shares | 167 | - | - | - |
| Investment fund units | 222 | 271 | - | - |
| Other shareholdings | - | 3 | - | - |
| Derivatives | 2 | 1 | - | - |
| Land and buildings | - | 5 | - | - |
| Entitlements arising from insurance policies | - | 157 | - | 229 |
| Investments of R+V Pensionsversicherung a.G. | - | 289 | - | 1,486 |
| Other assets | - | 135 | - | - |
| **Total** | **1,530** | **910** | **-** | **1,715** |

AS AT DECEMBER 31, 2022

| € million | Provisions: With quoted market price in an active market | Provisions: Without quoted market price in an active market | Other liabilities: With quoted market price in an active market | Other liabilities: Without quoted market price in an active market |
|---|---|---|---|---|
| Cash and money market investments | - | 55 | - | - |
| Bonds and other fixed-income securities | 1,109 | - | - | - |
| Shares | 150 | - | - | - |
| Investment fund units | 185 | 248 | - | - |
| Other shareholdings | - | 27 | - | - |
| Derivatives | 2 | 1 | - | - |
| Land and buildings | - | 5 | - | - |
| Entitlements arising from insurance policies | - | 152 | - | 223 |
| Investments of R+V Pensionsversicherung a.G. | - | 280 | - | 1,431 |
| Other assets | - | 138 | - | - |
| **Total** | **1,446** | **906** | **-** | **1,653** |

The plan assets included under bonds and other fixed-income securities and under investments of R+V Pensionsversicherung a.G. continue to be predominantly invested in bonds and other fixed-income securities. If market interest rates fall (as occurred in the year under review), the prices of the fixed-income assets rise. If interest rates rise, however, the prices of the fixed-income assets fall. This reflects the direction of interest-rate sensitivity of the defined benefit obligations and reduces risk to a certain extent. 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 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. As at December 31, 2023, the plan assets included €121 million of the group's own, transferable financial instruments (December 31, 2022: €142 million). The real estate and other assets contained in the plan assets are not used by the companies themselves. The other investments are predominantly floating-rate securities (equities and investment fund units) from around the world, entitlements arising from insurance contracts, short-term investments, other shareholdings, and real estate assets.

Contributions to plan assets of €37 million under provisions (2023: €36 million) and €27 million under other liabilities (2023: €27 million) are expected for 2024.

## Defined benefit obligations (net)

The following table shows the changes in the defined benefit obligations (net), comprising the present value of the defined benefit obligations, the fair value of the plan assets, and the change in the asset ceiling:

PROVISIONS

| € million | Present value of defined benefit obligations | Fair value of plan assets | Asset ceiling | **Defined benefit obligations (net)** |
|---|---|---|---|---|
| Balance as at Jan. 1, 2022 | 4,117 | -2,891 | 23 | 1,248 |
| Current service cost | 66 | - | - | 66 |
| Interest income/expense | 45 | -32 | - | 14 |
| Return on plan assets/reimbursement rights (excluding interest income) | - | 599 | - | 599 |
| Actuarial gains and losses due to changes in demographic assumptions | -1 | - | - | -1 |
| Actuarial gains (-)/losses (+) due to changes in financial assumptions | -982 | - | - | -982 |
| Actuarial gains and losses arising from experience adjustments | 21 | - | - | 21 |
| Changes in the effect of the asset ceiling (excluding interest income/expense) | - | - | 32 | 32 |
| Past service cost | 3 | - | - | 3 |
| Contributions from employers | - | -96 | - | -96 |
| Contributions from beneficiaries (employees) | 8 | -8 | - | - |
| Pension benefits paid including plan settlements | -137 | 84 | - | -53 |
| of which ongoing | -136 | 82 | - | -54 |
| of which as part of plan settlements | -1 | 2 | - | 1 |
| Plan takeovers | 5 | -6 | - | - |
| Reclassifications | 2 | - | - | 2 |
| Changes attributable to currency translation | 1 | -2 | - | -1 |
| Acquisition/addition of subsidiaries | 52 | - | - | 52 |
| Balance as at Dec. 31, 2022 | 3,199 | -2,352 | 55 | 903 |
| Current service cost | 44 | - | - | 44 |
| Interest income/expense | 115 | -85 | 2 | 32 |
| Return on plan assets/reimbursement rights (excluding interest income) | - | -57 | - | -57 |
| Actuarial gains and losses due to changes in demographic assumptions | -1 | - | - | -1 |
| Actuarial gains (-)/losses (+) due to changes in financial assumptions | 162 | - | - | 162 |
| Actuarial gains and losses arising from experience adjustments | 25 | - | - | 25 |
| Changes in the effect of the asset ceiling (excluding interest income/expense) | - | - | -6 | -6 |
| Contributions from employers | - | -25 | - | -25 |
| Contributions from beneficiaries (employees) | 6 | -7 | - | 0 |
| Pension benefits paid including plan settlements | -142 | 89 | - | -52 |
| of which ongoing | -138 | 87 | - | -51 |
| of which as part of plan settlements | -3 | 2 | - | -1 |
| Plan takeovers | 1 | -1 | - | 1 |
| Changes attributable to currency translation | 6 | -4 | - | 1 |
| **Balance as at Dec. 31, 2023** | **3,416** | **-2,440** | **51** | **1,027** |

OTHER LIABILITIES

| € million | Present value of defined benefit obligations | Fair value of plan assets | Asset ceiling | **Defined benefit obligations (net)** |
|---|---|---|---|---|
| Balance as at Jan. 1, 2022 | 2,091 | -2,006 | 118 | 203 |
| Current service cost | 44 | - | - | **44** |
| Interest income/expense | 23 | -22 | 1 | **2** |
| Return on plan assets/reimbursement rights (excluding interest income) | - | 352 | - | **352** |
| Actuarial gains (-)/losses (+) due to changes in financial assumptions | -652 | - | - | **-652** |
| Actuarial gains and losses arising from experience adjustments | 56 | - | - | **56** |
| Changes in the effect of the asset ceiling (excluding interest income/expense) | - | - | 156 | **156** |
| Contributions from beneficiaries (employees) | 1 | -34 | - | **-33** |
| Pension benefits paid including plan settlements | -66 | 57 | - | **-9** |
| Balance as at Dec. 31, 2022 | 1,497 | -1,653 | 275 | 119 |
| Current service cost | 25 | - | - | **25** |
| Interest income/expense | 54 | -61 | 11 | **4** |
| Return on plan assets/reimbursement rights (excluding interest income) | - | -24 | - | **-24** |
| Actuarial gains (-)/losses (+) due to changes in financial assumptions | 97 | - | - | **97** |
| Actuarial gains and losses arising from experience adjustments | -33 | - | - | **-33** |
| Changes in the effect of the asset ceiling (excluding interest income/expense) | - | - | -19 | **-19** |
| Contributions from beneficiaries (employees) | - | -36 | - | **-36** |
| Pension benefits paid including plan settlements | -68 | 59 | - | **-9** |
| **Balance as at Dec. 31, 2023** | **1,573** | **-1,715** | **267** | **125** |

The transactions to be recognized in profit or loss are included in staff expenses.

The actuarial losses to be recognized in other comprehensive income that were due to changes in the financial assumptions used to calculate the present value of the defined benefit obligations under provisions and other liabilities primarily resulted from the decrease in the underlying discount rate to 3.20 percent as at December 31, 2023 (December 31, 2022: 3.70 percent). Other effects were also taken into account, such as the impact of a virtual increase in current pension entitlements of employees carried out by a number of group entities (from 4.0 percent to 6.4 percent) in order to factor in the higher pension adjustments that these entities will have to make in future years as a result of inflation.

The change in the carrying amounts is largely attributable to the accounting treatment of the pension obligations managed through R+V Pensionsversicherung a.G. The asset ceiling affected plan assets resulting from the initial recognition of the pension obligations managed through R+V Pensionsversicherung a.G. as defined benefit pension plans.

## Multi-employer plans

Along with other financial institutions in Germany, entities of the DZ BANK Group are members of organizations such as Versicherungsverein des Bankgewerbes a.G., Berlin, (BVV) and BVV Versorgungskasse des Bankgewerbes e.V., Berlin, (BVVeV). These pension providers provide retirement benefits to eligible employees in Germany. These include plans into which both employers and employees make regular contributions that are usually calculated by applying a contribution rate (as a percentage) to the monthly gross income of the current employees and adding the employer contribution. The tariffs of the pension providers cover both fixed annuity payments with policyholder participation and capital payments. The member entities participate in a settlement class containing the actuarial risk of all pension beneficiaries. There are no agreements about the distribution of deficits or surpluses if the plan is wound up or if a member entity withdraws from the plan. As at December 31, 2023, the two BVV pension providers did not disclose any deficit or surplus. Each member entity is liable only for its own employment-law obligations in accordance with the insurance terms and conditions, benefit plans, and articles of association. The pension provider cannot allocate the assets in question and the defined benefit obligations relating to current and former employees to the individual member entities. The multi-employer defined benefit plans are therefore accounted for as if they were defined contribution plans in accordance with IAS 19.34. Of the 784 entities that are members of the BVV, 4 are DZ BANK Group entities. Approximately 0.6 percent of the current and former employees covered by the BVV are current or former employees of the DZ BANK Group.

### Obligations with minimum funding requirements outside Germany

Measured using the present value of the defined benefit obligations, a volume of €302 million was attributable to plans outside Germany that are subject to minimum funding requirements (December 31, 2022: €301 million). Occupational pension provision in Luxembourg is governed by the Luxembourg Occupational Pensions Act of June 8, 1999 in its most recent version dated January 1, 2019. DZ PRIVATBANK S.A. and IPConcept (Luxemburg) S.A., Strassen, Luxembourg, have decided to manage occupational pension provision through a pension fund. The legally independent pension fund is subject to the Luxembourg Pension Fund Act of July 13, 2005. The pension plan at DZ BANK's London branch is bound by the funding rules of the United Kingdom's Pensions Regulator. The pension obligations for employees of DZ BANK's New York branch are governed by the minimum funding requirements pursuant to the US Employee Retirement Income Security Act (ERISA). The rules laid down by the Swiss Federal Law on Occupational Retirement, Survivors' and Disability Pension Plans (Swiss BVG) apply to DZ PRIVATBANK Schweiz and IPConcept (Schweiz) AG, Zurich, Switzerland.

## » 108 Auditor fees

The total fees charged for 2023 by the independent auditors of the consolidated financial statements, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Frankfurt am Main, its affiliates, and other firms in the international PwC network are broken down by type of service as follows:

| | 2023 | |
|---|---|---|
| € million | Total | of which Germany |
| Auditing services | 13.2 | 11.3 |
| Other attestation services | 1.5 | 1.2 |
| Other services | 0.3 | 0.3 |
| **Total** | **15.1** | **12.8** |

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 for other audits for which the auditors' professional seal must or can be applied, mainly in connection with regulatory requirements. The fees for other services predominantly include fees for consultancy services.

## » 109 Remuneration for the Board of Managing Directors and Supervisory Board of DZ BANK

In 2023, overall remuneration for DZ BANK's Board of Managing Directors from the group in accordance with IAS 24.17 amounted to €13.3 million (2022: €15.4 million). This total is broken down into short-term employee benefits of €9.7 million (2022: €10.2 million), post-employment benefits of €1.9 million (2022: €3.4 million), and share-based payments of €1.7 million (2022: €1.8 million). The remuneration for the Board of Managing Directors in 2023 and 2022 included the total bonus awarded to the Board of Managing Directors for the year in question. Supervisory Board remuneration amounted to €1.0 million (2022: €1.0 million) and consisted of payments due in the short term.

The remuneration for the Board of Managing Directors included contributions of €0.4 million (2022: €0.4 million) to defined contribution pension plans. DZ BANK has defined benefit obligations for the members of the Board of Managing Directors amounting to €30.1 million (December 31, 2022: €27.8 million).

In 2023, the total remuneration for the Board of Managing Directors of DZ BANK for the performance of their duties at DZ BANK and its subsidiaries pursuant to section 314 (1) no. 6a HGB was €11.8 million (2022: €12.4 million), while the total remuneration for the Supervisory Board for the performance of these duties amounted to €1.0 million (2022: €1.0 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 €9.3 million in 2023 (2022: €9.2 million). DZ BANK has defined benefit obligations for former members of the Board of Managing Directors or their surviving dependants amounting to €134.3 million (December 31, 2022: €131.0 million).

## » 110 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 share-based variable remuneration 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. 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 setting pro rata deferred bonuses 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, 2022 | 1.7 | 0.3 |
| Remuneration granted | 0.7 | 0.4 |
| Payment of remuneration granted in 2021 | -0.1 | - |
| Payment of remuneration granted in previous years | -0.4 | -0.1 |
| Unpaid share-based payments as at Dec. 31, 2022 | 1.9 | 0.5 |
| Remuneration granted | 0.7 | 0.3 |
| Payment of remuneration granted in 2022 | -0.2 | -0.1 |
| Payment of remuneration granted in previous years | -0.3 | - |
| **Unpaid share-based payments as at Dec. 31, 2023** | **2.1** | **0.7** |

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, 2022 | 2.7 | 0.3 |
| Remuneration granted | 1.0 | 0.1 |
| Payment of remuneration granted in previous years | -0.8 | -0.1 |
| Unpaid share-based payments as at Dec. 31, 2022 | 2.9 | 0.3 |
| Remuneration granted | 1.0 | 0.1 |
| Payment of remuneration granted in previous years | -0.9 | -0.1 |
| **Unpaid share-based payments as at Dec. 31, 2023** | **3.0** | **0.3** |

TeamBank has entered into agreements governing variable remuneration paid over several years with the members of its Board of Managing Directors and risk takers. 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. The remaining 60 percent is paid in 5 tranches, each of 12 percent, within 5 calendar years. The variable remuneration is dependent on the long-term changes in the enterprise value of TeamBank. 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 | Risk takers |
|---|---|---|
| Unpaid share-based payments as at Jan. 1, 2022 | 1.2 | 0.1 |
| Remuneration granted | 0.5 | 0.1 |
| Payment of remuneration granted in 2021 | -0.1 | - |
| Payment of remuneration granted in previous years | -0.2 | - |
| Unpaid share-based payments as at Dec. 31, 2022 | 1.4 | 0.2 |
| Remuneration granted | 0.5 | 0.1 |
| Payment of remuneration granted in 2022 | -0.1 | - |
| Payment of remuneration granted in previous years | -0.2 | - |
| **Unpaid share-based payments as at Dec. 31, 2023** | **1.5** | **0.3** |

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 5 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 5 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. 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 €8.65 as at December 31, 2018, a value of €8.35 as at December 31, 2019, a value per share of €8.05 as at December 31, 2020, a value per share of €8.80 as at December 31, 2021, a value per share of €9.05 as at December 31, 2022, and a value per share of €10.45 as at December 31, 2023, 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, 2022 | 3.2 | 14.9 |
| Remuneration granted | 1.9 | 4.8 |
| Payment of remuneration granted in 2021 | -0.5 | -3.2 |
| Payment of remuneration granted in previous years | -1.0 | -4.1 |
| Unpaid share-based payments as at Dec. 31, 2022 | 3.6 | 12.4 |
| Remuneration granted | 1.9 | 3.9 |
| Payment of remuneration granted in 2022 | -0.4 | -2.2 |
| Payment of remuneration granted in previous years | -1.7 | -3.9 |
| **Unpaid share-based payments as at Dec. 31, 2023** | **3.4** | **10.1** |

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, 2022 | 1.1 | 0.4 |
| Remuneration granted | 0.4 | 0.1 |
| Payment of remuneration granted in 2021 | -0.1 | - |
| Payment of remuneration granted in previous years | -0.3 | -0.1 |
| Unpaid share-based payments as at Dec. 31, 2022 | 1.1 | 0.4 |
| Remuneration granted | 0.4 | 0.2 |
| Payment of remuneration granted in 2022 | -0.1 | -0.1 |
| Payment of remuneration granted in previous years | -0.3 | -0.1 |
| **Unpaid share-based payments as at Dec. 31, 2023** | **1.0** | **0.5** |

DZ PRIVATBANK has entered into arrangements about the payment of variable remuneration components 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. 80 percent of the total variable remuneration is deferred over a period of up to 6 years from when the bonus is determined. Amounts are paid out after taking into account deferral or retention periods. 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. Negative contributions to profits are taken into account when setting bonuses, when setting each pro rata deferred bonus, and when setting the pro rata deferred bonus 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 DZ PRIVATBANK:

| € million | Board of Managing Directors | Risk takers |
|---|---|---|
| Unpaid share-based payments as at Jan. 1, 2022 | 1.8 | 0.4 |
| Remuneration granted | 1.4 | 0.1 |
| Payment of remuneration granted in 2021 | -0.1 | - |
| Payment of remuneration granted in previous years | -0.2 | -0.1 |
| Reduction of share-based payments | -0.2 | - |
| Unpaid share-based payments as at Dec. 31, 2022 | 2.6 | 0.4 |
| Remuneration granted | 1.3 | 0.2 |
| Payment of remuneration granted in 2022 | -0.1 | - |
| Payment of remuneration granted in previous years | -0.3 | -0.1 |
| **Unpaid share-based payments as at Dec. 31, 2023** | **3.5** | **0.5** |

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, 2022 | 1.3 |
| Remuneration granted | 0.4 |
| Payment of remuneration granted in 2021 | -0.1 |
| Payment of remuneration granted in previous years | -0.3 |
| Reduction of share-based payments | -0.2 |
| Unpaid share-based payments as at Dec. 31, 2022 | 1.1 |
| Remuneration granted | 0.4 |
| Payment of remuneration granted in previous years | -0.2 |
| Reduction of share-based payments | -0.2 |
| **Unpaid share-based payments as at Dec. 31, 2023** | **1.1** |

If the variable remuneration granted to the Board of Managing Directors and risk takers at DVB exceeded €50,000 for a financial year, it was not paid out immediately and was instead subject to certain deferral periods and additional retention periods. The employee became entitled immediately (in the following year) to 40 percent of the granted variable remuneration. Only 50 percent of this amount was paid immediately; the remaining 50 percent was subject to an additional one-year retention period, during which it was pegged to the change in the DVB Bank Group's enterprise value. The remaining 60 percent of the variable remuneration was divided into 5 tranches (each equating to 12 percent) and deferred over a period of 1 to 5 years. After the deferral period, 50 percent of each tranche was subject to an additional one-year retention period and was pegged to the change in the DVB Bank Group's enterprise value during both the deferral period and the retention period. Entitlements arising from deferred variable remuneration had been sold in connection with the sale of the Aviation Asset Management and Aviation Investment Management businesses in 2021. The proportion of the deferred variable remuneration that had been sold that was attributable to share-based payments was shown under disposal of share-based payments in 2021. The disposal of share-based payments in 2022 was due to the merger of DVB Bank SE into DZ BANK AG.

The following table shows the changes in unpaid remuneration components at DVB in 2022:

| € million | Board of Managing Directors | Risk takers |
|---|---|---|
| Unpaid share-based payments as at Jan. 1, 2022 | 0.4 | 2.2 |
| Remuneration granted | 0.1 | 1.0 |
| Payment of remuneration granted in 2021 | -0.1 | -0.2 |
| Payment of remuneration granted in previous years | - | -0.4 |
| Disposal of share-based payments | -0.4 | -2.6 |
| Unpaid share-based payments as at Dec. 31, 2022 | - | - |

In 2023, the agreements described above gave rise to expenses for share-based payment transactions in the DZ BANK Group of €18.6 million (2022: €11.6 million) and income from the reversal of provisions for share-based payments of €0.2 million (2022: €0.2 million). As at December 31, 2023, the provisions recognized for share-based payment transactions in the DZ BANK Group amounted to €61.8 million (December 31, 2022: €54.4 million).

## » 111 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, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Loans and advances to banks** | **53** | **24** |
| to joint ventures | 53 | 24 |
| **Loans and advances to customers** | **160** | **140** |
| to subsidiaries | 53 | 44 |
| to joint ventures | 13 | 11 |
| to associates | 75 | 69 |
| to pension plans for the benefit of employees | 19 | 15 |
| **Financial assets held for trading** | **2** | **2** |
| of other related parties (entities) | 1 | 2 |
| **Investments** | **16** | **11** |
| of subsidiaries | 11 | 6 |
| of joint ventures | 5 | 5 |
| **Investments held by insurance companies** | **246** | **210** |
| of subsidiaries | 144 | 126 |
| of pension plans for the benefit of employees | 102 | 84 |
| **Other assets** | **32** | **34** |
| of subsidiaries | 30 | 28 |
| of associates | 1 | 1 |
| of pension plans for the benefit of employees | - | 5 |
| **Non-current assets and disposal groups classified as held for sale** | **6** | **-** |
| of associates | 6 | - |
| **Deposits from banks** | **49** | **305** |
| owed to subsidiaries | 5 | 7 |
| owed to joint ventures | 44 | 298 |
| **Deposits from customers** | **254** | **184** |
| owed to subsidiaries | 166 | 122 |
| owed to associates | 6 | 4 |
| owed to other related parties (entities) | 82 | 58 |
| **Financial liabilities held for trading** | **4** | **5** |
| of other related parties (entities) | 4 | 5 |
| **Insurance liabilities** | **1** | **-** |
| of subsidiaries | 1 | - |
| **Other liabilities** | **17** | **27** |
| of subsidiaries | 8 | 20 |
| of joint ventures | 1 | 1 |
| of pension plans for the benefit of employees | 8 | 7 |
| **Subordinated capital** | **34** | **23** |
| of pension plans for the benefit of employees | 34 | 22 |
| of other related parties (entities) | - | 1 |

| € million | Dec. 31, 2023 | Dec. 31, 2022 |
|---|---|---|
| **Financial guarantee contracts** | **44** | **1** |
| for subsidiaries | 42 | - |
| for associates | 1 | - |
| **Loan commitments** | **998** | **926** |
| to subsidiaries | 59 | 45 |
| to joint ventures | 350 | 250 |
| to associates | 1 | 1 |
| to pension plans for the benefit of employees | 588 | 630 |

Income of €3 million (2022: income of €15 million) in the total reported net interest income and expenses of €22 million (2022: expenses of €56 million) in the total reported net income from insurance business were attributable to transactions with related parties (entities). The balance of income and expenses included in the total reported net fee and commission income amounted to €0 million (2022: expenses of €1 million).

## 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, 2023, the DZ BANK Group's loans and loan commitments to related parties (persons) amounted to €0.4 million (December 31, 2022: €0.3 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.

## » 112 Board of Managing Directors

**Uwe Fröhlich**
(Co-Chief Executive Officer)
Responsibilities: Cooperative Banks/Verbund; Communications & Marketing; Research and Economics; Strategy & Group Development (including Sustainability Coordination); Structured Finance

**Dr. Cornelius Riese**
(Co-Chief Executive Officer)
Responsibilities: Group Audit; Legal; Strategy & Group Development (including Sustainability Coordination)

**Souâd Benkredda**
Responsibilities: Capital Markets Trading; Capital Markets Institutional Clients; Capital Markets Retail Clients; Group Treasury

**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

**Johannes Koch**
(Member of the Board of Managing Directors since January 1, 2024)
Responsibilities: Group Human Resources

**Michael Speth**
Responsibilities: Group Risk Controlling;

Group Risk Control & Services; Credit

**Thomas Ullrich**
Responsibilities: Operations; Payments & Accounts; Transaction Management

## » 113 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

**Ingo Stockhausen**
(Deputy Chairman of the Supervisory Board)
Chief Executive Officer
Volksbank Oberberg eG

**Uwe Barth**
Spokesman of the Board of Managing Directors
Volksbank Freiburg eG

**Heiner Beckmann**
Senior manager
Sales Director South-West
R+V Allgemeine Versicherung AG

**Pia Erning**
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank

**Timm Häberle**
Chief Executive Officer
VR-Bank Ludwigsburg 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

**Josef Hodrus**
Spokesman of the Board of Managing Directors
Volksbank Allgäu-Oberschwaben eG

**Marija Kolak**
President
Bundesverband der Deutschen Volksbanken
und Raiffeisenbanken e.V. (BVR)

**Sascha Monschauer**
Chief Executive Officer
Volksbank RheinAhrEifel eG

**Wolfgang Nett**
Sales Director
Union Investment Privatfonds GmbH

**Rolf Dieter Pogacar**
Employee
R+V Allgemeine Versicherung AG

**Stephan Schack**
Chief Executive Officer
Volksbank Raiffeisenbank eG, Itzehoe

**Sigrid Stenzel**
Freelance employee
ver.di Niedersachsen-Bremen

**Kevin Voß**
Labor union secretary
Banking industry group
ver.di Bundesverwaltung

**Dr. Gerhard Walther**
Chief Executive Officer
VR-Bank Mittelfranken Mitte eG

## Supervisory Board committees

### Nominations Committee
Henning Deneke-Jöhrens, Chairman
Ulrich Birkenstock, Deputy Chairman*
Pia Erning*
Timm Häberle
Wolfgang Nett*
Ingo Stockhausen

### Audit Committee
Timm Häberle, Chairman
Henning Deneke-Jöhrens
Pia Erning*
Dr. Peter Hanker
Andrea Hartmann*
Marija Kolak
Rolf Dieter Pogacar*
Stephan Schack
Ingo Stockhausen

### Remuneration Control Committee
Henning Deneke-Jöhrens, Chairman
Ulrich Birkenstock, Deputy Chairman*
Pia Erning*
Dr. Peter Hanker
Wolfgang Nett*
Ingo Stockhausen

### Risk Committee
Dr. Peter Hanker, Chairman
Heiner Beckmann*
Henning Deneke-Jöhrens
Timm Häberle
Andrea Hartmann*
Pilar Herrero Lerma, member since May 24, 2023*
Dr. Dierk Hirschel*
Sascha Monschauer
Ingo Stockhausen
Dr. Gerhard Walther

### Mediation Committee
Henning Deneke-Jöhrens, Chairman
Ulrich Birkenstock, Deputy Chairman*
Dr. Dierk Hirschel, member since January 17, 2023*
Ingo Stockhausen

*Employee representatives.

# » 114 Supervisory mandates held by members of the Board of Managing Directors and employees

## Within DZ BANK

As at December 31, 2023, 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**<br>(Co-Chief Executive Officer) | DZ HYP AG, Hamburg and Münster (*)<br>Chairman of the Supervisory Board |
| | DZ PRIVATBANK S.A., Strassen (*)<br>Chairman of the Supervisory Board |
| | VR Smart Finanz AG, Eschborn (*)<br>Chairman of the Supervisory Board |
| **Dr. Cornelius Riese**<br>(Co-Chief Executive Officer) | Bausparkasse Schwäbisch Hall AG, Schwäbisch Hall (*)<br>Chairman of the Supervisory Board |
| | R+V Versicherung AG, Wiesbaden (*)<br>Chairman of the Supervisory Board |
| | TeamBank AG Nürnberg, Nuremberg (*)<br>Chairman of the Supervisory Board |
| | Union Asset Management Holding AG, Frankfurt am Main (*)<br>Chairman of the Supervisory Board |
| **Souâd Benkredda** | R+V Lebensversicherung AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| **Uwe Berghaus** | DZ HYP AG, Hamburg and Münster (*)<br>Member of the Supervisory Board |
| | EDEKABANK AG, Hamburg<br>Member of the Supervisory Board |

| | |
|---|---|
| **Dr. Christian Brauckmann** | Atruvia AG, Frankfurt am Main<br>Member of the Supervisory Board |
| | Deutsche WertpapierService Bank AG, Frankfurt am Main<br>Chairman of the Supervisory Board |
| | DZ PRIVATBANK S.A., Strassen (*)<br>Deputy Chairman of the Supervisory Board |
| **Ulrike Brouzi** | Bausparkasse Schwäbisch Hall AG, Schwäbisch Hall (*)<br>Member of the Supervisory Board |
| | R+V Allgemeine Versicherung AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| | R+V Lebensversicherung AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| | Salzgitter AG, Salzgitter<br>Member of the Supervisory Board |
| | Union Asset Management Holding AG, Frankfurt am Main (*)<br>Member of the Supervisory Board |
| **Johannes Koch**<br>(member since January 1, 2024) | Deutsche WertpapierService Bank AG, Frankfurt am Main<br>Member of the Supervisory Board |
| **Michael Speth** | BAG Bankaktiengesellschaft, Hamm<br>Member of the Supervisory Board |
| | DZ HYP AG, Hamburg and Münster (*)<br>Member of the Supervisory Board |
| | R+V Versicherung AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| | VR Smart Finanz AG, Eschborn (*)<br>Deputy Chairman of the Supervisory Board |
| **Thomas Ullrich** | Deutsche WertpapierService Bank AG, Frankfurt am Main<br>Member of the Supervisory Board |
| | TeamBank AG Nürnberg, Nuremberg (*)<br>Deputy Chairman of the Supervisory Board |
| | VR Payment GmbH, Frankfurt am Main (*)<br>Chairman of the Supervisory Board |

## DZ BANK employees

| | |
|---|---|
| **Rolf Büscher** | ReiseBank AG, Frankfurt am Main (*)<br>Member of the Supervisory Board |
| **Winfried Münch** | AKA Ausfuhrkredit-Gesellschaft mbH, Frankfurt am Main<br>Member of the Supervisory Board |
| **Jochen Philipp** | Banco Cooperativo Español S.A., Madrid<br>Member of the Board of Directors |
| **Claudio Ramsperger** | Cassa Centrale Banca – Credito Cooperativo Italiano S.p.A., Trento<br>Member of the Board of Directors |
| **Gregor Roth** | ReiseBank AG, Frankfurt am Main (*)<br>Chairman of the Supervisory Board<br><br>VR Payment GmbH, Frankfurt am Main (*)<br>Member of the Supervisory Board |
| **Peter Tenbohlen** | Deutsche WertpapierService Bank AG, Frankfurt am Main<br>Member of the Supervisory Board |
| **Dr. Ulrich Walter** | Deutsche WertpapierService Bank AG, Frankfurt am Main<br>Member of the Supervisory Board |
| **Dagmar Werner** | Banco Cooperativo Español S.A., Madrid<br>Member of the Board of Directors |

## In the DZ BANK Group

As at December 31, 2023, 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**<br>Chief Executive Officer<br>Bausparkasse Schwäbisch Hall AG | Schwäbisch Hall Kreditservice GmbH, Schwäbisch Hall (*)<br>Chairman of the Supervisory Board |
| **Peter Magel**<br>Member of the Board of Managing Directors<br>Bausparkasse Schwäbisch Hall AG | Schwäbisch Hall Kreditservice GmbH, Schwäbisch Hall (*)<br>Member of the Supervisory Board |
| **Claudia Klug**<br>General Executive Manager<br>Bausparkasse Schwäbisch Hall AG | Schwäbisch Hall Facility Management GmbH,<br>Schwäbisch Hall (*)<br>Chairwoman of the Supervisory Board |
| **Dr. Dirk Otterbach**<br>Senior manager<br>Bausparkasse Schwäbisch Hall AG | Schwäbisch Hall Facility Management GmbH,<br>Schwäbisch Hall (*)<br>Member of the Supervisory Board |

| | |
|---|---|
| **Dr. Norbert Rollinger**<br>Chief Executive Officer<br>R+V Versicherung AG | Condor Lebensversicherungs-AG, Hamburg (*)<br>Chairman of the Supervisory Board |
| | KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*)<br>Chairman of the Supervisory Board |
| | KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*)<br>Chairman of the Supervisory Board |
| | Raiffeisendruckerei GmbH, Neuwied<br>Member of the Supervisory Board |
| | R+V Allgemeine Versicherung AG, Wiesbaden (*)<br>Chairman of the Supervisory Board |
| | R+V Krankenversicherung AG, Wiesbaden (*)<br>Chairman of the Supervisory Board |
| | R+V Lebensversicherung AG, Wiesbaden (*)<br>Chairman of the Supervisory Board |
| | R+V Pensionsfonds AG, Wiesbaden (*)<br>Chairman of the Supervisory Board |
| | Union Asset Management Holding AG, Frankfurt am Main (*)<br>Member of the Supervisory Board |
| **Claudia Andersch**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | CHEMIE Pensionsfonds AG, Munich (*)<br>Member of the Supervisory Board |
| | Condor Lebensversicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board |
| | R+V Pensionsfonds AG, Wiesbaden (*)<br>Deputy Chairwoman of the Supervisory Board |
| | R+V Pensionskasse AG, Wiesbaden (*)<br>Chairwoman of the Supervisory Board |
| **Dr. Klaus Endres**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | R+V Direktversicherung AG, Wiesbaden (*)<br>Chairman of the Supervisory Board |
| | Securitas Holding GmbH, Berlin (*)<br>Member of the Supervisory Board |
| | Sprint Sanierung GmbH, Cologne (*)<br>Chairman of the Supervisory Board |

| | |
|---|---|
| **Jens Hasselbächer**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | R+V Direktversicherung AG, Wiesbaden (*)<br>Deputy Chairman of the Supervisory Board<br><br>R+V Krankenversicherung AG, Wiesbaden (*)<br>Deputy Chairman of the Supervisory Board |
| **Dr. Christoph Lamby**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | Condor Allgemeine Versicherungs-AG, Hamburg (*)<br>Chairman of the Supervisory Board<br><br>Extremus Versicherungs-AG, Cologne<br>Member of the Supervisory Board<br><br>KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>R+V Pensionskasse AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| **Tillmann Lukosch**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | Condor Allgemeine Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>R+V Direktversicherung AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| **Julia Merkel**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>R+V Pensionskasse AG, Wiesbaden (*)<br>Member of the Supervisory Board<br><br>Südzucker AG, Mannheim<br>Member of the Supervisory Board |

| | |
|---|---|
| **Marc René Michallet**<br>Member of the Board of Managing Directors<br>R+V Versicherung AG | CHEMIE Pensionsfonds AG, Munich (*)<br>Member of the Supervisory Board<br><br>Condor Allgemeine Versicherungs-AG, Hamburg (*)<br>Deputy Chairman of the Supervisory Board<br><br>Condor Lebensversicherungs-AG, Hamburg (*)<br>Deputy Chairman of the Supervisory Board<br><br>GWG Gesellschaft für Wohnungs- und Gewerbebau Baden-Württemberg AG, Stuttgart (*)<br>Chairman of the Supervisory Board<br><br>KRAVAG-ALLGEMEINE Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>KRAVAG-LOGISTIC Versicherungs-AG, Hamburg (*)<br>Member of the Supervisory Board<br><br>R+V Pensionsfonds AG, Wiesbaden (*)<br>Member of the Supervisory Board |
| **Christian Polenz**<br>Deputy Chief Executive Officer<br>TeamBank AG Nürnberg | SCHUFA Holding AG, Wiesbaden<br>Chairman of the Supervisory Board |
| **Hans Joachim Reinke**<br>Chief Executive Officer<br>Union Asset Management Holding AG | Union Investment Institutional GmbH, Frankfurt am Main (*)<br>Deputy Chairman of the Supervisory Board<br><br>Union Investment Privatfonds GmbH, Frankfurt am Main (*)<br>Chairman of the Supervisory Board<br><br>Union Investment Real Estate GmbH, Hamburg (*)<br>Deputy Chairman of the Supervisory Board |
| **Sonja Albers**<br>Member of the Board of Managing Directors<br>Union Asset Management Holding AG | Union Investment Service Bank AG, Frankfurt am Main (*)<br>Chairwoman of the Supervisory Board |

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|---|---|
| **Dr. Frank Engels**<br>Member of the Board of Managing Directors<br>Union Asset Management Holding AG | Quoniam Asset Management GmbH, Frankfurt am Main (*)<br>Chairman of the Supervisory Board<br><br>Union Investment Institutional Property GmbH, Hamburg (*)<br>Deputy Chairman of the Supervisory Board<br><br>Union Investment Privatfonds GmbH, Frankfurt am Main (*)<br>Deputy Chairman of the Supervisory Board<br><br>Union Investment Service Bank AG, Frankfurt am Main (*)<br>Deputy Chairman of the Supervisory Board |
| **André Haagmann**<br>Member of the Board of Managing Directors<br>Union Asset Management Holding AG | Union Investment Institutional GmbH, Frankfurt am Main (*)<br>Chairman of the Supervisory Board<br><br>Union Investment Institutional Property GmbH, Hamburg (*)<br>Chairman of the Supervisory Board<br><br>Union Investment Real Estate GmbH, Hamburg (*)<br>Chairman of the Supervisory Board |
| **Dr. Daniel Günnewig**<br>Employee<br>Union Asset Management Holding AG | Union Investment Service Bank AG, Frankfurt am Main (*)<br>Member of the Supervisory Board |
| **Dr. Gunter Haueisen**<br>Employee<br>Union Asset Management Holding AG | Quoniam Asset Management GmbH, Frankfurt am Main (*)<br>Member of the Supervisory Board |
| **Harald Rieger**<br>Member of the Board of Managing Directors<br>Union Investment Institutional GmbH | Quoniam Asset Management GmbH, Frankfurt am Main (*)<br>Deputy Chairman of the Supervisory Board |
| **Dr. Michael Bütter**<br>Chief Executive Officer<br>Union Investment Real Estate GmbH | Union Investment Institutional Property GmbH, Hamburg (*)<br>Member of the Supervisory Board |
| **Jörg Kotzenbauer**<br>Chief Executive Officer<br>ZBI GmbH | ZBI Fondsmanagement GmbH, Erlangen (*)<br>Chairman of the Supervisory Board |
| **Marco Knopp**<br>Member of the Board of Managing Directors<br>ZBI GmbH | ZBI Fondsmanagement GmbH, Erlangen (*)<br>Deputy Chairman of the Supervisory Board |

# » 115 List of shareholdings

## SUBSIDIARIES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| Alchemy Parts (Malta) Limited i.L. 3) | Floriana, Malta | - | | 21 | -52 | |
| APZ Beteiligungs GmbH 1) | Darmstadt | 88.50 | 100.00 | 4,815 | -725 | * |
| APZ CarMotion GmbH 1) | Fischamend, Austria | 100.00 | | 698 | -80 | * |
| APZ GmbH 1) | Darmstadt | 100.00 | | 7,021 | - | * |
| APZ Mobility GmbH 1) | Darmstadt | 100.00 | | - | -588 | * |
| APZ Smart Repair GmbH 1) | Munich | 100.00 | | 139 | - | * |
| Assimoco S.p.A. 1) | Milan, Italy | 69.05 | | 279,535 | 18,767 | * |
| Assimoco Vita S.p.A. 1) | Milan, Italy | 86.67 | | 302,343 | 17,323 | * |
| Attrax Financial Services S.A. 1) | Senningerberg, Luxembourg | 100.00 | | 84,805 | 22,056 | |
| Aufbau und Handelsgesellschaft mbH 1) | Stuttgart | 94.90 | | 525 | - | * |
| AXICA Kongress- und Tagungszentrum Pariser Platz 3 GmbH 4) | Berlin | 100.00 | | 26 | - | |
| axytos Finance Holding GmbH 1) | Langen | 75.00 | | 3,955 | -113 | * |
| axytos GmbH 1) | Langen | 100.00 | | -3,092 | -1,981 | * |
| axytos Software GmbH 1) | Langen | 100.00 | | - | -608 | * |
| axytovento GmbH 1) | Langen | 100.00 | | 8 | -1 | * |
| BankingGuide GmbH | Düsseldorf | 60.00 | | 803 | -143 | * |
| BAUFINEX GmbH 1) | Schwäbisch Hall | 70.00 | | 784 | -1,980 | |
| BAUFINEX Service GmbH 1) | Berlin | 50.00 | 75.00 | 25 | - | |
| Bausparkasse Schwäbisch Hall Aktiengesellschaft - Bausparkasse der Volksbanken und Raiffeisenbanken - 4) | Schwäbisch Hall | 97.59 | | 1,812,302 | - | |
| Beteiligungsgesellschaft Westend 1 mbH & Co. KG | Frankfurt am Main | 94.90 | | 28,324 | 10,840 | |
| BWG Baugesellschaft Württembergischer Genossenschaften mbH 1) | Stuttgart | 94.78 | | 9,965 | - | * |
| carexpert Kfz-Sachverständigen GmbH 1) | Mainz | 60.00 | | 1,835 | 443 | |
| CHEMIE Pensionsfonds AG 1) | Wiesbaden | 100.00 | | 32,818 | 1,000 | |
| Chiefs Aircraft Holding (Malta) Limited i.L. | Floriana, Malta | - | | - | -116 | * |
| CI CONDOR Immobilien GmbH 1) | Hamburg | 100.00 | | 20,100 | - | |
| compertis Beratungsgesellschaft für betriebliches Vorsorgemanagement mbH 1) | Wiesbaden | 100.00 | | 3,458 | 1,113 | |
| Condor Allgemeine Versicherungs-Aktiengesellschaft 1) 4) | Hamburg | 100.00 | | 41,762 | - | |
| Condor Dienstleistungs GmbH 1) | Hamburg | 100.00 | | 619 | 43 | |
| Condor Lebensversicherungs-Aktiengesellschaft 1) | Hamburg | 94.98 | | 51,742 | - | |
| DCII (Malta) Limited i.L. 3) | Floriana, Malta | - | | 8 | -41 | |
| Delfco Leasing (Malta) Limited 3) | Floriana, Malta | - | | 12 | -31 | |
| Deucalion Capital II Limited | George Town, Cayman Islands | - | | -609 | 1,463 | ** |
| Deucalion Capital VIII Limited | George Town, Cayman Islands | - | | -74 | -6,698 | ** |
| Deucalion Capital X Ltd. | George Town, Cayman Islands | - | | n/a | n/a | |
| Deucalion Ltd. | George Town, Cayman Islands | - | | 28,883 | 1,709 | ** |
| 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 | |
| DEVIF-Fonds Nr. 60 Deutsche Gesellschaft für Investmentfonds 1) | Frankfurt am Main | - | | n/a | n/a | |
| Dilax Beteiligungs Verwaltungsgesellschaft mbH 1) | Berlin | 100.00 | | 24 | - | * |
| Dilax Beteiligungsgesellschaft mbH & Co. KG 1) | Berlin | 92.39 | | 10,322 | -177 | * |
| Dilax France SAS 1) | Valence, France | 100.00 | | 623 | 64 | * |
| Dilax Intelcom AG 1) | Ermatingen, Switzerland | 100.00 | | 377 | 70 | * |
| Dilax Intelcom GmbH 1) | Berlin | 97.01 | | 1,568 | -2,297 | * |
| Dilax Intelcom Iberica S.L.U. 1) | Madrid, Spain | 100.00 | | 416 | 33 | * |
| Dilax Management Investment Reserve GmbH 1) | Berlin | 100.00 | | 230 | 1 | * |
| Dilax Management Investment Verwaltungsgesellschaft mbH 1) | Berlin | 100.00 | | 15 | -2 | * |
| Dilax Management Investmentgesellschaft mbH & Co. KG 1) | Berlin | 99.50 | | 165 | -8 | * |
| Dilax Systems Inc. 1) | Saint Lambert, Canada | 100.00 | | 1,346 | 31 | * |
| Dilax Systems UK Ltd. 1) | London, UK | 100.00 | | 68 | 1 | * |
| DILAX Systems US Inc 1) | Wilmington, USA | 100.00 | | 39 | 19 | * |
| DVB Bank America N.V. i.L. | Willemstad, Curaçao | 100.00 | | 5,343 | 1 | |
| DVB Fontainburg Aviation Capital Services Ltd (Cayman Islands) | Grand Cayman, Cayman Islands | - | | n/a | n/a | |
| DVB Transport Finance Limited | London, UK | 100.00 | | 32,464 | -821 | |
| DVG Deutsche Vermögensverwaltungs-Gesellschaft mit beschränkter Haftung 4) | Frankfurt am Main | 100.00 | | 82 | - | |

## SUBSIDIARIES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| DZ BANK Kunststiftung gGmbH | Frankfurt am Main | 100.00 | | 82 | 69 | * |
| DZ BANK Sao Paulo Representacao Ltda. | São Paulo, Brazil | 100.00 | | 2,512 | 365 | * |
| DZ Beteiligungsgesellschaft mbH Nr. 11 4) | Frankfurt am Main | 100.00 | | 4,220 | - | |
| DZ Beteiligungsgesellschaft mbH Nr. 14 4) | Frankfurt am Main | 100.00 | | 51 | - | |
| DZ Beteiligungsgesellschaft mbH Nr. 18 4) | Frankfurt am Main | 100.00 | | 58,973 | - | |
| DZ Beteiligungsgesellschaft mbH Nr. 21 4) | Frankfurt am Main | 100.00 | | 25 | - | |
| DZ Beteiligungsgesellschaft mbH Nr. 22 | Frankfurt am Main | 100.00 | | 33 | -4 | |
| DZ Beteiligungsgesellschaft mbH Nr. 23 4) | Frankfurt am Main | 100.00 | | 25 | - | |
| DZ Beteiligungsgesellschaft mbH Nr. 24 | Frankfurt am Main | 100.00 | | 33 | -2 | |
| DZ CompliancePartner GmbH 4) | Neu-Isenburg | 100.00 | | 2,086 | - | |
| DZ FINANCIAL MARKETS LLC | New York, USA | 100.00 | | 7,844 | 1,859 | * |
| DZ Gesellschaft für Grundstücke und Beteiligungen mbH 4) | Frankfurt am Main | 100.00 | | 5,207 | - | |
| DZ HYP AG 3) 4) | Hamburg/Münster | 96.42 | | 1,127,331 | - | |
| DZ PRIVATBANK (Schweiz) AG 1) | Zurich, Switzerland | 100.00 | | 202,699 | 5,969 | |
| DZ PRIVATBANK S.A. 3) | Strassen, Luxembourg | 91.83 | | 1,143,663 | 86,877 | |
| DZ Versicherungsvermittlung Gesellschaft mbH 4) | Frankfurt am Main | 100.00 | | 299 | - | |
| easymize GmbH 1) | Wiesbaden | 100.00 | | 270 | 1,707 | |
| Englische Strasse 5 GmbH 1) | Wiesbaden | 90.00 | | 15,790 | 597 | |
| Evo IT Holding GmbH 1) | Vienna, Austria | 80.00 | | 12,270 | 2,750 | * |
| Evol.X Customer Experience GmbH 1) | Vienna, Austria | 100.00 | | n/a | n/a | |
| Evolit Consulting GmbH 1) | Vienna, Austria | 100.00 | | 1,849 | 1,740 | * |
| Evolit Slovakia s.r.o. 1) | Poprad, Slovakia | 75.00 | | 48 | -2 | * |
| Fischer Privatkunden Makler GmbH 1) | Nagold | 90.00 | | 162 | 135 | * |
| FKS-NAVIGIUM GmbH 1) | Eschborn | 100.00 | | -4,382 | 337 | |
| FPAC (Malta) Limited i.L. 3) | Floriana, Malta | 100.00 | | 1 | -45 | |
| Fundamenta Erteklanc Ingatlanközvetitö es Szolgaltato Kft. 1) | Budapest, Hungary | 100.00 | | -1,271 | 189 | |
| Fundamenta-Lakáskassza Lakás-takarékpénztár Zrt. 1) | Budapest, Hungary | 52.64 | | 190,156 | 27,055 | |
| Fundamenta-Lakáskassza Pénzügyi Közvetitö Kft. 1) | Budapest, Hungary | 100.00 | | 9,952 | 1,036 | |
| GAF Active Life 1 Renditebeteiligungs-GmbH & Co. KG 1) | Nidderau | 96.56 | | 13,594 | 16,594 | * |
| GAF Active Life 2 Renditebeteiligungs-GmbH & Co. KG 1) | Nidderau | 95.03 | | 65,178 | 16,741 | * |
| GENO Broker GmbH 4) | Frankfurt am Main | 100.00 | | 10,000 | - | |
| Genoflex GmbH 1) | Nuremberg | 70.00 | | 467 | -372 | * |
| GMS Development GmbH 1) | Paderborn | 100.00 | | 6,725 | 1,492 | * |
| GMS Holding GmbH 1) | Paderborn | 88.89 | 75.00 | 21,958 | 1,479 | * |
| GMS Management und Service GmbH 1) | Nidderau | 100.00 | | 203 | 101 | * |
| GWG 1. Wohn GmbH & Co. KG 1) | Stuttgart | 100.00 | | 2,000 | 1,127 | * |
| GWG 2. Wohn GmbH & Co. KG 1) | Stuttgart | 100.00 | | 3,000 | 601 | * |
| GWG 3. Wohn GmbH & Co. KG 1) | Stuttgart | 100.00 | | 7,000 | 1,619 | * |
| GWG 4. Wohn GmbH & Co. KG 1) | Stuttgart | 100.00 | | 9,000 | 1,497 | * |
| GWG Beteiligungsgesellschaft mbH 1) | Stuttgart | 100.00 | | 30 | 1 | * |
| GWG Gesellschaft für Wohnungs- und Gewerbebau Baden-Württemberg AG 1) | Stuttgart | 91.57 | | 387,324 | 15,068 | * |
| GWG Hausbau GmbH 1) | Stuttgart | 94.48 | | 2,750 | - | * |
| GWG ImmoInvest GmbH 1) | Stuttgart | 94.90 | | 12,921 | 659 | * |
| GWG Wohnpark Sendling GmbH 1) | Stuttgart | 94.00 | | 4,028 | - | * |
| HMV GmbH 1) | Erlangen | 100.00 | | 55 | - | |
| HumanProtect Consulting GmbH 1) | Cologne | 100.00 | | 586 | 102 | * |
| Ihr Autoputzmeister Service GmbH 1) | Graz, Austria | 100.00 | | 620 | 139 | * |
| Immobilien-Gesellschaft 'DG Bank-Turm, Frankfurt am Main, Westend' mbH & Co. KG des genossenschaftlichen Verbundes 2) | Frankfurt am Main | 95.97 | | 83,345 | 344,494 | |
| Immobilien-Verwaltungsgesellschaft 'DG BANK-Turm, Frankfurt am Main, Westend' mbH | Frankfurt am Main | 100.00 | | 48 | 13 | |
| IMPETUS Bietergesellschaft mbH 4) | Düsseldorf | 100.00 | | 37,103 | - | |
| INFINDO Development GmbH 1) | Wiesbaden | 100.00 | | 97,417 | - | |
| IPConcept (Luxemburg) S.A. 1) | Strassen, Luxembourg | 100.00 | | 21,627 | 11,547 | |
| IPConcept (Schweiz) AG 1) | Zurich, Switzerland | 100.00 | | 7,764 | 510 | |
| KRAVAG Umweltschutz und Sicherheitstechnik GmbH 1) | Hamburg | 100.00 | | 441 | 11 | |
| KRAVAG-ALLGEMEINE Versicherungs-Aktiengesellschaft 1) | Hamburg | 100.00 | | 92,951 | 18,835 | |
| KRAVAG-LOGISTIC Versicherungs-Aktiengesellschaft 1) | Hamburg | 51.00 | | 235,163 | -20,317 | |
| Lodestone Parts (Malta) Limited i.L. 3) | Floriana, Malta | - | | 27 | -27 | |
| MD Aviation Capital Pte. Ltd. | Singapore, Singapore | 100.00 | | 9,687 | 12,649 | * |
| MDAC 6 Pte Ltd. | Singapore, Singapore | 100.00 | | 1,078 | -13 | * |
| MDAC Malta Ltd. i.L. | Floriana, Malta | - | | 10,599 | -25 | ** |
| MI-Fonds 384 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 F43 Metzler Investment GmbH 1) | Frankfurt am Main | - | | n/a | n/a | |
| MI-Fonds F44 Metzler Investment GmbH 1) | Frankfurt am Main | - | | n/a | n/a | |

## SUBSIDIARIES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| MI-Fonds F45 Metzler Investment GmbH 1) | Frankfurt am Main | - | | n/a | n/a | |
| MI-Fonds F47 Metzler Investment 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) | Wiesbaden | 100.00 | | 112,048 | - | |
| MSU Management-, Service- und Unternehmensberatung GmbH 1) | Landau in der Pfalz | 60.00 | | 967 | 102 | * |
| NEF-Conservative 1) | Luxembourg, Luxembourg | - | | n/a | n/a | |
| NewVolit GmbH 1) | Vienna, Austria | 100.00 | | n/a | n/a | |
| NTK Immobilien GmbH 1) | Hamburg | 100.00 | | 44 | - | * |
| NTK Immobilien GmbH & Co. Management KG 1) | Hamburg | 100.00 | | 865 | -386 | * |
| Pascon GmbH 1) | Wiesbaden | 100.00 | | 48 | 3 | |
| PCAM Issuance II SA Issue RV AVL 001 1) | Luxembourg, Luxembourg | - | | n/a | n/a | |
| PDZ Personaldienste & Zeitarbeit GmbH 4) | Darmstadt | 100.00 | | 60 | - | |
| Pension Consult-Beratungsgesellschaft für Altersvorsorge mbH 1) | Wiesbaden | 100.00 | | 958 | 68 | |
| Phoenix Beteiligungsgesellschaft mbH 4) | Düsseldorf | 100.00 | | 5,849 | - | |
| PW 4168 Engine Solutions (Ireland) Ltd i.L. | Dublin, Ireland | - | | -21 | 1 | ** |
| PW 4168 Solutions (Malta) Limited 3) | Floriana, Malta | - | | -90 | -9 | |
| Quoniam Asset Management GmbH 1) | Frankfurt am Main | 97.60 | 100.00 | 22,989 | 1,928 | |
| Quoniam Funds Selection SICAV - Equities Climate Transformation EUR A dis 1) | Senningerberg, Luxembourg | - | | n/a | n/a | |
| Quoniam Funds Selection SICAV - Equities Climate Transformation EUR I acc 1) | Senningerberg, Luxembourg | - | | n/a | n/a | |
| R+V AIFM S.à.r.l. 1) | Munsbach, Luxembourg | 100.00 | | 1,703 | 699 | * |
| R+V Allgemeine Versicherung Aktiengesellschaft 1) 4) | Wiesbaden | 95.00 | | 1,024,175 | - | |
| R+V Deutschland Real (RDR) 1) | Hamburg | - | | n/a | n/a | |
| R+V Dienstleistungs GmbH 1) | Wiesbaden | 100.00 | | 781 | 65 | |
| R+V Direktversicherung AG 1) 4) | Wiesbaden | 100.00 | | 13,320 | - | |
| R+V INTERNATIONAL BUSINESS SERVICES Ltd., Dublin 1) | Dublin, Ireland | 100.00 | | n/a | n/a | |
| R+V KOMPOSIT Holding GmbH 1) 4) | Wiesbaden | 100.00 | | 2,080,863 | - | |
| R+V Krankenversicherung AG 1) | Wiesbaden | 100.00 | | 177,485 | 24,000 | |
| R+V Lebensversicherung Aktiengesellschaft 1) | Wiesbaden | 100.00 | | 1,206,933 | - | |
| R+V Mannheim P2 GmbH 1) | Wiesbaden | 94.00 | | 57,065 | 1,578 | |
| R+V Pensionsfonds AG 1) | Wiesbaden | 100.00 | | 39,803 | 1,000 | |
| R+V Pensionskasse AG 1) | Wiesbaden | 100.00 | | 123,578 | -13,900 | |
| R+V Personen Holding GmbH 1) | Wiesbaden | 100.00 | | 1,197,855 | 37,429 | |
| R+V Rechtsschutz-Schadenregulierungs-GmbH 1) | Wiesbaden | 100.00 | | 363 | 86 | |
| R+V Service Center GmbH 1) 4) | Wiesbaden | 100.00 | | 2,869 | - | |
| R+V Service Holding GmbH 1) 4) | Wiesbaden | 100.00 | | 221,733 | - | |
| R+V Treuhand GmbH 1) | Wiesbaden | 100.00 | | 1,650 | 1,489 | |
| R+V Versicherung AG 4) | Wiesbaden | 92.31 | | 2,397,253 | - | |
| RC II S.a.r.l. 1) | Munsbach, Luxembourg | 90.00 | | 8,982 | 124 | ** |
| REDOS Einzelhandel Deutschland IV 1) | Hamburg | - | | n/a | n/a | |
| Reisebank AG 4) | Frankfurt am Main | 100.00 | | 19,267 | - | |
| RUV Agenturberatungs GmbH 1) | Wiesbaden | 100.00 | | 435 | 174 | |
| 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 | 97.55 | | 571,708 | 12,950 | * |
| RV AIP S.C.S. SICAV-SIF – RV TF 6 Infra Debt II 1) | Luxembourg, Luxembourg | 94.40 | | 257,079 | 4,902 | * |
| RV AIP S.C.S. SICAV-SIF – RV TF 7 Private Equity 1) | Luxembourg, Luxembourg | 99.01 | | 69,513 | -1,418 | * |
| RV AIP S.C.S. SICAV-SIF - RV TF Acquisition Financing 1) | Luxembourg, Luxembourg | 98.67 | | 267,377 | 8,019 | * |
| RV AIP S.C.S. SICAV-SIF – TF 3 Primaries 1) | Luxembourg, Luxembourg | 99.25 | | 28,139 | -2,244 | * |
| RV AIP S.C.S. SICAV-SIF – TF 4 Secondaries 1) | Luxembourg, Luxembourg | 99.25 | | 30,292 | 25 | * |
| RV AIP S.C.S. SICAV-SIF – TF 5 Co-Investments 1) | Luxembourg, Luxembourg | 99.25 | | 82,245 | -575 | * |
| RV Securitisation I S.à.r.l. 1) | Senningerberg, Luxembourg | 100.00 | | 12 | - | * |
| RV Securitisation I S.à.r.l. - Aviation Opportunities I 1) | Senningerberg, Luxembourg | - | | 12 | - | * |
| RVL Grundstücks GmbH & Co. KG 1) | Wiesbaden | 100.00 | | 401,572 | 8,562 | |
| RVL Grundstücksverwaltung GmbH 1) | Wiesbaden | 100.00 | | 24 | - | |
| Schwäbisch Hall Facility Management GmbH - Gebäude und mehr - 1) | Schwäbisch Hall | 100.00 | | 3,684 | -645 | |
| Schwäbisch Hall Kreditservice GmbH 1) 4) | Schwäbisch Hall | 100.00 | | 18,775 | - | |
| Schwäbisch Hall Transformation GmbH 1) | Schwäbisch Hall | 100.00 | | 2,423 | -764 | |
| Schwäbisch Hall Wohnen GmbH 1) | Schwäbisch Hall | 100.00 | | 899 | -526 | |
| Sprint Italia S.r.l. 1) | Bolzano, Italy | 51.00 | | -75 | -336 | * |
| Sprint Sanierung GmbH 1) | Cologne | 100.00 | | 20,588 | -6,167 | * |
| STARTRAIFF GmbH 1) | Wiesbaden | 100.00 | | 1,643 | 1,438 | |
| Taiping Fontainburg DVB Aviation Capital L.P. i.L. | Grand Cayman, Cayman Islands | - | | 117,889 | 11,540 | * |
| TeamBank AG Nürnberg 2) 4) | Nuremberg | 92.62 | | 439,699 | - | |
| UI Infrastruktur Management SARL 1) | Senningerberg, Luxembourg | 100.00 | | 45 | 8 | * |
| UI Management S.à r.l. 1) | Senningerberg, Luxembourg | 100.00 | | 16 | 1 | * |

## SUBSIDIARIES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| UI Private Debt Management S.à r.l. 1) | Senningerberg, Luxembourg | 100.00 | | 12 | - | * |
| UI Vario: 2 issued by Union Investment Luxembourg S.A. 1) | Senningerberg, Luxembourg | - | | n/a | n/a | |
| UII Anzinger Strasse 29 Verwaltung LP GmbH 1) | Hamburg | 100.00 | | 41 | 15 | * |
| UII Issy 3 Moulins SARL 1) | Paris, France | 100.00 | | 1 | -6 | * |
| UII MS Immobilien GP GmbH 1) | Hamburg | 100.00 | | 30 | 4 | * |
| UII MS Immobilien Verwaltung LP GmbH 1) | Hamburg | 100.00 | | 40 | 13 | * |
| UII PSD KN ImmoInvest GP GmbH 1) | Hamburg | 100.00 | | 135 | 26 | * |
| UII SCE Management GP GmbH 1) | Hamburg | 100.00 | | 92 | 14 | * |
| UII Verwaltungsgesellschaft mbH 1) | Hamburg | 100.00 | | 23 | 2 | * |
| UIN Union Investment Institutional Fonds Nr. 1039 1) | Frankfurt am Main | - | | n/a | n/a | |
| UIN Union Investment Institutional Fonds Nr. 1041 1) | Frankfurt am Main | - | | n/a | n/a | |
| UIN Union Investment Institutional Fonds Nr. 1059 1) | Frankfurt am Main | - | | n/a | n/a | |
| 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. 670 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 | - | | 3,282,176 | -2,175 | ** |
| 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 | |
| UIN-Fonds Nr. 1086 1) | Frankfurt am Main | - | | n/a | n/a | |
| UIR Verwaltungsgesellschaft mbH 1) | Hamburg | 100.00 | | 85 | -6 | * |
| UIW Austria Verwaltungs GmbH 1) | Erlangen | 100.00 | | 23 | - | * |
| UMB Unternehmens-Managementberatungs GmbH 1) | Wiesbaden | 100.00 | | 6,026 | 2,273 | |
| UniInstitutional Multi Asset Nachhaltig 1) | Senningerberg, Luxembourg | - | | n/a | n/a | |
| UniMultiAsset: Chance IV Nachhaltig 1) | Frankfurt am Main | - | | n/a | n/a | |
| UniNachhaltig Aktien Dividende A 1) | Senningerberg, Luxembourg | - | | n/a | n/a | |
| UniNachhaltig Aktien Dividende -net- 1) | Senningerberg, Luxembourg | - | | n/a | n/a | |
| Union Asset Management Holding AG 2) | Frankfurt am Main | 96.59 | | 1,934,633 | 490,707 | |
| Union Investment Austria GmbH 1) | Vienna, Austria | 100.00 | | 18,213 | 1,223 | |
| Union Investment Institutional GmbH 1) | Frankfurt am Main | 100.00 | | 103,970 | - | |
| Union Investment Institutional Property GmbH 1) | Hamburg | 90.00 | | 45,451 | 11,768 | |
| Union Investment Luxembourg S.A. 1) | Senningerberg, Luxembourg | 100.00 | | 469,228 | 124,885 | |
| Union Investment Privatfonds GmbH 1) | Frankfurt am Main | 100.00 | | 980,942 | - | |
| Union Investment Real Estate Asia Pacific Pte. Ltd. 1) | Singapore, Singapore | 100.00 | | 782 | -160 | * |
| Union Investment Real Estate Austria AG 1) | Vienna, Austria | 94.50 | | 9,191 | 2,081 | |
| Union Investment Real Estate Digital GmbH 1) 5) | Hamburg | 100.00 | | 10,225 | - | |
| Union Investment Real Estate France SAS 1) | Paris, France | 100.00 | | 3,188 | 1,230 | * |
| Union Investment Real Estate GmbH 2) | Hamburg | 94.50 | | 203,974 | 69,485 | |
| Union Investment Service Bank AG 1) | Frankfurt am Main | 100.00 | | 123,115 | - | |
| Union IT-Services GmbH 1) 5) | Frankfurt am Main | 100.00 | | 6,019 | 908 | |
| Union Service-Gesellschaft mbH 1) 5) | Frankfurt am Main | 100.00 | | 12,917 | 1,762 | |
| Unterstützungskasse der Condor Versicherungsgesellschaften GmbH 1) | Hamburg | 66.67 | | 26 | - | |
| URA Verwaltung GmbH 1) | Vienna, Austria | 100.00 | | 32 | -5 | * |
| VisualVest GmbH 1) | Frankfurt am Main | 100.00 | | 28,525 | - | |
| 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 | | 5,201 | 19 | * |
| VR Equitypartner Beteiligungskapital GmbH & Co. KG UBG 2) | Frankfurt am Main | 100.00 | | 44,501 | 25,712 | |
| VR Equitypartner GmbH 4) | Frankfurt am Main | 100.00 | | 69,070 | - | |
| VR Factoring GmbH 4) | Eschborn | 100.00 | | 54,385 | - | |
| VR GbR 2) | Frankfurt am Main | 100.00 | | 217,144 | 72,177 | |
| VR HYP GmbH 1) | Hamburg | 100.00 | | 25 | - | |
| VR Kreditservice GmbH 1) 4) | Hamburg | 100.00 | | 25 | - | |
| VR Makler GmbH 1) | Hannover | 100.00 | | 406 | -1,221 | * |
| VR Mittelstandskapital Unternehmensbeteiligungs GmbH 2) | Düsseldorf | 100.00 | | 8,012 | 157 | * |
| VR Payment GmbH | Frankfurt am Main | 90.00 | | 61,146 | 1,400 | |
| VR Real Estate GmbH 1) | Hamburg | 100.00 | | 25 | - | |
| VR Smart Finanz AG 4) | Eschborn | 100.00 | | 211,070 | - | |
| VR Smart Finanz Bank GmbH 1) 4) | Eschborn | 100.00 | | 250,147 | - | |
| VR Smart Finanz Beteiligungs GmbH 1) | Eschborn | 100.00 | | 99,925 | 1,288 | |
| VR Smart Guide GmbH 1) | Eschborn | 100.00 | | 1,135 | -4,647 | * |
| VR WERT Gesellschaft für Immobilienbewertung mbH 1) 4) | Hamburg | 100.00 | | 100 | - | |

## SUBSIDIARIES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| WBS Wohnwirtschaftliche Baubetreuungs- und Servicegesellschaft mbH 1) | Stuttgart | 94.90 | | 26,308 | 2,430 | * |
| ZBI Beteiligungs GmbH 1) | Erlangen | 100.00 | | 23 | -2 | * |
| ZBI Fondsmanagement GmbH 1) | Erlangen | 100.00 | | 8,133 | - | |
| ZBI Fondsverwaltungs GmbH 1) | Erlangen | 100.00 | | 247 | 17 | * |
| ZBI GmbH 1) | Erlangen | 94.90 | | 4,877 | -9,786 | |
| ZBI Immobilienmanagement GmbH 1) | Erlangen | 100.00 | | 11,913 | - | |
| ZBI Professional Fondsverwaltungs GmbH 1) | Erlangen | 100.00 | | 244 | 36 | * |
| ZBI Regiofonds Wohnen GF GmbH 1) | Erlangen | 100.00 | | 7 | - | * |
| ZBI Regiofonds Wohnen GmbH 1) | Erlangen | 100.00 | | 17 | 1 | * |
| ZBI Vorsorge - Plan Wohnen GF GmbH 1) | Erlangen | 100.00 | | 23 | 1 | * |
| ZBI Vorsorge - Plan Wohnen GmbH 1) | Erlangen | 100.00 | | 22 | 1 | * |
| ZBI Wohnen Plus Verwaltungs GmbH 1) | Erlangen | 100.00 | | 21 | - | * |
| ZBI WohnWert Verwaltungs GmbH 1) | Erlangen | 100.00 | | 15 | - | * |
| ZBVV - Zentral Boden Vermietung und Verwaltung GmbH 1) | Erlangen | 100.00 | | 6,061 | - | |

## JOINT VENTURES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| BAU + HAUS Management GmbH 1) | Wiesbaden | 50.00 | | 8,575 | 916 | |
| BEA Union Investment Management Limited 1) | Hong Kong, Hong Kong | 49.00 | | 59,282 | 5,808 | * |
| Deutsche WertpapierService Bank AG | Frankfurt am Main | 50.00 | | 335,363 | 50,476 | |
| DZ BANK Galerie im Städel Kunstverwaltungsgesellschaft mbH | Frankfurt am Main | 50.00 | | 16 | -3 | * |
| Norafin Verwaltungs GmbH 1) | Mildenau | 44.72 | 46.81 | 27,736 | 1,955 | * |
| PolarXpress SCS 1) | Wasserbillig, Luxembourg | 58.82 | | 79,349 | -5,902 | * |
| Prvá stavebná sporitel'na, a.s. 1) | Bratislava, Slovakia | 32.50 | | 311,848 | 20,798 | |
| R+V Kureck Immobilien GmbH Grundstücksverwaltung Braunschweig i.L. 1) | Wiesbaden | 50.00 | | 640 | 523 | |
| Trustlog GmbH 1) | Hamburg | 50.00 | | 7,549 | -2,326 | * |
| Versicherungs-Vermittlungsgesellschaft des Sächsischen Landesbauernverbandes mbH 1) | Dresden | 50.00 | | 217 | 4 | * |
| Versicherungs-Vermittlungsgesellschaft mbH des Bauernverbandes Mecklenburg-Vorpommern e.V. (VVB) 1) | Neubrandenburg | 50.00 | | 344 | 64 | * |
| Versicherungs-Vermittlungsgesellschaft mbH des Landesbauernverbandes Brandenburg (VVB) 1) | Teltow | 50.00 | | 34 | 4 | * |
| Versicherungs-Vermittlungsgesellschaft mbH des Landesbauernverbandes Sachsen-Anhalt e.V. (VVB) 1) | Magdeburg | 50.00 | | 75 | 4 | * |
| Zhong De Zuh Fang Chu Xu Yin Hang (Sino-German-Bausparkasse) Ltd. 1) | Tianjin, China | 24.90 | | 388,493 | 10,245 | |

## ASSOCIATES

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| adorsys GmbH & Co. KG 1) | Nuremberg | 25.89 | | 2,616 | 1,230 | * |
| adorsys Verwaltungs GmbH 1) | Nuremberg | 25.90 | | 31 | 1 | * |
| aku.beteiligung GmbH 1) | Aalen | 46.04 | | 6,758 | -953 | * |
| Bankenkonsortium der Zenit GmbH, GbR | Düsseldorf | 33.30 | | 153 | - | * |
| bbv-service Versicherungsmakler GmbH 1) | Munich | 25.20 | | 2,436 | 414 | * |
| Berlin-AI Management S.à r.l. 1) | Senningerberg, Luxembourg | 20.00 | | 10 | 3 | |
| Blitz SKB GmbH 1) | Giessen | 41.76 | | 36,687 | -2,425 | * |
| Bookwire Holding GmbH 1) | Frankfurt am Main | 49.00 | | 1,898 | -452 | * |
| Cygna Labs Group GmbH 1) | Heilbronn | 26.03 | | 11,792 | -3,593 | * |
| DeSign Verbund GmbH 1) | Hochstadt am Main | 49.80 | | 2,540 | 1,020 | * |
| DITTRICH + CO Holding GmbH 1) | Frankfurt am Main | 49.85 | | 9,932 | -17 | * |
| Dr. Förster Holding GmbH i.L. 1) | Neu-Isenburg | 20.06 | | - | -2,604 | * |
| European Convenience Food GmbH 1) | Garrel | 41.16 | 41.52 | 19,479 | 1,280 | * |
| GBS Beteiligungsgesellschaft mbH 1) | Bayreuth | 42.33 | | 7,812 | 486 | ** |
| GHM MPP Reserve GmbH 1) | Remscheid | 50.00 | | 983 | 620 | * |
| GHM MPP Verwaltungs GmbH 1) | Remscheid | 50.00 | | 263 | -19 | * |
| Glas Strack Holding GmbH 1) | Bochum | 51.06 | 49.90 | 9,203 | 13 | * |
| Goldeck Zetti Beteiligungsgesellschaft mbH 1) | Leipzig | 39.23 | | 35,310 | 1,159 | * |
| Impleco GmbH 1) | Berlin | 50.00 | | 4,461 | -2,415 | |
| Informatik Consulting Systems Holding GmbH 1) | Stuttgart | 49.83 | 49.43 | 8,943 | 288 | * |
| Interni Erwerbsgesellschaft mbH 1) | Düsseldorf | 49.90 | | n/a | n/a | |
| Kapitalbeteiligungsgesellschaft für die mittelständische Wirtschaft in Nordrhein-Westfalen mbH - KBG - | Neuss | 23.60 | | 5,952 | 286 | * |
| KTP Holding GmbH 1) | Bous | 37.36 | | 48,753 | 3,539 | * |
| Kunststoffpartner Verwaltung GmbH 1) | Villingen-Schwenningen | 49.00 | | - | - | * |
| paydirekt GmbH | Frankfurt am Main | 33.33 | | 25,348 | 1,274 | * |
| payfree GmbH 1) | Düsseldorf | 60.00 | | 5,454 | -1,544 | * |
| Pesca Management GmbH 1) | Munich | 49.30 | | 13,311 | -80 | * |
| Solectrix Holding GmbH 1) | Fürth | 49.90 | | 11,949 | 1,525 | * |
| Treuhand- und Finanzierungsgesellschaft für Wohnungs- und Bauwirtschaft mit beschränkter Haftung. Treufinanz | Düsseldorf | 33.14 | | 1,274 | -160 | * |
| Votronic Elektronik-Systeme GmbH 1) | Lauterbach | 49.80 | | 7,162 | 2,450 | * |
| VR Unternehmerkapital GmbH 1) | Frankfurt am Main | 49.00 | | n/a | n/a | |
| Weisshaar Holding GmbH 1) | Deisslingen | 84.94 | 49.92 | - | - | ** |
| Zimmer & Hälbig Holding GmbH 1) | Bielefeld | 50.29 | 49.90 | 19,414 | -1,198 | * |

## SHAREHOLDINGS OF 20% OR MORE

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| amberra GmbH 2) | Berlin | 20.00 | | 15,998 | -2 | * |
| Assiconf S.r.l. 1) | Turin, Italy | 20.00 | | 88 | 2 | ** |
| Burghofspiele GmbH 1) | Eltville | 20.00 | | - | -21 | ** |
| Kreditgarantiegemeinschaft in Baden-Württemberg Verwaltungs-GmbH | Stuttgart | 20.00 | | 1,023 | - | * |
| Finatem II GmbH & Co. KG 1) | Frankfurt am Main | 20.20 | | 1,299 | -347 | * |
| Cheyne Real Estate Credit (CRECH) Fund IV Loans SCS SICAV-SIF 1) | Luxembourg, Luxembourg | 20.83 | | 236,025 | 25,839 | * |
| Cheyne Real Estate Credit Holdings VII 1) | Luxembourg, Luxembourg | 21.56 | | 830,757 | 61,731 | * |
| TF H IV Technologiefonds Hessen GmbH & Co. KG | Wiesbaden | 21.74 | | n/a | n/a | |
| Bürgschaftsbank Thüringen GmbH | Erfurt | 22.13 | | 27,696 | 172 | * |
| TXS GmbH 1) | Hamburg | 24.50 | | 1,236 | 308 | * |
| VBI Beteiligungs GmbH 1) | Vienna, Austria | 24.50 | | 799 | -33 | * |
| ICG Infrastructure Equity Fund I SCSp 1) | Senningerberg, Luxembourg | 24.54 | | 269,775 | 32,174 | * |
| TF H III Technologiefonds Hessen Gesellschaft mit beschränkter Haftung | Wiesbaden | 25.00 | | 7,124 | 532 | * |
| VAD Beteiligungen GmbH | Berlin | 25.16 | | 29,651 | -156 | * |
| Bürgschaftsbank Brandenburg GmbH | Potsdam | 25.31 | | 36,769 | 2,563 | * |
| GENOPACE GmbH 1) 5) | Berlin | 27.49 | | 200 | - | * |
| Global Infrastructure Partners III-C2, L.P. 1) | New York, USA | 27.97 | | 554,338 | 72,881 | * |
| GIP CAPS II Feeder Fund AIV 2, L.P. 1) | Wilmington, USA | 27.99 | | n/a | n/a | |
| Bürgschaftsbank Sachsen-Anhalt GmbH | Magdeburg | 29.73 | | 17,216 | 216 | * |
| Schroder Property Services B.V. S.à.r.l. 1) | Senningerberg, Luxembourg | 30.00 | | 282 | -28 | * |
| Credit Suisse Global Infrastructure SCA SICAR 1) | Luxembourg, Luxembourg | 30.09 | | 8,612 | -100 | ** |
| Bürgschaftsbank Mecklenburg-Vorpommern GmbH | Schwerin | 30.38 | | 17,504 | 153 | * |
| FREUNDE DER EINTRACHT FRANKFURT Aktiengesellschaft | Frankfurt am Main | 32.05 | 19.84 | 7,643 | -2 | * |
| Swiss Life Health Care III SICAV-FIS 1) | Luxembourg, Luxembourg | 33.33 | | 181,325 | 11,569 | * |
| TF H Technologie-Finanzierungsfonds Hessen Gesellschaft mit beschränkter Haftung (TF H GmbH) i.L. | Wiesbaden | 33.33 | | 481 | -25 | * |
| Technology DZ Venture Capital Fund I GmbH & Co. KG i.L. 1) | Munich | 34.33 | | 8,224 | -70 | * |
| MB Asia Real Estate Feeder (Scot.) L.P. 1) | Edinburgh, UK | 34.80 | | 746 | -138 | * |
| Global Energy & Power Infrastructure Fund III E, SCSp 1) | Luxembourg, Luxembourg | 35.34 | | 195,777 | 3,697 | * |
| Ares Infrastructure Debt Fund IV (EUR), L.P. 1) | Luxembourg, Luxembourg | 39.84 | | 456,786 | 35,469 | * |
| Swiss Life ESG Health Care Germany V S.C.S., SICAV-SIF 1) | Luxembourg, Luxembourg | 41.33 | | 518,090 | -7,488 | * |
| VR-NetWorld GmbH 2) | Bonn | 43.48 | | 7,316 | 614 | * |
| Swiss Life Health Care IV SICAV-FIS 1) | Luxembourg, Luxembourg | 46.51 | | 130,899 | 9,482 | * |
| CMMT Partners L.P. 1) | Camden, USA | 47.07 | | 1,061,553 | 42,377 | * |
| TRUUCO GmbH 2) | Frankfurt am Main | 49.00 | | 5,646 | -4 | * |
| Macquarie Asia Infrastructure Fund 2 SCSp 1) | Luxembourg, Luxembourg | 50.48 | | 337,453 | 24,065 | * |
| EIG Global Project Fund V-A, L.P. 1) | Wilmington, USA | 51.28 | | 294,079 | 14,853 | * |
| Tishman Speyer European Real Estate Venture VIII Parallel SCSp 1) | Luxembourg, Luxembourg | 55.88 | | 221,813 | -4,598 | * |
| DigitalBridge II Foreign Feeder-MV, SCSp 1) | Luxembourg, Luxembourg | 68.10 | | 7,359,397 | -102,983 | * |
| Ares Infrastructure Debt Fund V (EUR), L.P. 1) | Luxembourg, Luxembourg | 68.14 | | 363,769 | 12,853 | * |
| BREDS IV Aggregator SCSp 1) | Luxembourg, Luxembourg | 90.91 | | 156,252 | 11,764 | * |
| KKR Global Impact Fund II EEA Feeder SCSp 1) | Luxembourg, Luxembourg | 95.33 | | 694 | -1,542 | * |
| KKR North America Fund XIII EEA Feeder SCSp 1) | Luxembourg, Luxembourg | 95.43 | | 45,220 | -332 | * |
| Medico 12 GmbH & Co. KG 1) | Frankfurt am Main | 99.98 | | 13 | -38 | * |
| GTIS Brazil II S-Feeder LP 1) | Edinburgh, UK | 100.00 | | 274,692 | 26,968 | * |
| Macquarie Asia Infrastructure Fund EU Feeder L.P. 1) | London, UK | 100.00 | | 72,154 | 6,147 | * |
| RV-CVIII Holdings, LLC 1) | Camden, USA | 100.00 | | -794 | -12,196 | * |
| Tishman Speyer Brazil Feeder (Scots/D), L.P. 1) | Edinburgh, UK | 100.00 | | 18,284 | -8,620 | * |

## MORE THAN 5% OF VOTING RIGHTS (LARGE CORPORATIONS)

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| Raiffeisendruckerei GmbH 1) | Neuwied | 7.88 | | 34,773 | 694 | * |

## SHAREHOLDINGS OF LESS THAN 20%

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| Berliner Volksbank eG 1) | Berlin | - | 0.10 | 1,177,230 | 28,892 | * |
| Immo Feest en Cultuurpaleis Oostende SA 1) | Brussels, Belgium | - | | 14,977 | -552 | * |
| K in Kortrijk S.A. 1) | Brussels, Belgium | - | | 82,598 | -5,668 | * |
| Konsortium der Absatzfinanzierungsinstitute plettac-assco GbR | Wuppertal | - | 7.08 | n/a | n/a | *** |
| Les Grands Pres S.A. 1) | Brussels-Zaventem, Belgium | - | 0.11 | 52,450 | 5,737 | * |
| Opción Jamantab S. A. DE C. V. 1) | Mexico City, Mexico | - | | 13,830 | -362 | * |
| UIR Le Président 1 1) | Brussels-Zaventem, Belgium | - | 0.06 | 12,712 | -2,228 | * |
| UIR MU III S.A. de C.V. 1) | Mexico City, Mexico | - | | 10,239 | -488 | * |
| Visa Inc. | San Francisco, USA | - | | 33,321,783 | 11,380,408 | * |
| VR-Bank Heilbronn Schwäbisch Hall eG 1) | Schwäbisch Hall | - | 0.01 | 278,082 | 6,820 | * |
| Royale 120 S.A. 1) | Brussels-Zaventem, Belgium | 0.01 | | 45,054 | 226 | * |
| UII Anzinger Strasse 29 GmbH & Co. KG 1) | Hamburg | 0.01 | | n/a | n/a | |
| GBK Holding GmbH & Co. KG 1) | Kassel | 0.02 | | 462,993 | 13,126 | * |
| Akademie Badischer Volksbanken und Raiffeisenbanken GmbH 1) | Karlsruhe | 0.03 | | 9,255 | 231 | * |
| Société de la Bourse de Luxembourg S.A. 1) | Senningerberg, Luxembourg | 0.04 | | 291,817 | 170,003 | * |
| Munster S.A. 1) | Senningerberg, Luxembourg | 0.07 | | 1,673 | -191 | * |
| Strategie Invest SICAV 1) | Zurich, Switzerland | 0.07 | | 250 | - | * |
| 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 | ** |
| FIDUCIA Mailing Services eG 2) | Karlsruhe | 0.13 | | 70 | - | * |
| UIR Belgique 1 S.A. 1) | Brussels, Belgium | 0.13 | | 68,705 | 2,184 | * |
| SGB-Bank Spólka Akcyjna | Poznań, Poland | 0.19 | | 206,706 | 4,937 | * |
| S.W.I.F.T. Society for Worldwide International Financial Telecommunication 2) | La Hulpe, Belgium | 0.25 | | 627,234 | 31,623 | * |
| AKA Ausfuhrkredit-Gesellschaft mit beschränkter Haftung | Frankfurt am Main | 0.31 | | 283,796 | 10,195 | * |
| Atruvia AG 2) | Frankfurt am Main | 0.35 | | 448,074 | 7,592 | * |
| WESTFLEISCH Finanz AG 1) | Münster | 0.36 | | 51,360 | 1,406 | * |
| Assicoop-Assicurazioni Cooperative S.r.l. 1) | Catania, Italy | 0.41 | | n/a | n/a | |
| Kunststiftung Baden-Württemberg GmbH 1) | Stuttgart | 0.50 | | - | - | ** |
| Anlegerentschädigung von Wertpapierfirmen GmbH 1) | Vienna, Austria | 0.57 | 1.61 | 70 | - | * |
| North Haven Infrastructure Partners III SCSp 1) | Luxembourg, Luxembourg | 0.61 | | 1,058,774 | -2,784 | * |
| CLS Group Holdings AG | Lucerne, Switzerland | 0.69 | | 370,826 | 15,141 | * |
| Sana Kliniken AG 1) | Ismaning | 0.69 | | 1,017,094 | 66,685 | ** |
| ZBI Vorsorge-Plan Wohnen 1 GmbH & Co. KG 1) | Erlangen | 0.75 | | 2,318 | 112 | * |
| Bank Polskiej Spoldzielczosci Spolka Akcyjna | Warsaw, Poland | 0.91 | | 177,826 | -8,101 | * |
| Schulze-Delitzsch-Haus, eingetragene Genossenschaft 1) | Bonn | 0.97 | | 1,862 | 174 | * |
| Münchener Hypothekenbank eG 2) | Munich | 0.99 | | 1,722,435 | 68,086 | * |
| ZG Raiffeisen eG | Karlsruhe | 1.01 | 0.02 | 69,760 | 4,683 | * |
| Beteiligungs-Aktiengesellschaft der bayerischen Volksbanken 1) | Pöcking | 1.14 | | 233,359 | 8,644 | * |
| DG Nexolution eG 2) | Wiesbaden | 1.58 | | 69,477 | 2,868 | * |
| Blackstone Real Estate Partners Europe III L.P. 1) | New York, USA | 1.62 | | 248,091 | -23,489 | * |
| DUCAH - Digital Urban Center for Aging and Health eG i.Gr. 1) | Berlin | 1.66 | | n/a | n/a | |
| Bayerische Raiffeisen-Beteiligungs-Aktiengesellschaft 2) | Beilngries | 1.85 | | 866,827 | 39,199 | * |
| Grand Hotel Heiligendamm GmbH & Co. KG Fundus Fonds Nr. 34 1) | Vettweiss-Disternich | 1.90 | | - | - | * |
| ABE Clearing S.A.S a Capital Variable | Paris, France | 2.08 | | 46,639 | 3,998 | * |
| Raiffeisen Waren-Zentrale Rhein-Main AG 2) | Cologne | 2.23 | | 153,054 | 24,220 | * |
| Partners Group Global Mezzanine 2007 S.C.A., SICAR 1) | Luxembourg, Luxembourg | 2.24 | | 1,558 | 328 | * |
| heal.capital I GmbH & Co. KG 1) | Berlin | 2.33 | | 36,143 | -3,691 | * |
| GAD Beteiligungs GmbH & Co. KG 2) | Münster | 2.49 | | 119,597 | 3,023 | * |
| Saarländische Wagnisfinanzierungsgesellschaft mbH | Saarbrücken | 2.59 | | 7,602 | -1,007 | * |
| WRW Wohnungswirtschaftliche Treuhand Rheinland-Westfalen Gesellschaft mit beschränkter Haftung i.L. | Düsseldorf | 2.73 | | n/a | n/a | |
| GDV Dienstleistungs-GmbH 1) | Hamburg | 2.82 | | n/a | n/a | |
| North Haven Infrastructure Partners III Feeder A L.P. 1) | Kitchener, Canada | 3.05 | | 893,666 | -5,606 | * |
| CASSA CENTRALE BANCA - CREDITO COOPERATIVO ITALIANO S.P.A. | Trento, Italy | 3.69 | | 1,168,319 | 44,660 | * |
| DI Rathaus-Center Pankow Nr.35 KG 1) | Düren | 3.86 | | 27,574 | 2,303 | ** |
| GMS Mitarbeiter Beteiligungsgesellschaft UG & Co.KG 1) | Paderborn | 4.00 | | 963 | -5 | * |
| Cash Logistik Security AG | Düsseldorf | 4.10 | | 5,186 | 2,155 | * |
| Macquarie European Infrastructure Fund 6 SCSp 1) | Luxembourg, Luxembourg | 4.15 | | 6,342,628 | 305,859 | * |
| Technologiezentrum Schwäbisch Hall GmbH 1) | Schwäbisch Hall | 4.17 | 5.56 | 622 | 44 | * |
| MED Platform II S.L.P. 1) | Lyon, France | 4.32 | | 203,718 | - | * |
| Euro Capital S.A.S. 1) | Metz, France | 4.44 | | 31,462 | 635 | * |
| Süddeutsche Zuckerrübenverwertungs-Genossenschaft eG | Ochsenfurt | 4.44 | 4.55 | 252,195 | 23,915 | |
| Die Familiengenossenschaft eG 1) | Mannheim | 4.71 | | 20 | -8 | * |
| Kreditgarantiegemeinschaft der Freien Berufe Baden-Württemberg Verwaltungs GmbH | Stuttgart | 4.76 | | 153 | - | * |
| Bürgschaftsbank Bremen GmbH | Bremen | 4.86 | | 8,724 | 148 | * |
| EXTREMUS Versicherungs-Aktiengesellschaft 1) | Cologne | 5.00 | | 61,746 | -1,719 | * |

## SHAREHOLDINGS OF LESS THAN 20%

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| assistance partner GmbH & Co. KG 1) | Munich | 5.01 | | 1,248 | 248 | ** |
| DG IMMOBILIEN MANAGEMENT Gesellschaft mbH | Frankfurt am Main | 5.01 | | 20,646 | 878 | * |
| Protektor Lebensversicherungs-AG 1) | Berlin | 5.27 | | 7,856 | 2 | * |
| Macquarie European Infrastructure Fund 4 L.P. 1) | St. Peter Port, Guernsey | 5.70 | | 1,124,376 | 372,765 | * |
| Copenhagen Infrastructure III K/S 1) | Copenhagen, Denmark | 5.94 | | 348,416 | 34,464 | ** |
| IVS Immobilien GmbH 1) | Schiffweiler | 6.00 | | 26 | - | * |
| VR-IMMOBILIEN-LEASING GmbH 1) | Eschborn | 6.00 | | 10,292 | 8,398 | * |
| Copenhagen Infrastructure III-A K/S 1) | Copenhagen, Denmark | 6.17 | | 669,872 | 269,439 | ** |
| European Property Investors Special Opportunities, L.P. 1) | London, UK | 6.35 | | 8,330 | -1,070 | * |
| Bürgschaftsbank Hamburg GmbH | Hamburg | 6.36 | | 27,424 | 107 | * |
| Global Renewable Power Infrastructure Fund III (C), SCSp 1) | Luxembourg, Luxembourg | 6.40 | | 1,162,802 | -24,574 | * |
| EPI Company SE | Brussels, Belgium | 6.49 | | 64,094 | -15,634 | * |
| Partners Group Direct Equity IV (EUR) S.C.A., SICAV-RAIF 1) | Luxembourg, Luxembourg | 6.84 | | 1,959,620 | -23,113 | * |
| Interessengemeinschaft Frankfurter Kreditinstitute GmbH | Frankfurt am Main | 7.01 | | 23,660 | 7,978 | * |
| Copenhagen Infrastructure IV K/S 1) | Copenhagen, Denmark | 7.15 | | 459,636 | 70,012 | ** |
| Kreditgarantiegemeinschaft für den Handel in Bayern GmbH | Munich | 7.19 | | 6,317 | - | * |
| Gründerfonds Ruhr GmbH & Co. KG 1) | Essen | 7.25 | | 15,890 | -611 | * |
| Crown Secondaries Special Opportunities II S.C.S. 1) | Luxembourg, Luxembourg | 7.66 | | 1,279,628 | 145,976 | * |
| Blackrock Renewable Income Europe Fund 1) | Dublin, Ireland | 7.69 | | 674,927 | 114,807 | * |
| True Sale International GmbH | Frankfurt am Main | 7.69 | | 4,672 | 136 | * |
| Raiffeisen-Kassel A-Beteiligungs GmbH & Co. KG | Kassel | 8.22 | | - | 296 | * |
| Raiffeisen-Kassel B-Beteiligungs GmbH & Co. KG | Kassel | 8.22 | | - | 296 | * |
| EDEKABANK Aktiengesellschaft | Hamburg | 8.35 | | 169,857 | 7,537 | * |
| PANELLINIA BANK SOCIETE ANONYME (under special liquidation) | Athens, Greece | 8.42 | 5.28 | - | - | ** |
| Copenhagen Infrastructure Energy Transition Fund I K/S 1) | Copenhagen, Denmark | 8.81 | | 669,872 | 269,439 | ** |
| Mittelständische Beteiligungsgesellschaft Berlin-Brandenburg mbH | Potsdam | 8.89 | | 26,407 | 1,061 | * |
| BLHV Versicherungs-Service GmbH 1) | Freiburg | 9.00 | | 338 | 158 | * |
| Kreditgarantiegemeinschaft des bayerischen Gartenbaues GmbH | Munich | 9.07 | | 649 | - | * |
| BayBG Bayerische Beteiligungsgesellschaft mbH | Munich | 9.38 | | 264,128 | 5,263 | * |
| Mittelständische Beteiligungsgesellschaft Sachsen mbH | Dresden | 9.38 | | 49,636 | 189 | * |
| Verimi GmbH | Berlin | 9.56 | 10.17 | 5,940 | -14,213 | * |
| Kreditgarantiegemeinschaft des Hotel- und Gaststättengewerbes in Bayern GmbH | Munich | 9.66 | | 649 | - | * |
| Blackstone Real Estate Partners International I.E. L.P. 1) | New York, USA | 9.77 | | -26,468 | 30,572 | ** |
| Crown Secondaries Special Opportunities III Feeder SCSp 1) | Luxembourg, Luxembourg | 9.78 | | n/a | n/a | |
| MBG Mittelständische Beteiligungsgesellschaft Rheinland-Pfalz mbH | Mainz | 9.80 | 11.11 | 17,273 | 571 | * |
| MBG Mittelständische Beteiligungsgesellschaft Baden-Württemberg Gesellschaft mit beschränkter Haftung | Stuttgart | 9.94 | 8.33 | 99,598 | 7,387 | * |
| KLV BAKO Vermittlungs-GmbH | Karlsruhe | 10.00 | | 268 | 8 | * |
| MBG Mittelständische Beteiligungsgesellschaft Hamburg mbH | Hamburg | 10.00 | | 5,602 | 306 | * |
| RPD Real Property Development GmbH 1) | Langenwang, Austria | 10.00 | | 1,434 | 221 | * |
| Target Partners Capital GmbH & Co. KG 1) | Munich | 10.00 | 10.01 | 273 | -8 | ** |
| Teko - Technisches Kontor für Versicherungen Gesellschaft mit beschränkter Haftung 1) | Düsseldorf | 10.00 | | 144 | 34 | * |
| VNT Automotive GmbH 1) | Langenwang, Austria | 10.00 | | 10,285 | 575 | * |
| Kreditgarantiegemeinschaft des Handels Baden-Württemberg Verwaltungs-GmbH | Stuttgart | 10.05 | | 1,022 | - | * |
| Kreditgarantiegemeinschaft des Handwerks Baden-Württemberg Verwaltungs-GmbH | Stuttgart | 10.05 | | 1,001 | - | * |
| HANDWERKSBAU NIEDERRHEIN AKTIENGESELLSCHAFT | Düsseldorf | 10.15 | | 30,718 | 1,747 | * |
| Mittelständische Beteiligungsgesellschaft Thüringen mbH | Erfurt | 10.28 | | 29,137 | 529 | * |
| Architrave GmbH 1) | Berlin | 10.42 | | 3,401 | -2,019 | ** |
| Curzon Capital Partners IV LP 1) | London, UK | 10.73 | | 140,553 | 15,155 | * |
| GMB Systems GmbH & Co. KG 1) | Hamburg | 10.75 | | n/a | n/a | |
| GIP Capital Solutions Feeder Fund II (EEA) 1) | Luxembourg, Luxembourg | 10.97 | | 171,078 | 15,973 | * |
| Splash Investment GmbH 1) | Kerpen | 10.98 | | 133,559 | -80,353 | * |
| GIP CAPS II Finco, L.P. 1) | Wilmington, USA | 11.36 | | n/a | n/a | |
| Bürgschaftsbank Schleswig-Holstein Gesellschaft mit beschränkter Haftung | Kiel | 11.79 | | 42,278 | - | * |
| Curzon Capital Partners III LP 1) | London, UK | 11.99 | | 43,320 | -12,772 | * |
| 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 | - | * |
| Banco Cooperativo Español S.A. | Madrid, Spain | 12.03 | | 665,013 | 43,998 | * |
| BGG Bayerische Garantiegesellschaft mit beschränkter Haftung für mittelständische Beteiligungen | Munich | 13.15 | | 62,542 | 883 | * |
| Copenhagen Infrastructure III US AIV Non-QFPF Blocker K/S 1) | Copenhagen, Denmark | 13.20 | | n/a | n/a | |

## SHAREHOLDINGS OF LESS THAN 20%

| Name | Location | Shareholding | Voting rights, if different | Equity in € '000 | Profit/loss in € '000 | |
|---|---|---|---|---|---|---|
| ARDIAN Infrastructure Fund V B S.C.S., SICAV-RAIF 1) | Luxembourg, Luxembourg | 13.58 | | 1,162,157 | 147,243 | * |
| GI Data Infrastructure Fund-A LP 1) | Wilmington, USA | 13.60 | | 1,108,876 | -27,370 | * |
| Hines European Value Fund SCSp 1) | Luxembourg, Luxembourg | 13.87 | | 639,315 | 25,391 | * |
| EIG Energy Fund XVI (Scotland) L.P. 1) | Edinburgh, UK | 14.02 | | 394,807 | 22,820 | * |
| Domus Beteiligungsgesellschaft der Privaten Bausparkassen mbH Berlin 1) | Berlin | 14.13 | | 26 | -2 | * |
| Bürgschaftsbank Rheinland-Pfalz GmbH | Mainz | 14.31 | | 17,626 | 270 | * |
| MBG Mittelständische Beteiligungsgesellschaft Schleswig-Holstein mbH | Kiel | 14.59 | 15.22 | 49,299 | 2,205 | * |
| Bürgschaftsbank Sachsen GmbH | Dresden | 14.66 | 16.59 | 44,936 | 500 | * |
| AgroRisk Polska Spólka z ograniczona odpowiedzialnoscia 1) | Poznań, Poland | 15.00 | | 30 | -75 | * |
| GIP CAPS II Feeder Fund AIV 1, L.P. 1) | Wilmington, USA | 15.00 | | n/a | n/a | |
| KLAAS MESSTECHNIK GmbH 1) | Seelze-Harenberg | 15.00 | | 61 | 20 | ** |
| CI IV US AIV Non-QFPF K/S 1) | Copenhagen, Denmark | 15.24 | | 115,022 | -15,628 | ** |
| Kreditgarantiegemeinschaft der Industrie, des Verkehrsgewerbes und des Gastgewerbes Baden-Württemberg Verwaltungs-GmbH | Stuttgart | 15.28 | | 1,300 | - | * |
| EIG Energy Fund XVII (Scotland) L.P. 1) | Edinburgh, UK | 15.61 | | 600 | 137 | * |
| Prosa Beteiligungs GmbH & Co. KG 1) | Frankfurt am Main | 15.63 | | 28 | -23 | * |
| Bürgschaftsbank Nordrhein-Westfalen GmbH Kreditgarantiegemeinschaft | Neuss | 15.75 | | 41,490 | 1,205 | * |
| Partners Group Direct Infrastructure III (EUR), L.P. S.C.Sp., SICAV-RAIF 1) | Luxembourg, Luxembourg | 15.80 | | 523,183 | 54,890 | * |
| Bürgschaftsbank Hessen GmbH | Wiesbaden | 15.87 | | 24,716 | 967 | * |
| Mittelständische Beteiligungsgesellschaft Mecklenburg-Vorpommern mbH | Schwerin | 16.00 | | 19,614 | 273 | * |
| Deutsche Börse Commodities GmbH | Frankfurt am Main | 16.20 | 14.48 | 11,276 | 7,797 | * |
| Deutsche Bauernsiedlung - Deutsche Gesellschaft für Landentwicklung (DGL) mbH 1) | Frankfurt am Main | 16.26 | | 5,642 | -222 | * |
| MBG H Mittelständische Beteiligungsgesellschaft Hessen GmbH | Wiesbaden | 16.26 | | 11,649 | 12 | * |
| AERS Consortio AG 1) | Stuttgart | 16.50 | | 114 | -18 | ** |
| Copenhagen Infrastructure Energy Transition Fund I DK B K/S 1) | Copenhagen, Denmark | 16.71 | | 669,872 | 269,439 | ** |
| Copenhagen Infrastructure Energy Transition Fund I US Non-QFPF K/S 1) | Copenhagen, Denmark | 17.09 | | n/a | n/a | |
| Global Infrastructure Partners IV-C2, L.P. 1) | Luxembourg, Luxembourg | 17.17 | | 2,303,373 | 148,270 | * |
| GLADBACHER BANK Aktiengesellschaft von 1922 | Mönchengladbach | 17.53 | | 39,879 | 1,498 | * |
| Niedersächsische Bürgschaftsbank (NBB) Gesellschaft mit beschränkter Haftung | Hannover | 17.68 | | 35,022 | 2,328 | * |
| RREEF Pan-European Infrastructure Feeder GmbH & Co. KG 1) | Eschborn | 17.70 | | 348,880 | -116 | ** |
| EURO Kartensysteme GmbH | Frankfurt am Main | 19.60 | | 12,641 | 199 | * |
| Mittelständische Beteiligungsgesellschaft Sachsen-Anhalt (MBG) mbH | Magdeburg | 19.84 | | 25,378 | 704 | * |
| Mittelständische Beteiligungsgesellschaft Niedersachsen (MBG) mit beschränkter Haftung | Hannover | 19.92 | | 16,815 | 388 | * |
| SCHUFA Holding AG 2) | Wiesbaden | 19.93 | | 157,165 | 50,866 | * |

1) Held indirectly.
2) Including shares held indirectly.
3) A letter of comfort exists.
4) Profit-and-loss transfer agreement with DZ BANK (direct or indirect).
5) Section 264 (3) HGB and section 264b HGB have been applied.
n/a = no figures available.
* Prior-year figures.
** Latest available financial statements before 2022
*** The company does not prepare financial statements / exemption