Notes

A General disclosures

» 01 Basis of preparation

Pursuant to section 115 of the German Securities Trading Act (WpHG) in conjunction with section 117 no. 2 WpHG, the interim consolidated financial statements of DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main, (DZ BANK) for the first half of the 2022 financial year have been prepared in accordance with the provisions of the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU). In particular, the requirements of IAS 34 *Interim Financial Reporting* have been taken into account.

All figures are rounded to the nearest whole number. This may result in very small discrepancies in the calculation of totals and percentages.

» 02 Accounting policies and estimates

Changes in accounting policies

The financial statements of the entities consolidated in the DZ BANK Group have been prepared using uniform accounting policies. The accounting policies used to prepare these financial statements were the same as those applied in the consolidated financial statements for the 2021 financial year, unless these policies are subject to the amendments described below.

First-time application in 2022 of changes in IFRS
The following amendments to IFRS are applied for the first time in DZ BANK's interim consolidated financial statements for the first half of the 2022 financial year:

- Amendments to IFRS 3 *Business Combinations*,
- Amendments to IAS 16 *Property, Plant and Equipment*,
- Amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*,
- *Annual Improvements to IFRSs 2018–2020 Cycle*.

The amendments to IFRS 3 *Business Combinations* include updated references to the revised 2018 Conceptual Framework and the addition of an exception to the recognition principles in IFRS 3. For liabilities and contingent liabilities that are recognized separately within the scope of IAS 37 or IFRIC 21, an acquirer applies IAS 37 or IFRIC 21 to identify the liabilities it has assumed in a business combination. The amendments also add an explicit statement that an acquirer does not recognize contingent assets acquired in a business combination.

The amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* clarify which costs are included in the assessment of whether a contract is onerous. When determining the cost of fulfilling a contract, the entity must include all costs that relate directly to the contract.

The amendments to IAS 16 *Property, Plant and Equipment* prohibit the deduction from the cost of an item of property, plant, and equipment of any proceeds from selling articles produced while bringing that item to the location and condition necessary for it to operate in the manner intended by management. Instead, those sales proceeds and the cost of producing those articles are recognized in operating profit/loss.

The amendment to IFRS 9 *Financial Instruments* as part of the Annual Improvements to IFRSs 2018–2020 Cycle clarifies which fees paid or received between the entity and the lender an entity includes in the 10 percent test (IFRS 9.B3.3.6) in deciding whether to derecognize a financial liability. If the derecognition test for modified or exchanged financial liabilities results in their extinguishment, any costs or fees incurred are recognized in profit or loss as part of the gain or loss on the extinguishment. If the modification or exchange does not result in their extinguishment, any costs or fees incurred adjust the carrying amount of the liability and the effective interest rate and are amortized over the remaining term of the modified liability, provided they do not constitute compensation for the modification of cash flows from the liability. In the case of the latter, a modification gain or loss must be recognized in profit or loss.

As part of the *Annual Improvements to IFRSs 2018–2020 Cycle*, a passage was deleted in the illustrative examples in IFRS 16 *Leases* concerning the accounting treatment of reimbursement by the lessor of leasehold improvements by the lessee.

All the above amendments and improvements to IFRS must be applied to financial years beginning on or after January 1, 2022.

The amendments and improvements to IFRS listed above did not have a material impact on DZ BANK's consolidated financial statements.

Changes in IFRS endorsed by the EU but not yet adopted

The DZ BANK Group has decided against voluntary early adoption of the following new financial reporting standard and its amendments:

- IFRS 17 *Insurance Contracts*,
- Amendments to IFRS 17 *Insurance Contracts*.

The IASB published IFRS 17 *Insurance Contracts* on May 18, 2017. The objective of the new standard is to ensure the consistent, principles-based accounting treatment of insurance contracts and requires insurance liabilities to be measured using the latest amount equating to the fulfillment cash flows. This results in more consistent measurement and presentation of all insurance contracts. IFRS 17 supersedes IFRS 4 *Insurance Contracts*.

Under IFRS 17, insurance contracts are measured either using the general measurement model (GMM) or using a simplified method, the premium allocation approach (PAA). The general model specifies that, upon initial recognition, an entity shall measure a group of insurance contracts at the total of the fulfillment cash flows (FCF) and the contractual service margin (CSM). The FCF comprises the probability-weighted estimate of future cash flows, an adjustment to reflect the time value of money and the financial risks associated with the future cash flows, and a risk adjustment for non-financial risk.

Measurement is based on groups of contracts instead of individual contracts. In order to recognize groups of contracts, an entity must identify portfolios of insurance contracts that comprise contracts that are subject to similar risks and managed together. These portfolios are divided into groups of contracts based on profitability and annual cohorts. The annual cohort requirement under IFRS 17.22 as endorsed by the EU is optional; the European Commission permits users in the EU to choose whether to apply the requirement under IFRS 17.22 for certain contracts or not. R+V will make use of this option.

On subsequent measurement, the carrying amount of a group of insurance contracts at the end of each reporting period is the sum of the liability for future coverage and the liability for incurred claims. The liability for future coverage comprises the FCF related to future services and the CSM of the group at that date. The liability for incurred claims comprises the FCF related to past services that was allocated to the group at that date.

The measurement of a group of insurance contracts may be simplified using the PAA, provided that certain criteria are met. This simplification can be applied upon initial recognition of the group if an entity reasonably expects that use of the PPA will result in a measurement of the liability for future coverage that is not materially different from its measurement under the general model or if the coverage period of each contract in the group is one year or less.

Save for exceptions, contracts with direct participation features should be accounted for under the variable fee approach (VFA). Initial measurement is the same as under the general model, whereas subsequent measurement takes policyholder participation features into account.

R+V will make use of all measurement models. The main measurement model will be the premium allocation approach in non-life insurance, the variable fee approach in personal insurance, and the general measurement model in inward reinsurance. For casualty insurance with premium refund, R+V will measure the savings component using the variable fee approach, whereas the risk component will be measured using the general measurement model.

A project was initiated at the level of R+V to implement the requirements of IFRS 17. Based on preliminary test calculations, the change in accounting is expected to have the following effects on financial position and financial performance. Given the adjustments and calibrations planned for 2022 as part of the project to implement IFRS 17, these effects are subject to uncertainty, such that it is not yet possible to quantify them.

The insurance items recognized on the balance sheet and in the income statement under IFRS 4, which were largely influenced by the German Commercial Code (HGB) and the Regulation on the Accounting of Insurance Undertakings (RechVersV) at R+V, will no longer be reported from January 1, 2023.

The introduction of IFRS 17 will result in new line items in the external reporting for the insurance business, primarily the liability for remaining coverage (LRC) and the liability for incurred claims (LIC). They will be accompanied by extensive disclosures in the notes, which will provide further information on these line items for the reporting period.

Based on the latest insights, equity is expected to increase as at the transition date and the level of profitability is likely to be comparable with the level under IFRS 4. In addition, R+V’s CSM as at the transition date is expected to reflect the anticipated future profit. Given the increase in equity, the introduction of IFRS 17 at R+V will also improve the Tier 1 capital ratio (CET1) of the DZ BANK banking group.

Under IFRS 17, line items in the income statement and on the equity and liabilities side of the balance sheet must be subject to measurement that is consistent with observable market prices and sensitive to interest rates, largely based on an entity-specific yield curve. Compared with IFRS 4, it can therefore be assumed that volatility will be higher in profit and loss and in other comprehensive income (OCI). The options provided under IFRS 17 will be exercised in order to minimize volatility as much as possible during the transition (OCI option).

IFRS 17 must be applied for financial years beginning on or after January 1, 2023.

Changes in presentation

As a result of the changes – presented in the consolidated financial statements as at December 31, 2021 in note 2 (Accounting policies and estimates) – for amounts arising from differences between the transaction price and fair value (day-one profit or loss) that were identified upon initial recognition of financial assets and financial liabilities, which will be deferred and recognized over the remaining term of the underlying transaction and no longer recognized immediately in profit or loss, the related comparative figures as at June 30, 2021 in the income statement, statement of changes in equity, and statement of cash flows have been restated in the interim consolidated financial statements.

As a result of the changes – presented in the consolidated financial statements as at December 31, 2021 in note 2 (Accounting policies and estimates) – in connection with the elimination or significant reduction of measurement or recognition inconsistencies (accounting mismatches) by exercising the fair value option, the related comparative figures as at June 30, 2021 in the income statement and statement of cash flows have been restated in the interim consolidated financial statements.

As a result of the changes – presented in the consolidated financial statements as at December 31, 2021 in note 2 (Accounting policies and estimates) – relating to the determination of amounts to be reclassified from gains and losses on trading activities to net interest income, the comparative figures as at June 30, 2021 in the income statement and statement of cash flows have been restated in the interim consolidated financial statements.

As a result of the reclassification – presented in the consolidated financial statements as at December 31, 2021 in note 2 (Accounting policies and estimates) – of amounts previously recognized as cash changes in the statement of cash flows as non-cash changes, the comparative figures as at June 30, 2021 in the statement of cash flows have been restated in the interim consolidated financial statements.

The aforementioned presentation changes result in related adjustments to the associated disclosures in the statement of changes in equity, note 4 (Segment information), note 5 (Net interest income), note 7 (Gains and losses on trading activities), note 9 (Other gains and losses on valuation of financial instruments), and note 42 (Differences not recognized at the time of initial recognition).

In accordance with the provisions of IAS 8.41 et seq., consolidation items previously assigned to other assets on the balance sheet are recognized under investments held by insurance companies from the 2022 financial year onward. This retrospective change resulted in the following adjustments to the balance sheet and statement of cash flows.

Balance sheet as at January 1, 2021

ASSETS

€ million	Jan. 1, 2021 before restatement	Amount of restatement	Jan. 1, 2021 after restatement
(…)			
Investments held by insurance companies	121,668	-6	121,662
(…)			
Other assets	5,516	6	5,522
(…)			
Total assets	**594,535**	-	**594,535**

Balance sheet as at December 31, 2021

ASSETS

€ million	Dec. 31, 2021 before restatement	Amount of restatement	Dec. 31, 2021 after restatement
(…)			
Investments held by insurance companies	129,131	-11	129,119
(…)			
Other assets	6,490	11	6,501
(…)			
Total assets	**627,273**	-	**627,273**

Statement of cash flows for the period January 1 to June 30, 2021

€ million	Jan. 1–Jun. 30, 2021 before restatement	Amount of restatement	Jan. 1–Jun. 30, 2021 after restatement
Net profit	1,307	-	**1,307**
Non-cash items included in net profit	-728	-	-728
Subtotal	579	-	579
Cash changes in assets and liabilities arising from operating activities			
(…)			
Other assets and liabilities from operating activities	1,060	-502	558
(…)			
Cash flows from operating activities	**32,871**	**-502**	**32,369**
Cash flows from investing activities	**-1,788**	**502**	**-1,286**
Cash flows from financing activities	**-1,589**	-	**-1,589**

€ million	Jan. 1–Jun. 30, 2021 before restatement	Amount of restatement	Jan. 1–Jun. 30, 2021 after restatement
Cash and cash equivalents as at January 1	68,354	-	68,354
Cash flows from operating activities	32,871	-502	32,369
Cash flows from investing activities	-1,788	502	-1,286
Cash flows from financing activities	-1,589	-	-1,589
Cash and cash equivalents as at June 30	**97,848**	-	**97,848**

Furthermore, the aforementioned presentation changes result in related adjustments to the associated disclosures in note 26 (Investments held by insurance companies), note 28 (Other assets), note 41 (Classes, categories, and fair values of financial instruments), note 43 (Assets and liabilities measured at fair value on the balance sheet) – specifically the fair value hierarchy disclosures – and note 46 (Nature and extent of risks arising from financial instruments and insurance contracts) – specifically the disclosures on loss allowances and gross carrying amounts.

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 interim consolidated financial statements. These assumptions and estimates are based on historical experience, planning, and expectations or forecasts regarding future events.

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

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 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 or the identification of any impairment of financial assets in the reporting period. To some extent, however, climate-related matters are factored into the pertinent models implicitly. When measuring insurance liabilities, climate-related matters are taken into account by making prudent additions to provisions for claims and maintaining an extensive reinsurance program that comes into effect when a defined claims threshold is exceeded and thus limits financial risk.

The war in Ukraine

The war in Ukraine has not given rise to any additional estimation uncertainty with regard to the calculation of the carrying amounts of assets, liabilities, income, and expenses. The consequences of the war in Ukraine particularly affect the familiar assumptions and estimates used to calculate loss allowances, provisions, and insurance liabilities. The lending volume impacted by the war in Ukraine, and the related collateralization, is presented in section 7.3.2 of the risk report.

» 03 Scope of consolidation

The main changes to the scope of consolidation as at June 30, 2022 compared with the scope of consolidation as at December 31, 2021 were due to the first-time inclusion of Schwäbisch Hall Facility Management GmbH, Schwäbisch Hall, and the acquisition of INFINDO Development GmbH, Düsseldorf, and MIRADOR Development GmbH, Düsseldorf.

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

» 04 Segment information

INFORMATION ON OPERATING SEGMENTS FOR THE PERIOD JANUARY 1 TO JUNE 30, 2022

€ million	BSH	R+V	TeamBank	UMH
Net interest income	419	-	247	-
Net fee and commission income	13	-	8	1,000
Gains and losses on trading activities	-	-	-	-
Gains and losses on investments	-46	-	-	-49
Other gains and losses on valuation of financial instruments	-1	-	4	-56
Gains and losses from the derecognition of financial assets measured at amortized cost	6	-	-	-
Premiums earned	-	9,746	-	-
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	-3,333	-	-
Insurance benefit payments	-	-4,735	-	-
Insurance business operating expenses	-	-1,710	-	-
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business	-	6	-	-
Loss allowances	-6	-	-53	-
Administrative expenses	-258	-	-141	-564
Other net operating income	42	-5	3	39
Profit/loss before taxes	**168**	**-30**	**68**	**371**
Cost/income ratio (%)	59.6	-	53.8	60.4
Regulatory RORAC (%)	25.9	-0.6	22.9	>100.0
Average own funds/solvency requirement	1,299	9,326	593	542
Total assets/total equity and liabilities as at Jun. 30, 2022	86,681	121,929	10,396	3,947

	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	DZ BANK – holding function	Other/ Consolidation	**Total**
	474	387	34	58	4	-9	-139	1,475
	262	12	112	-15	-	-	-28	1,364
	347	-1	11	-	-2	-	4	359
	-1	33	-	-	-	-	10	-53
	-6	73	-2	-	101	-	-8	105
	5	-	-2	-	-	-	2	11
	-	-	-	-	-	-	-	9,746
	-	-	-	-	-	-	-31	-3,364
	-	-	-	-	-	-	-	-4,735
	-	-	-	-	-	-	82	-1,628
	-	-	-	-	-	-	-	6
	-44	-14	-	-3	61	-	-1	-60
	-679	-162	-137	-38	-46	-133	-84	-2,242
	12	7	2	-	11	-	45	156
	369	**335**	**19**	**3**	**131**	**-143**	**-150**	**1,141**
	62.1	31.7	88.4	88.4	40.4	-	-	65.1
	12.8	48.8	11.1	3.5	>100.0	-	-	11.7
	5,785	1,372	341	169	61	-	-	19,488
	389,758	89,683	24,541	3,357	5,481	20,348	-97,464	658,657

INFORMATION ON OPERATING SEGMENTS FOR THE PERIOD JANUARY 1 TO JUNE 30, 2021

€ million	BSH	R+V	TeamBank	UMH
Net interest income	293	-	241	4
Net fee and commission income	1	-	-1	1,264
Gains and losses on trading activities	-	-	-	-
Gains and losses on investments	13	-	-	-1
Other gains and losses on valuation of financial instruments	-	-	1	74
Gains and losses from the derecognition of financial assets measured at amortized cost	4	-	-	-
Premiums earned	-	9,497	-	-
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	2,759	-	-
Insurance benefit payments	-	-10,126	-	-
Insurance business operating expenses	-	-1,645	-	-
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business	-	-	-	-
Loss allowances	-19	-	-22	-
Administrative expenses	-257	-	-138	-503
Other net operating income	18	-2	4	-14
Profit/loss before taxes	**54**	**482**	**84**	**825**
Cost/income ratio (%)	78.1	-	56.3	37.9
Regulatory RORAC (%)	8.3	9.5	29.9	>100.0
Average own funds/solvency requirement	1,295	10,194	565	516
Total assets/total equity and liabilities as at Dec. 31, 2021	85,371	137,390	10,022	4,665

	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	DZ BANK – holding function	Other/ Consolidation	**Total**
	501	364	28	64	-12	-20	-79	1,384
	258	4	103	-15	8	-	-26	1,596
	-41	-4	11	-	-1	-	41	6
	24	-	-	-	-	-	1	37
	61	70	1	-	24	-	3	234
	3	-	-	-	-	-	-1	6
	-	-	-	-	-	-	-	9,497
	-	-	-	-	-	-	-26	2,733
	-	-	-	-	-	-	-	-10,126
	-	-	-	-	-	-	63	-1,582
	-	-	-	-	-	-	-	-
	78	1	-	-5	80	-	1	114
	-664	-157	-125	-41	-68	-119	-70	-2,142
	-5	8	1	-3	39	-	27	73
	215	**287**	**19**	**-**	**70**	**-139**	**-68**	**1,829**
	82.9	35.5	86.8	89.1	>100.0	-	-	55.5
	8.1	39.9	11.4	0.3	>100.0	-	-	18.4
	5,300	1,441	331	185	103	-	-	19,929
	335,254	91,362	21,611	3,352	7,097	19,675	-88,526	627,273

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

Presentation of operating segments

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

Measurement

Internal reporting to the chief operating decision-makers is primarily based on the generally accepted 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 were 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 were primarily the result of the elimination of intragroup dividend payments and profit distributions in connection with intragroup liabilities to dormant partners and were also attributable to the early redemption of issued bonds and commercial paper that had been acquired by entities in the DZ BANK Group other than the issuer. Internal transactions in the DZ BANK – CICB operating segment were 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.

» 05 Net interest income

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
INTEREST INCOME AND CURRENT INCOME AND EXPENSE	**2,228**	**2,116**
Interest income from	**2,193**	**2,085**
Lending and money market business	2,362	2,230
Bonds and other fixed-income securities	210	194
Portfolio hedges of interest-rate risk	-204	-204
Financial assets with a negative effective interest rate	-176	-136
Current income and expense from	**35**	**31**
Shares and other variable-yield securities	10	11
of which income from other shareholdings	9	9
Investments in subsidiaries	2	2
Investments in associates	-	1
Entities accounted for using the equity method	23	15
of which relating to investments in joint ventures	25	22
of which relating to investments in associates	-2	-7
Income from profit-pooling, profit-transfer and partial profit-transfer agreements	-	2
INTEREST EXPENSE ON	**-752**	**-732**
Deposits from banks and customers	-907	-971
Debt certificates issued including bonds	-243	-97
Subordinated capital	-30	-39
Portfolio hedges of interest-rate risk	44	26
Financial liabilities with a positive effective interest rate	387	351
Provisions and other liabilities	-3	-3
Total	**1,475**	**1,384**

The interest expense on provisions and other liabilities included interest expense on lease liabilities of €2 million (first half of 2021: €2 million).

» 06 Net fee and commission income

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Fee and commission income	**2,732**	**2,861**
Securities business	2,156	2,312
Asset management	179	197
Payments processing including card processing	161	147
Lending business and trust activities	74	60
Financial guarantee contracts and loan commitments	35	34
International business	7	5
Building society operations	22	22
Other	98	84
Fee and commission expenses	**-1,368**	**-1,264**
Securities business	-980	-865
Asset management	-114	-144
Payments processing including card processing	-84	-69
Lending business	-34	-41
Financial guarantee contracts and loan commitments	-6	-5
Building society operations	-28	-37
Other	-122	-104
Total	**1,364**	**1,596**

In the reporting period, fee and commission income included revenue from contracts with customers pursuant to IFRS 15 in an amount of €2,723 million (first half of 2021: €2,856 million); see note 51.

» 07 Gains and losses on trading activities

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Gains and losses on non-derivative financial instruments and embedded derivatives	**3,628**	-356
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	2,026	154
Gains and losses on derivatives	**-3,387**	300
Gains and losses on exchange differences	**118**	62
Total	**359**	6

Gains and losses on exchange differences included currency translation losses of €6 million on financial instruments not measured at fair value through profit or loss (first half of 2021: gains of €32 million).

» 08 Gains and losses on investments

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Gains and losses on the disposal of bonds and other fixed-income securities	**-14**	32
Gains and losses on the disposal of shares and other variable-yield securities	**-49**	-1
Gains and losses on investments in associates	**11**	6
Disposals	11	6
Total	**-53**	37

» 09 Other gains and losses on valuation of financial instruments

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Gains and losses from fair value hedge accounting	**6**	15
Gains and losses on derivatives used for purposes other than trading	**66**	76
Gains and losses on financial instruments designated as at fair value through profit or loss	**82**	116
Gains and losses on non-derivative financial instruments and embedded derivatives that are not related to derivatives held for trading purposes	240	92
Gains and losses on derivatives	-158	24
Gains and losses on financial assets mandatorily measured at fair value through profit or loss	**-50**	26
Total	**105**	234

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.

» 10 Premiums earned

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Net premiums written	**10,723**	**10,434**
Gross premiums written	10,860	10,559
Reinsurance premiums ceded	-136	-125
Change in provision for unearned premiums	**-977**	**-937**
Gross premiums	-1,002	-955
Reinsurers' share	25	17
Total	**9,746**	**9,497**

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

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Income from investments held by insurance companies	**3,052**	**4,465**
Interest income and current income	1,230	1,134
Income from reversals of impairment losses and reversals of loss allowances, and unrealized gains	781	575
Gains on valuation through profit or loss of investments held by insurance companies	623	2,431
Gains on disposals	419	326
Expenses in connection with investments held by insurance companies	**-6,659**	**-1,667**
Administrative expenses	-130	-120
Depreciation/amortization expense, additions to loss allowances, and impairment losses and unrealized losses	-159	-283
Losses on valuation through profit or loss of investments held by insurance companies	-5,354	-936
Losses on disposals	-1,016	-327
Other gains and losses of insurance companies	**243**	**-65**
Other insurance gains and losses	142	175
Other non-insurance gains and losses	100	-241
Total	**-3,364**	**2,733**

Income from and expenses in connection with investments held by insurance companies included additions to loss allowances of €41 million (first half of 2021: €53 million) and reversals of loss allowances of €25 million (first half of 2021: €51 million).

» 12 Insurance benefit payments

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Expenses for claims	**-5,942**	**-5,765**
Gross expenses for claims	-5,988	-5,779
Reinsurers' share	45	15
Changes in the benefit reserve and in other insurance liabilities	**-203**	**-3,806**
Gross changes in provisions	-205	-3,806
Reinsurers' share	3	-
Income from/expenses for premium refunds	**1,410**	**-556**
Gross income from/expenses for premium refunds	905	-202
Expenses for deferred premium refunds	505	-354
Total	**-4,735**	**-10,126**

The income from premium refunds is attributable to the changes in the provision for premium refunds, which were recognized in profit or loss; the provision is reported under insurance liabilities and the changes are presented in note 37.

» 13 Insurance business operating expenses

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Gross expenses	-1,648	-1,608
Reinsurers' share	19	25
Total	**-1,628**	**-1,582**

» 14 Loss allowances

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Loss allowances for loans and advances to banks	**-13**	**20**
Additions	-32	-14
Reversals	18	14
Recoveries on loans and advances to banks previously impaired	1	20
Loss allowances for loans and advances to customers	**-42**	**69**
Additions	-1,077	-921
Reversals	995	963
Directly recognized impairment losses	-12	-19
Recoveries on loans and advances to customers previously impaired	39	34
Other	12	12
Loss allowances for investments	**3**	**15**
Additions	-7	-8
Reversals	10	23
Loss allowances for other assets	**-**	**1**
Recoveries on other assets previously impaired	-	1
Other loss allowances for loans and advances	**-7**	**9**
Additions to and reversals of provisions for loan commitments	-5	-4
Additions to and reversals of provisions for financial guarantee contracts	-	12
Additions to and reversals of other provisions for loans and advances	-2	1
Total	**-60**	**114**

Gains and losses from credit-risk-related modifications and other gains and losses on financial assets that are purchased or originated credit-impaired assets (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.

» 15 Administrative expenses

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Staff expenses	-1,001	-966
General and administrative expenses	-1,100	-1,039
Depreciation and amortization	-140	-138
Total	**-2,242**	**-2,143**

» 16 Other net operating income

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Income from the reversal of provisions and accruals	72	37
Gains and losses on non-current assets and disposal groups classified as held for sale	27	52
Gains on the disposal of other assets	23	19
Expenses for other taxes	-10	-13
Restructuring expenses	-2	-23
Residual other net operating income	46	1
Total	**156**	**73**

» 17 Income taxes

IAS 34 states that income taxes in interim financial statements are to be calculated on the basis of the best possible estimate of the weighted average tax rate for the year as a whole. This tax rate is based on the legislation that is in force or has been adopted at the relevant balance sheet date.

» 18 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	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Gains and losses on debt instruments measured at fair value through other comprehensive income	**-6,918**	-717
Gains (+)/losses (-) arising during the reporting period	-7,017	-601
Gains (-)/losses (+) reclassified to the income statement during the reporting period	100	-116
Exchange differences on currency translation of foreign operations	**6**	-23
Gains (+)/losses (-) arising during the reporting period	5	8
Gains (-)/losses (+) reclassified to the income statement during the reporting period	1	-31
Gains and losses on hedges of net investments in foreign operations	**-**	4
Gains (-)/losses (+) reclassified to the income statement during the reporting period	-	4
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	**8**	6
Gains (+)/losses (-) arising during the reporting period	8	6

» 19 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	Jan. 1–Jun. 30, 2022 Amount before taxes	Income taxes	Amount after taxes	Jan. 1–Jun. 30, 2021 Amount before taxes	Income taxes	Amount after taxes
Items that may be reclassified to the income statement	**-6,904**	**2,206**	**-4,699**	-730	178	-552
Gains and losses on debt instruments measured at fair value through other comprehensive income	-6,918	2,209	-4,709	-717	179	-538
Exchange differences on currency translation of foreign operations	6	-3	3	-23	-1	-24
Gains and losses on hedges of net investments in foreign operations	-	-	-	4	-	4
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	8	-	8	6	-	6
Items that will not be reclassified to the income statement	**55**	**-87**	**-32**	302	-22	280
Gains and losses on equity instruments for which the fair value OCI option has been exercised	-372	43	-329	224	-9	215
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk	-15	6	-9	-31	10	-21
Gains and losses arising from remeasurement of defined benefit plans	442	-137	305	109	-23	86
Total	**-6,849**	**2,118**	**-4,731**	**-428**	**156**	**-272**

C Balance sheet disclosures

» 20 Cash and cash equivalents

€ million	Jun. 30, 2022	Dec. 31, 2021
Cash on hand	294	266
Balances with central banks	112,654	85,763
Total	**112,948**	**86,029**

» 21 Loans and advances to banks

	Repayable on demand		Other loans and advances		Total	
€ million	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021
Domestic banks	**3,761**	3,310	**104,231**	96,627	**107,992**	99,937
Affiliated banks	2,156	1,506	101,135	92,528	103,291	94,034
Other banks	1,604	1,804	3,097	4,099	4,701	5,903
Foreign banks	**3,305**	3,973	**4,648**	3,750	**7,954**	7,723
Total	**7,066**	**7,284**	**108,880**	**100,375**	**115,946**	**107,659**

» 22 Loans and advances to customers

€ million	Jun. 30, 2022	Dec. 31, 2021
Loans and advances to domestic customers	175,310	169,717
Loans and advances to foreign customers	27,692	25,948
Total	**203,002**	**195,665**

» 23 Hedging instruments (positive fair values)

Hedging instruments (positive fair values) amounted to €948 million (December 31, 2021: €389 million) and resulted solely from derivatives used as fair value hedges.

» 24 Financial assets held for trading

€ million	Jun. 30, 2022	Dec. 31, 2021
DERIVATIVES (POSITIVE FAIR VALUES)	**18,719**	**16,188**
Interest-linked contracts	14,714	13,478
Currency-linked contracts	3,156	1,481
Share-/index-linked contracts	674	847
Other contracts	3	2
Credit derivatives	171	380
BONDS AND OTHER FIXED-INCOME SECURITIES	**11,995**	**10,964**
Money market instruments	526	140
Bonds	11,469	10,824
SHARES AND OTHER VARIABLE-YIELD SECURITIES	**1,355**	**1,752**
Shares	1,321	1,750
Investment fund units	33	2
RECEIVABLES	**28,559**	**18,417**
of which from affiliated banks	33	24
of which from other banks	26,596	17,325
Money market placements	**27,166**	**17,127**
with banks	25,794	16,575
with customers	1,372	553
Promissory notes and registered bonds	**1,393**	**1,290**
from banks	835	774
from customers	558	516
Total	**60,628**	**47,321**

» 25 Investments

€ million	Jun. 30, 2022	Dec. 31, 2021
Bonds and other fixed-income securities	**42,963**	**49,125**
Money market instruments	394	488
Bonds	42,569	48,637
Shares and other variable-yield securities	**1,724**	**2,587**
Shares and other shareholdings	469	494
Investment fund units	1,252	2,080
Other variable-yield securities	3	13
Investments in subsidiaries	**282**	**305**
Investments in joint ventures	**372**	**349**
Investments in associates	**108**	**75**
Total	**45,448**	**52,440**

The carrying amount of investments in joint ventures accounted for using the equity method totaled €369 million (December 31, 2021: €349 million). €95 million of the investments in associates has been accounted for using the equity method (December 31, 2021: €72 million).

» 26 Investments held by insurance companies

€ million	Jun. 30, 2022	Dec. 31, 2021
Investment property	4,054	3,813
Investments in subsidiaries	869	901
Investments in joint ventures	23	21
Investments in associates	1	1
Mortgage loans	11,621	13,005
Promissory notes and loans	6,470	7,202
Registered bonds	6,743	8,510
Other loans	872	968
Variable-yield securities	12,896	13,742
Fixed-income securities	51,321	61,445
Derivatives (positive fair values)	4	199
Deposits with ceding insurers and other investments	643	594
Assets related to unit-linked contracts	16,398	18,719
Total	**111,914**	**129,119**

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

€ million	Jun. 30, 2022	Dec. 31, 2021
Land and buildings	871	888
Office furniture and equipment	177	178
Investment property	289	279
Right-of-use assets	545	537
Total	**1,882**	**1,881**

» 28 Other assets

€ million	Jun. 30, 2022	Dec. 31, 2021
Other assets held by insurance companies	4,274	4,492
Goodwill	155	155
Other intangible assets	501	522
of which software	404	419
of which acquired customer relationships	61	63
Other loans and advances	459	459
Residual other assets	1,911	874
Total	**7,300**	**6,501**

Residual other assets principally relate to initial margins from client clearing.

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

€ million	Jun. 30, 2022	Dec. 31, 2021
Intangible assets	147	151
Reinsurers' share of insurance liabilities	626	782
Receivables	1,929	1,703
Credit balances with banks, checks and cash on hand	106	713
Property, plant and equipment	397	408
Residual other assets	1,071	736
Loss allowances	-1	-2
Total	**4,274**	**4,492**

Residual other assets included right-of-use assets amounting to €62 million (December 31, 2021: €69 million).

» 29 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, 2021	14	3	6	246	336	1,661	7
Additions	14	-	-	122	332	462	5
Utilizations	-	-	-	-	-1	-199	-
Reversals	-12	-2	-	-203	-193	-560	-6
Other changes	-	-	-	90	-117	75	1
Balance as at Jun. 30, 2021	**16**	**1**	**6**	**255**	**357**	**1,439**	**7**
Balance as at Jan. 1, 2022	14	2	8	264	364	1,267	13
Additions	16	6	10	154	417	490	15
Utilizations	-	-	-	-	-1	-214	-2
Reversals	-14	-2	-1	-246	-205	-534	-9
Other changes	-1	1	-1	102	-162	103	-
Balance as at Jun. 30, 2022	**15**	**6**	**16**	**274**	**413**	**1,113**	**17**

	Investments			Other assets	Total
€ million	Stage 1	Stage 2	Stage 3	Stage 1	
Balance as at Jan. 1, 2021	6	22	17	2	2,320
Additions	4	1	-	-	940
Utilizations	-	-	-	-	-200
Reversals	-19	-2	-	-	-997
Other changes	17	-16	-	-	50
Balance as at Jun. 30, 2021	**8**	**5**	**17**	**2**	**2,113**
Balance as at Jan. 1, 2022	4	13	5	2	1,956
Additions	1	2	-	-	1,111
Utilizations	-	-	-	-	-217
Reversals	-1	-3	-2	-	-1,017
Other changes	-	-	-	-	42
Balance as at Jun. 30, 2022	**4**	**12**	**3**	**2**	**1,874**

» 30 Non-current assets and disposal groups classified as held for sale

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

At the level of DVB, further parts of the credit portfolio of the aviation finance business, which had previously constituted a disposal group not qualifying as a discontinued operation, were disposed of in the first half of 2022. The disposal gave rise to a net gain of €2 million, which was recognized under other net operating income. The impairment loss requirement of €1 million identified for this disposal group was also recognized under other net operating income. As at June 30, 2022, assets of €2 million were still recognized in this disposal group. The disposal of the remaining assets is expected to take place in 2022.

The plan to sell the fully consolidated subsidiary of the DVB subgroup that had constituted a disposal group not qualifying as a discontinued operation in 2021 was abandoned in the first half of 2022. The impairment loss requirement of €9 million identified for this disposal group in 2021 was recognized as income under other net operating income in the first half of 2022.

Other disposal groups that do not qualify as discontinued operations include units in various investment funds, an unconsolidated subsidiary, and receivables. The sale of these disposal groups is expected to take place in 2022.

The disposal group not qualifying as a discontinued operation, which had been classified as such as at December 31, 2021 and consisted of receivables and an associate, was sold in the first half of 2022. The resulting gain of €18 million was reported under other net operating income.

The individual non-current assets classified as held for sale comprise investment property.

» 31 Deposits from banks

	Repayable on demand		With agreed maturity or notice period		Total	
€ million	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021
Domestic banks	**43,339**	56,372	**136,497**	131,426	**179,836**	187,798
Affiliated banks	39,169	52,196	25,078	22,254	64,247	74,450
Other banks	4,170	4,176	111,419	109,172	115,589	113,348
Foreign banks	**9,309**	3,290	**13,510**	5,474	**22,819**	8,764
Total	**52,648**	59,662	**150,007**	136,900	**202,655**	196,562

» 32 Deposits from customers

	Repayable on demand		With agreed maturity or notice period		Total	
€ million	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021	Jun. 30, 2022	Dec. 31, 2021
Domestic customers	28,984	24,628	97,833	91,030	126,817	115,658
Foreign customers	30,166	13,262	6,685	10,055	36,851	23,317
Total	**59,150**	37,889	**104,519**	101,086	**163,668**	138,975

» 33 Debt certificates issued including bonds

€ million	Jun. 30, 2022	Dec. 31, 2021
Bonds issued	**68,146**	**67,086**
Mortgage Pfandbriefe	29,069	27,472
Public-sector Pfandbriefe	1,285	1,657
Other bonds	37,792	37,957
Other debt certificates issued	**22,520**	**12,566**
Total	**90,666**	**79,652**

As was also the case as at December 31, 2021, all other debt certificates issued are commercial paper.

» 34 Hedging instruments (negative fair values)

Hedging instruments (negative fair values) amounted to €550 million (December 31, 2021: €1,678 million) and resulted solely from derivatives used as fair value hedges.

» 35 Financial liabilities held for trading

€ million	Jun. 30, 2022	Dec. 31, 2021
DERIVATIVES (NEGATIVE FAIR VALUES)	**22,775**	**15,402**
Interest-linked contracts	16,881	11,911
Currency-linked contracts	3,065	1,682
Share-/index-linked contracts	2,491	1,577
Other contracts	170	150
Credit derivatives	167	82
SHORT POSITIONS	**2,451**	**1,548**
BONDS ISSUED	**20,482**	**22,245**
DEPOSITS	**5,987**	**4,216**
of which from affiliated banks	3,824	3,412
of which from other banks	1,790	613
Money market deposits	**5,822**	**4,031**
from banks	5,540	3,934
from customers	282	97
Promissory notes and registered bonds issued	**164**	**185**
to banks	74	91
to customers	90	94
Total	**51,695**	**43,411**

As was also the case as at December 31, 2021, bonds issued mainly comprise share certificates and index-linked certificates.

» 36 Provisions

€ million	Jun. 30, 2022	Dec. 31, 2021
Provisions for employee benefits	**1,353**	**1,772**
Provisions for defined benefit plans	883	1,251
Provisions for other long-term employee benefits	188	206
of which for semi-retirement schemes	59	59
Provisions for termination benefits	258	276
of which for early retirement schemes	28	27
of which for restructuring	183	201
Provisions for short-term employee benefits	24	38
Provisions for share-based payment transactions	**31**	**42**
Other provisions	**1,887**	**2,178**
Provisions for onerous contracts	18	25
Provisions for restructuring	30	41
Provisions for loan commitments	131	125
Provisions for financial guarantee contracts	82	88
Other provisions for loans and advances	40	38
Provisions relating to building society operations	1,199	1,398
Residual provisions	387	462
Total	**3,270**	**3,992**

The reduction in the defined benefit obligation was mainly due to actuarial gains resulting from the increase in the underlying discount rate from 1.10 percent as at December 31, 2021 to 3.30 percent as at June 30, 2022. Furthermore, the annuity trend was adjusted from 1.80 percent as at December 31, 2021 to 2.30 percent as at June 30, 2022. Both adjustments were due to changes in financial assumptions.

» 37 Insurance liabilities

€ million	Jun. 30, 2022	Dec. 31, 2021
Provision for unearned premiums	2,186	1,179
Benefit reserve	75,242	74,167
Provision for claims outstanding	16,890	16,429
Provision for premium refunds	-1,679	11,237
Other insurance liabilities	47	53
Reserve for unit-linked insurance contracts	14,649	15,799
Total	**107,337**	**118,863**

Due to the changes in interest rates in the reporting period and the related reduction in the fair values of fixed-income securities, a comparison of the carrying amounts and fair values of investments held by insurance companies gave rise to considerable unrealized losses that were recognized in other comprehensive income. Where these investments held by insurance companies relate to life insurance contracts with policyholder participation, expenses for deferred premium refunds were calculated on the basis of these unrealized losses in line with IFRS 4.30. Overall, the 'Expenses for deferred premium refunds' item was negative and thus constituted accrued income in the reporting period. At present, the DZ BANK Group is reasonably certain that the unrealized losses are a temporary effect that will reverse.

» 38 Other liabilities

€ million	Jun. 30, 2022	Dec. 31, 2021
Other liabilities of insurance companies	7,468	7,796
Accruals	1,000	1,526
Other payables	202	170
Lease liabilities	557	547
Residual other liabilities	1,666	758
Total	**10,893**	**10,797**

Residual other liabilities principally relate to initial margins from client clearing.

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

€ million	Jun. 30, 2022	Dec. 31, 2021
Other provisions	346	426
Payables and residual other liabilities	7,122	7,371
Total	**7,468**	**7,796**

Other provisions include provisions for defined benefit plans of €139 million (December 31, 2021: €203 million). The actuarial gains resulting from remeasurement of the present value of the defined benefit obligation of the insurance companies were mainly due to the increase in the underlying discount rate from 1.10 percent as at December 31, 2021 to 3.30 percent as at June 30, 2022. Furthermore, the annuity trend was adjusted from 1.80 percent as at December 31, 2021 to 2.30 percent as at June 30, 2022. Both adjustments were due to changes in financial assumptions.

Payables and residual other liabilities included lease liabilities of €78 million (December 31, 2021: €86 million).

» 39 Subordinated capital

€ million	Jun. 30, 2022	Dec. 31, 2021
Subordinated liabilities	3,094	3,062
Share capital repayable on demand	12	12
Total	**3,106**	**3,074**

» 40 Equity

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

	Items not reclassified to the income statement		Items reclassified to the income statement	
€ million	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 comprehensive income	Currency translation reserve
Equity as at Jan. 1, 2021	340	-76	1,889	59
Other comprehensive income/loss	189	-21	-503	-17
Total comprehensive income/loss	**189**	**-21**	**-503**	**-17**
Acquisition/disposal of non-controlling interests	-	-	-	-1
Reclassifications within equity	-51	-7	-	-
Equity as at Jun. 30, 2021	**478**	**-104**	**1,386**	**41**
Equity as at Jan. 1, 2022	621	-54	1,025	58
Other comprehensive income/loss	-292	-9	-4,221	15
Total comprehensive income/loss	**-292**	**-9**	**-4,221**	**15**
Changes in scope of consolidation	4	-	-	-
Acquisition/disposal of non-controlling interests	-	-	2	-
Reclassifications within equity	-17	-5	-	-
Equity as at Jun. 30, 2022	**316**	**-67**	**-3,194**	**72**

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 1	Stage 3	Stage 1	Stage 2	Stage 3	
Balance as at Jan. 1, 2021	2	8	24	10	2	-	46
Additions	-	3	-	44	2	-	49
Reversals	-1	-2	-	-19	-	-	-22
Other changes	-	-	-	-3	-1	1	-3
Balance as at Jun. 30, 2021	**1**	**9**	**24**	**32**	**3**	**1**	**70**
Balance as at Jan. 1, 2022	-	7	24	19	2	1	53
Additions	-	4	-	7	5	2	18
Utilizations	-	-	-	-	-	-2	-2
Reversals	-	-3	-	-5	-4	-	-12
Other changes	-	-	-	-1	1	-	-
Balance as at Jun. 30, 2022	**-**	**8**	**24**	**20**	**4**	**1**	**57**

The information on regulatory capital and on capital management pursuant to IAS 1.134-136, which also forms part of these IFRS interim consolidated financial statements, can be found in the interim group management report in chapter VI ‘DZ BANK Group risk report’, section 6 ‘Capital adequacy’.

D Financial instruments and fair value disclosures

» 41 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	Jun. 30, 2022 Carrying amount	Jun. 30, 2022 Fair value	Dec. 31, 2021 Carrying amount	Dec. 31, 2021 Fair value
FINANCIAL ASSETS MEASURED AT FAIR VALUE	**207,232**	**207,249**	**218,606**	**218,663**
Financial assets measured at fair value through profit or loss	**97,956**	**97,973**	**89,638**	**89,695**
Financial assets mandatorily measured at fair value through profit or loss	***90,440***	***90,456***	***80,923***	***80,980***
Loans and advances to customers	180	180	168	168
Hedging instruments (positive fair values)	948	948	389	389
Financial assets held for trading	60,628	60,645	47,321	47,378
Investments	2,336	2,336	3,129	3,129
Investments held by insurance companies	26,348	26,348	29,917	29,917
Financial assets designated as at fair value through profit or loss	***7,516***	***7,516***	***8,715***	***8,715***
Loans and advances to banks	1,510	1,510	1,854	1,854
Loans and advances to customers	886	886	1,033	1,033
Investments	5,120	5,120	5,829	5,829
Financial assets measured at fair value through other comprehensive income	**109,237**	**109,237**	**128,805**	**128,805**
Financial assets mandatorily measured at fair value through other comprehensive income	***102,688***	***102,688***	***122,068***	***122,068***
Loans and advances to banks	66	66	68	68
Loans and advances to customers	2,340	2,340	2,781	2,781
Investments	25,577	25,577	30,779	30,779
Investments held by insurance companies	74,705	74,705	88,439	88,439
Financial assets designated as at fair value through other comprehensive income	***6,549***	***6,549***	***6,737***	***6,737***
Investments	498	498	528	528
Investments held by insurance companies	6,051	6,051	6,209	6,209
Non-current assets and disposal groups classified as held for sale	**39**	**39**	**163**	**163**
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**434,499**	**426,087**	**395,340**	**398,843**
Cash and cash equivalents	112,654	112,654	85,763	85,763
Loans and advances to banks	114,331	108,171	105,713	107,307
Loans and advances to customers	197,156	192,290	189,044	191,230
Investments	11,435	11,520	11,733	12,387
Investments held by insurance companies	113	147	147	135
Other assets	1,305	1,305	2,021	2,021
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	-2,495		920	
FINANCE LEASES	**624**	**632**	**731**	**736**
Loans and advances to banks	1	1	1	1
Loans and advances to customers	624	631	730	735

€ million	Jun. 30, 2022 Carrying amount	Jun. 30, 2022 Fair value	Dec. 31, 2021 Carrying amount	Dec. 31, 2021 Fair value
FINANCIAL LIABILITIES MEASURED AT FAIR VALUE	**79,671**	**79,609**	**74,519**	**74,505**
Financial liabilities mandatorily measured at fair value through profit or loss	**52,750**	**52,688**	**45,192**	**45,178**
Hedging instruments (negative fair values)	550	550	1,678	1,678
Financial liabilities held for trading	51,695	51,632	43,411	43,397
Other liabilities	506	506	103	103
Financial liabilities designated as at fair value through profit or loss	**26,920**	**26,920**	**29,327**	**29,327**
Deposits from banks	4,058	4,058	3,953	3,953
Deposits from customers	6,721	6,721	8,259	8,259
Debt certificates issued including bonds	16,072	16,072	16,975	16,975
Subordinated capital	70	70	140	140
FINANCIAL LIABILITIES MEASURED AT AMORTIZED COST	**434,519**	**425,918**	**391,013**	**394,457**
Deposits from banks	198,597	193,427	192,609	194,467
Deposits from customers	156,948	156,032	130,716	132,062
Debt certificates issued including bonds	74,594	71,553	62,677	62,995
Other liabilities	2,009	2,009	1,926	1,927
Subordinated capital	3,036	2,897	2,934	3,006
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	-665		150	
LEASES	**635**	**635**	**632**	**632**
Other liabilities	635	635	632	632
FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS	**213**	**213**	**213**	**213**
Financial guarantee contracts	**82**	**82**	**88**	**88**
Provisions	82	82	88	88
Loan commitments	**131**	**131**	**125**	**125**
Provisions	131	131	125	125

Given the complex structure of home savings contracts and the multitude of scales of rates and charges, there is currently no suitable method for calculating the fair value of an individual contract as at the balance sheet date. Consequently, the fair value pursuant to IFRS 7.25 cannot be determined using either comparable market prices or suitable option pricing models. The fair values of financial assets and financial liabilities resulting from building society operations are therefore shown in simplified form at their carrying amounts. On the basis of the models used for building society management, which comprise both collective and non-collective business including deposits, the overall amount for building society operations during the reporting period was positive.

The fair values of the investments held by insurance companies comprise both the proportion of the fair values that is attributable to the policyholders and the proportion attributable to the shareholders of the DZ BANK Group. The fair value attributable to the shareholders of the DZ BANK Group of investments held by insurance companies measured at amortized cost was €224 million (December 31, 2021: €105 million).

The differences between the carrying amount and the fair value of financial assets held for trading in the 'financial assets measured at fair value' class and of financial liabilities held for trading in the 'financial liabilities measured at fair value' class are due to the deferral of day-one profit or loss, which is based on unobservable measurement parameters.

» 42 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 in the DZ BANK Group 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 recognized at fair value on the balance sheet, whereby the day-one profit or loss is shown together with the financial instrument. The difference is amortized to profit or loss over the term of the transaction. The following table shows the deferred, previously unrecognized differences, broken down by class pursuant to IFRS 7.

€ million	Measured at fair value: Financial assets	Financial liabilities
Balance as at Jan. 1, 2021	57	5
Additions as a result of transactions	6	-
Differences amortized to profit or loss	-3	-1
Reclassifications	-3	3
Balance as at Jun. 30, 2021	**57**	**8**
Balance as at Jan. 1, 2022	57	14
Additions as a result of transactions	5	11
Differences amortized to profit or loss	-5	-3
Reclassifications	-40	40
Balance as at Jun. 30, 2022	**17**	**62**

» 43 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 Jun. 30, 2022	Level 1 Dec. 31, 2021	Level 2 Jun. 30, 2022	Level 2 Dec. 31, 2021	Level 3 Jun. 30, 2022	Level 3 Dec. 31, 2021
Assets	**75,040**	92,029	**108,029**	101,882	**24,180**	24,753
Loans and advances to banks	-	-	1,577	1,922	-	-
Loans and advances to customers	-	-	2,771	3,303	635	679
Hedging instruments (positive fair values)	-	-	948	389	-	-
Financial assets held for trading	2,004	2,477	57,908	44,256	733	645
Investments	14,976	19,466	16,599	18,898	1,954	1,900
Investments held by insurance companies	58,059	70,086	28,222	33,114	20,823	21,365
Non-current assets and disposal groups classified as held for sale	-	-	5	-	35	163
of which non-recurring measurement	-	-	-	-	-	7
Liabilities	**4,671**	4,510	**91,557**	88,027	**549**	595
Deposits from banks	-	-	4,058	3,953	-	-
Deposits from customers	-	-	6,721	8,259	-	-
Debt certificates issued including bonds	3,107	3,331	12,562	13,218	403	427
Hedging instruments (negative fair values)	-	-	550	1,678	-	-
Financial liabilities held for trading	1,559	1,178	49,947	42,071	127	148
Financial liabilities arising from unit-linked insurance products	-	-	17,168	18,627	-	-
Other liabilities	5	2	501	101	-	-
Subordinated capital	-	-	51	120	19	20

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

Transfers

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

€ million	Transfers from Level 1 to Level 2		Transfers from Level 2 to Level 1	
	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Financial assets measured at fair value	**791**	402	**468**	876
Investments	5	-	35	-
Investments held by insurance companies	786	402	433	876

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

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

Fair value measurements within Levels 2 and 3

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

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

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

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

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

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

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

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

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

The following table shows the valuation techniques, the unobservable inputs, and the spreads of the unobservable inputs used for the fair value measurements at Level 3 of the fair value hierarchy as at June 30, 2022.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Loans and advances to customers	Loans	429	DCF method	BVAL price adjustment	-4.0 to 5.3
		27	DCF method	Credit spread	0.1 to 0.2
	Profit-participation certificates	19	DCF method	Internal credit ratings	3.6 to 10.1
	Shareholders' loans	90	DCF method	Internal credit ratings	3.6 to 10.1
	Initial fund loans	11	DCF method	Probability of default	0.8
	Receivables arising from silent partnerships	59	DCF method	Internal credit ratings	3.6 to 10.1
Financial assets held for trading	ABSs	3	DCF method	Credit spread	7.1
	Equity/commodity basket products	1	Local volatility model	Correlation of the risk factors considered	10.0 to 80.0
	Loans and advances to issuers in default	11	DCF method	Recovery rate	-
	Collateralized loan obligations	240	Gaussian copula model	Liquidity spread	1.8 to 4.7
	Bearer securities	204	DCF method	BVAL price adjustment	-0.3 to 1.5
	Registered securities	273	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	62	DCF method	Credit spread	0.8 to 10.8
	Investments in associates	17	Income capitalization approach	Future income	-
		65	DCF method	Assumptions for measurement of risk parameters	10.8 to 12.5
		203	Income capitalization approach, net asset value method	Future income	-
	Investments in subsidiaries	4	Multiples method	Multiples (ratios)	-
	Collateralized loan obligations	1	Gaussian copula model	Liquidity spread	1.7 to 2.8
	Loans and advances to issuers in default	6	DCF method	Recovery rate	-
	Bearer securities	464	DCF method	BVAL price adjustment	-0.3 to 113.1
	Investment fund units	19	Net asset value	-	-
		225	DCF method	Duration	-
	Mortgage-backed securities	15	DCF method	Recovery rate	0.0 to 72.2
		227	DCF method	Capitalization rate, growth factor	2.0 to 12.2
	Other shareholdings	243	Income capitalization approach, net asset value method	Future income	-
	VR Circle	403	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	1,549	Third-party pricing information	-	-
	Investments in subsidiaries, associates, and joint ventures, real estate funds, profit-participation certificates, and other long-term equity investments	4,730	Net asset value	-	-
	Investments in subsidiaries, associates, and joint ventures, other long-term equity investments, and shares in cooperatives	313	Income capitalization approach	Future income	7.6 to 7.8
	Fixed-income securities, convertible bonds, shares, investment fund units, and shares in cooperatives	842	Third-party pricing information	-	-
	Profit-participation certificates, mortgage loans, and promissory notes	13,316	DCF method	Credit spread	0.6 to 11.4
	Initial fund loans	59	DCF method	Probability of default	0.8
	Other shareholdings	14	Approximation	-	-
Non-current assets and disposal groups classified as held for sale	Investments in subsidiaries and loans	33	Provisional selling price with purchase price adjustment mechanism	Conditions of the purchase price adjustment mechanism with an effect on the achievable selling price	-
	Loans	2	DCF method	Credit spread	0.1 to 0.2
Debt certificates issued including bonds	VR Circle	403	DCF method	Multiple-year default probabilities	0.0 to 100.0
Financial liabilities held for trading	Equity/commodity basket products	123	Local volatility model	Correlation of the risk factors considered	10.0 to 81.0
	Products with commodity volatility derived from comparable instruments	4	Local volatility model	Volatility	15.0 to 80.3
Subordinated capital	Loans	19	DCF method	Credit spread	0.3 to 0.6

The following table shows the valuation techniques, the unobservable inputs, and the spreads of the unobservable inputs used for the fair value measurements at Level 3 of the fair value hierarchy as at December 31, 2021.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Loans and advances to customers	Loans	455	DCF method	BVAL price adjustment	-4.0 to 5.3
		56	DCF method	Credit spread	0.0 to 0.2
	Profit-participation certificates	26	DCF method	Internal credit ratings	3.8 to 11.6
	Shareholders' loans	81	DCF method	Internal credit ratings	3.8 to 11.6
	Initial fund loans	13	DCF method	Probability of default	0.8
	Receivables arising from silent partnerships	48	DCF method	Internal credit ratings	3.8 to 11.6
Financial assets held for trading	ABSs	3	DCF method	Credit spread	6.7
	Equity/commodity basket products	2	Local volatility model	Correlation of the risk factors considered	17.3 to 91.0
	Loans and advances to issuers in default	3	DCF method	Recovery rate	-
	Collateralized loan obligations	104	Gaussian copula model	Liquidity spread	1.3 to 3.7
	Bearer securities	315	DCF method	BVAL price adjustment	0.2 to 1.5
	Registered securities	217	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	67	DCF method	Credit spread	0.5 to 7.9
	Other variable-yield securities	10	DCF method	Assumptions for measurement of risk parameters	10.0 to 12.5
	Investments in associates	3	Income capitalization approach	Future income	-
	Investments in subsidiaries	83	DCF method	Assumptions for measurement of risk parameters	10.0 to 12.5
		221	Income capitalization approach, net asset value method	Future income	-
	Collateralized loan obligations	1	Gaussian copula model	Liquidity spread	1.7 to 2.4
	Loans and advances to issuers in default	6	DCF method	Recovery rate	-
	Bearer securities	308	DCF method	BVAL price adjustment	-0.5 to 134.1
	Investment fund units	15	Net asset value	-	-
	Mortgage-backed securities	251	DCF method	Duration	-
		16	DCF method	Recovery rate	0.0 to 73.0
	Other shareholdings	249	DCF method	Capitalization rate, growth factor	1.5 to 12.5
		243	Income capitalization approach, net asset value method	Future income	-
	VR Circle	427	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	1,533	Third-party pricing information	-	-
	Investments in subsidiaries, associates, and joint ventures, real estate funds, profit-participation certificates, and other long-term equity investments	3,975	Net asset value	-	-
	Investments in subsidiaries, associates, and joint ventures, other long-term equity investments, and shares in cooperatives	312	Income capitalization approach	Future income	7.6 to 7.8
	Fixed-income securities, convertible bonds, shares, investment fund units, and shares in cooperatives	755	Third-party pricing information	-	-
	Profit-participation certificates and promissory notes	14,708	DCF method	Credit spread	0.6 to 11.4
	Initial fund loans	69	DCF method	Probability of default	0.8
	Other shareholdings	13	Approximation	-	-
Non-current assets and disposal groups classified as held for sale	Loans	163	DCF method	Credit spread	0.0 to 23.9
Debt certificates issued including bonds	VR Circle	427	DCF method	Multiple-year default probabilities	0.0 to 100.0
Financial liabilities held for trading	Equity/commodity basket products	139	Local volatility model	Correlation of the risk factors considered	15.9 to 91.0
	Products with commodity volatility derived from comparable instruments	9	Local volatility model	Volatility	7.0 to 73.6
Subordinated capital	Loans	20	DCF method	Credit spread	0.3 to 0.6

Fair value measurements within Level 3 of the fair value hierarchy

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

€ million	Loans and advances to customers	Financial assets held for trading	Investments	Investments held by insurance companies	Non-current assets and disposal groups classified as held for sale
Balance as at Jan. 1, 2021	861	769	1,705	6,030	86
Additions (purchases)	37	190	33	1,993	-
Transfers	-	84	77	-205	-
from Level 3 to Levels 1 and 2	-	-61	-100	-230	-
from Levels 1 and 2 to Level 3	-	145	177	25	-
Disposals (sales)	-66	-604	-97	-996	-108
Changes resulting from measurement at fair value	-9	-8	23	-559	38
through profit or loss	-6	-8	15	64	38
through other comprehensive income	-3	-	8	-623	-
Other changes	-5	-1	15	13,856	1
Balance as at Jun. 30, 2021	**818**	**430**	**1,756**	**20,119**	**17**
Balance as at Jan. 1, 2022	679	645	1,900	21,365	163
Additions (purchases)	55	306	66	2,492	-
Transfers	-	59	196	301	-
from Level 3 to Levels 1 and 2	-	-276	-357	-24	-
from Levels 1 and 2 to Level 3	-	335	553	325	-
Disposals (sales)	-63	-262	-111	-883	-155
Changes resulting from measurement at fair value	-32	-15	-85	-2,509	-
through profit or loss	-18	-15	-24	173	-
through other comprehensive income	-14	-	-61	-2,682	-
Other changes	-3	-	-12	57	26
Balance as at Jun. 30, 2022	**635**	**733**	**1,954**	**20,823**	**35**

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

€ million	Debt certificates issued including bonds	Financial liabilities held for trading	Subordinated capital
Balance as at Jan. 1, 2021	482	271	20
Additions (issues)	-	29	-
Transfers	-	-21	-
from Level 3 to Level 2	-	-61	-
from Level 2 to Level 3	-	40	-
Disposals (settlements)	-26	-39	-4
Changes resulting from measurement at fair value	-	3	4
through profit or loss	-	3	5
through other comprehensive income	-	-	-1
Balance as at Jun. 30, 2021	**457**	**244**	**20**
Balance as at Jan. 1, 2022	427	148	20
Additions (issues)	-	24	-
Transfers	-	-18	-
from Level 3 to Level 2	-	-161	-
from Level 2 to Level 3	-	143	-
Disposals (settlements)	-24	-21	-
Changes resulting from measurement at fair value	1	-8	-
through profit or loss	1	-8	-1
through other comprehensive income	-	-	-
Other changes	-	-	-1
Balance as at Jun. 30, 2022	**403**	**127**	**19**

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

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

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

The amount of gains or losses recognized in profit or loss resulting from the recurring fair value measurements within Level 3 of assets and liabilities held at the balance sheet date constituted a net gain of €174 million during the reporting period (first half of 2021: net gain of €149 million). The gains or losses are included in the line items net interest income, gains and losses on trading activities, other gains and losses on valuation of financial instruments, gains and losses on investments held by insurance companies and other insurance company gains and losses, loss allowances, and other net operating income.

For the fair values of investments held by insurance companies reported within Level 3, a rise in the interest rate of 1 percent would lead to the recognition of a €28 million loss in the income statement (December 31, 2021: loss of €34 million) and a loss of €1,162 million under other comprehensive income/loss

(December 31, 2021: loss of €1,409 million). For the fair values of investments held by insurance companies, a worsening in the credit rating of 1 percent would lead to the recognition of a €32 million loss in the income statement (December 31, 2021: loss of €40 million) and a loss of €1,165 million under other comprehensive income/loss (December 31, 2021: loss of €1,438 million).

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 lead to the recognition of a €7 million loss in the income statement (December 31, 2021: loss of €6 million). For the fair values of investments, there would be a €44 million loss under other comprehensive income/loss (December 31, 2021: loss of €56 million) and a €19 million loss in the income statement (December 31, 2021: loss of €31 million). For the fair values of non-current assets and disposal groups classified as held for sale, a loss of €1 million would have been recognized in the income statement as at December 31, 2021.

The fair values of bonds without liquid markets that are reported within financial assets held for trading, investments, and loans and advances to customers are given an individual adjustment spread or are measured using Bloomberg Valuation Service prices, which are observable in the market. All other things being equal, an increase in the pertinent measurement assumptions of 1 percent would lead to the recognition of a €13 million loss in the income statement (December 31, 2021: loss of €13 million) and a loss of €8 million under other comprehensive income/loss (December 31, 2021: loss of €12 million).

An alternative assumption about the credit spreads used could lead to a significant change in the fair values of some of the ABSs reported under financial assets held for trading and under investments. All other things being equal, an increase of 1 percent in these spreads would lead to the recognition of a €1 million loss under other comprehensive income/loss (December 31, 2021: loss of €1 million).

An alternative assumption about the liquidity spreads used could lead to a significant change in respect of collateralized loan obligations reported under investments and under financial assets held for trading. All other things being equal, a rise in the liquidity spread assumptions by 1 percent would lead to a €9 million decrease in the fair values of these financial assets that would be recognized in the income statement (December 31, 2021: decrease of €4 million).

Sensitivity analysis is used to calculate the aforementioned changes in the fair value measurements. Non-performing exposures, strategically held investments in subsidiaries and other shareholdings, and long-term equity investments in real estate funds whose fair values are calculated using an income capitalization approach or the net asset value are not included in the sensitivity analysis.

Exercise of option pursuant to IFRS 13.48

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

» 44 Reclassification

On January 1, 2021, financial assets were 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' were reclassified as 'financial assets measured at fair value through other comprehensive income'.

Financial assets of €3,139 million categorized as 'financial assets measured at fair value through profit or loss' were reclassified as 'financial assets measured at fair value through other comprehensive income'. 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 €42 million (first half of 2021: €55 million).

» 45 Hedge accounting

Gains and losses arising on hedging instruments and hedged items that need to be recognized in profit or loss are reported in the gains and losses from hedge accounting under other gains and losses on valuation of financial instruments. The breakdown of gains and losses from hedge accounting, by type of hedge, is as follows:

€ million	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Gains and losses on fair value hedges	**8**	-5
Gains and losses on hedging instruments	232	55
Gains and losses on hedged items	-224	-60
Gains and losses on portfolio fair value hedges	**-1**	20
Gains and losses on hedging instruments	4,061	728
Gains and losses on hedged items	-4,063	-708
Total	**6**	15

» 46 Nature and extent of risks arising from financial instruments and insurance contracts

With the exception of the qualitative and quantitative disclosures pursuant to IFRS 7.35F(a)-36(b), the disclosures on the nature and extent of risks arising from financial instruments (IFRS 7.31-42) and insurance contracts (IFRS 4.38-39A) are included in the interim group management report in chapter VI 'Risk report', sections 5 'Liquidity adequacy' and 7 'Credit risk', section 9 'Market risk' for the Bank sector, and sections 13 'Actuarial risk' and 14 'Market risk' for the Insurance sector. The disclosures pursuant to IFRS 7.35F(a)-36(b) can be found in the notes to the interim 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
– Debt instruments held as financial assets measured at fair value through other comprehensive income.

The impairment rules are also applied to:

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

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

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

The review of whether the credit risk of financial assets, financial guarantee contracts, and loan commitments has increased significantly since initial recognition is carried out on an ongoing basis. The assessment is conducted both for individual financial assets and for portfolios of assets using quantitative and qualitative analysis. As a rule, quantitative analysis looks at the expected credit risk over the entire residual life of the financial instruments in question. Macroeconomic information is also factored in by transferring these inputs to shift factors for determining the default probability. 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 based on the latest changes in the lifetime probability of default relative to the portfolio's past lifetime probability of default. 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 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, loans and advances, loan commitments, and financial guarantee contracts.

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. At the same time, the regulatory default status ceases to apply and specified cure periods are taken into account.

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

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

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

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

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. In the consumer finance business, post-model adjustments totaling €105 million were therefore carried out as at December 31, 2021. The post-model adjustments were validated and adapted to changed circumstances as at the end of the first half of 2022. Due to the fact that the unique circumstances created by the COVID-19 pandemic have largely returned to normal and thus the associated uncertainty for the consumer finance business has dissipated, the related post-model adjustment of €15 million was reversed. In order to ensure that expectations regarding customer behavior in the face of new legal requirements and a number of other risk drivers are reflected that are still not yet factored into the models by way of shift factors, there continued to be a post-model adjustment of €90 million as at June 30, 2022.

Impact of macroeconomic conditions

The established models and processes for calculating expected losses at specific exposure or portfolio level in line with IFRS 9 have generally been retained. The impact of the war in Ukraine 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 (known as shift factors). The shift factors are used to include current economic conditions (known as a point-in-time focus) and forecasts of future economic conditions for the years covered by the macroeconomic forecast period in the determination of loss allowances. These shift factors are derived from macroeconomic inputs for various levels of default probability using stress test models that already existed or that were developed for IFRS 9. The shift factors used as at June 30, 2022 are based on two macroeconomic scenarios developed by the Economic Roundtable of the DZ BANK Group, the baseline scenario and the risk scenario.

The main macroeconomic forecasts for 2022 to 2026 used to calculate the expected loss as at June 30, 2022 were as follows:

		2022		**2023**		**2024**		**2025**		**2026**	
		Baseline	Risk	Baseline	Risk	Baseline	Risk	Baseline	Risk	Baseline	Risk
DAX 30, Germany	Index	15,100	11,900	15,860	12,400	16,650	13,600	17,320	14,175	18,010	14,750
EURO STOXX 50, EU	Index	4,100	3,225	4,260	3,350	4,430	3,690	4,560	3,835	4,700	3,990
Unemployment rate, Germany	%	3.30	3.50	3.20	3.40	3.20	3.30	3.20	3.20	3.10	3.20
Harmonized unemployment rates, EU	%	6.70	7.30	6.50	6.70	6.20	6.40	6.10	6.20	6.00	6.00
Real GDP growth, Germany (seasonally and calendar-adjusted)	Compared with prior year (%)	2.00	0.00	3.25	1.25	1.75	1.75	1.25	1.25	1.00	1.00
Real GDP growth, EU (seasonally and calendar-adjusted)	Compared with prior year (%)	2.30	0.30	3.40	1.70	2.30	2.30	1.80	1.80	1.50	1.50
Consumer price index, Germany	Compared with prior year (%)	6.00	8.00	3.00	5.00	2.00	3.00	2.00	2.25	2.00	2.00
Oil price (Brent), US$/bbl	At year-end	105.00	120.00	90.00	110.00	85.00	100.00	80.00	90.00	80.00	80.00
Natural gas price, US$/MMBtu	At year-end	6.50	8.00	6.00	7.50	5.50	7.00	5.00	6.50	5.50	6.50
Commercial real estate price index, Germany	Compared with prior year (%)	-2.00	-3.50	-2.50	-4.00	-1.50	-3.00	1.00	0.00	-1.00	0.00
3m Euribor, European Monetary Union	%	-0.20	0.25	0.75	1.60	0.85	1.20	1.00	0.85	1.10	0.85
10-year government bonds, Germany	%	0.75	1.25	1.25	2.00	1.25	1.75	1.25	1.50	1.25	1.50

Due to the unprecedented level of macroeconomic uncertainty at present, the models can no longer adequately represent the current market situation. On the basis of consultation with relevant experts, the shift factors determined using statistical methods were therefore overridden. 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 unchanged compared with December 31, 2021. The degree to which sectors are affected continues to be taken into account when testing the plausibility of the shift factors at sub-sector level. Previously, the degree to which sectors were affected only related to the COVID-19 pandemic. Since the beginning of 2022, however, this aspect has included 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. Besides the repercussions of the COVID-19 pandemic, in the first half of 2022 these factors specifically included the war in Ukraine, commodity shortages (particularly gas), supply chain difficulties, and high inflation coupled with soaring energy prices. The most severely affected sub-sectors – including chemicals, steel, and metal – have been downgraded by two rating classes. Overall, additional loss allowances of €201 million were recognized as at June 30, 2022 due to the expert-led override of the shift factors determined using statistical methods.

In July 2022, stress scenarios were also prepared in order to analyze potential worst-case developments in relation to a gas embargo. Test calculations were used to establish the impact at individual exposure level and portfolio level. The model-driven effect resulting from the latest Economic Roundtable on July 12, 2022 was estimated using a test calculation for the DZ BANK Group and a range of sensitivities was derived from this. Although it is not currently known whether the gas supply will actually be shut off completely, or how likely this scenario is and which countermeasures the government may introduce, the worst-case scenario assumes that the gas supply will be shut off completely. This indicates that the overrides carried out on the basis of the plausibility testing of the shift factors at sector level, combined with the preceding analysis of how the sectors are affected (which focused on the hike in energy prices), are sufficiently cautious and adequately cover this worse-case scenario.

Since 2022, climate and environmental parameters have been explicitly included in scenario analysis and are thus factored into the loss allowances via the shift factors. 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 reflected 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 insignificant over the forecast period.

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, 2021	19	106,216	3	701	24	18
Addition/increase in loan drawdowns	34	34,294	1	133	-	15
Change to financial assets due to transfer between stages	2	97	-2	-100	-	3
Transfer from stage 1	-	-340	-	338	-	2
Transfer from stage 2	2	437	-2	-438	-	1
Derecognitions and repayments	-1	-9,856	-	-77	-	-5
Changes to models/risk parameters	-7	-	1	-	-	-
Additions	14	-	1	-	-	-
Reversals	-21	-	-	-	-	-
Amortization, fair value changes, and other changes in measurement	-	-4,300	-	9	-	-1
Exchange differences and other changes	-	52	-	1	-	-
Deferred taxes	-5	-	-	-	-	-
Balance as at Jun. 30, 2021	**42**	**126,503**	**3**	**667**	**24**	**30**
Balance as at Jan. 1, 2022	26	121,359	3	674	25	34
Addition/increase in loan drawdowns	4	12,117	-	54	-	-
Change to financial assets due to transfer between stages	-1	-947	1	942	-	5
Transfer from stage 1	-1	-1,179	1	1,177	-	2
Transfer from stage 2	1	232	-1	-235	-	3
Use of loss allowances/directly recognized impairment losses	-	-	-	-	-2	-2
Derecognitions and repayments	-5	-12,430	-4	-108	-	-5
Changes to models/risk parameters	4	-	5	-	2	-
Additions	7	-	5	-	2	-
Reversals	-3	-	-1	-	-	-
Modifications	-	2	-	-	-	-
Modification gains	-	2	-	-	-	-
Amortization, fair value changes, and other changes in measurement	-	-18,996	-	-151	-	-1
Exchange differences and other changes	-	131	-	7	-	1
Balance as at Jun. 30, 2022	**28**	**101,237**	**4**	**1,419**	**25**	**32**

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, 2021	286	367,677	359	14,216	1,672	3,747	7	69
Restatements according to IAS 8	-	-	-	6	-	-	-	-
Balance restated as at Jan. 1, 2021	286	367,677	359	14,222	1,672	3,747	7	69
Addition/increase in loan drawdowns	77	6,000,787	41	13,878	305	979	1	38
Change to financial assets due to transfer between stages	103	876	-131	-1,077	30	201	-	-
Transfer from stage 1	-23	-3,488	22	3,436	1	52	-	-
Transfer from stage 2	119	4,304	-169	-4,621	50	317	-	-
Transfer from stage 3	7	60	16	108	-21	-168	-	-
Use of loss allowances/directly recognized impairment losses	-	-	-1	-	-199	-17	-	-2
Derecognitions and repayments	-102	-5,988,846	-74	-13,357	-376	-1,617	-4	-53
Changes to models/risk parameters	-87	-	165	-	-30	-	1	-
Additions	61	-	287	-	150	-	4	-
Reversals	-148	-	-122	-	-180	-	-3	-
Modifications	-	1	-	-2	-	-	-	-
Modification gains	-	2	-	-	-	-	-	-
Modification losses	-	-1	-	-2	-	-	-	-
Amortization, fair value changes, and other changes in measurement	-	2,068	-	26	-	-80	-	-
Positive change in fair value of POCI assets	-	-	-	-	-	-	-	12
Exchange differences and other changes	1	251	-	-13	49	18	1	1
Changes in the scope of consolidation	-	-	-	103	-	-	-	-
Addition of subsidiaries	-	-	-	103	-	-	-	-
Balance as at Jun. 30, 2021	**278**	**382,815**	**359**	**13,780**	**1,451**	**3,231**	**6**	**65**
Balance as at Jan. 1, 2022	282	376,209	374	17,187	1,267	2,870	13	90
Addition/increase in loan drawdowns	112	9,050,777	47	14,620	343	985	-	90
Change to financial assets due to transfer between stages	101	-119	-162	-140	62	259	-	-
Transfer from stage 1	-29	-6,632	29	6,604	-	29	-	-
Transfer from stage 2	125	6,477	-201	-6,868	76	391	-	-
Transfer from stage 3	5	36	11	124	-14	-160	-	-
Use of loss allowances/directly recognized impairment losses	-	-	-1	-	-214	-10	-2	-2
Derecognitions and repayments	-78	-9,007,479	-72	-16,060	-302	-1,485	-6	-54
Changes to models/risk parameters	-124	-	239	-	-77	-	11	-
Additions	57	-	375	-	146	-	14	-
Reversals	-181	-	-136	-	-223	-	-4	-
Modifications	-	-	-	-	1	1	-	-
Modification gains	-	-	-	-	1	1	-	-
Amortization, fair value changes, and other changes in measurement	-	54	-	21	-	-26	-	-
Positive change in fair value of POCI assets	-	-	-	-	-	-	-	15
Exchange differences and other changes	-	939	1	32	41	67	-	2
Changes in the scope of consolidation	-	6	-	3	-	-	-	-
Addition of subsidiaries	-	6	-	3	-	-	-	-
Balance as at Jun. 30, 2022	**293**	**420,386**	**427**	**15,663**	**1,121**	**2,662**	**17**	**141**

The undiscounted expected credit losses on purchased or originated credit-impaired assets that were recognized for the first time during the reporting period totaled €134 million (first half of 2021: €94 million).

Non-current assets and disposal groups classified as held for sale that were previously recognized as financial assets measured at amortized cost

	Stage 1		Stage 2		Stage 3	
€ million	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount
Balance as at Jan. 1, 2021	-	4	-	-	-	-
Derecognitions and repayments	-	-4	-	-	-	-
Balance as at Jun. 30, 2021	**-**	**-**	**-**	**-**	**-**	**-**

Finance leases

	Stage 1		Stage 2		Stage 3	
€ million	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount	Loss allowances	Gross carrying amount
Balance as at Jan. 1, 2021	2	802	6	261	12	34
Addition/increase in loan drawdowns	1	55	4	3	8	1
Change to finance leases due to transfer between stages	2	-	-	-11	-4	11
Transfer from stage 1	-	-94	-	91	-	3
Transfer from stage 2	1	91	-2	-108	1	17
Transfer from stage 3	1	3	2	6	-5	-9
Derecognitions and repayments	-3	-180	-5	-52	-4	-16
Balance as at Jun. 30, 2021	**2**	**677**	**5**	**201**	**12**	**30**
Balance as at Jan. 1, 2022	2	548	6	176	14	29
Addition/increase in loan drawdowns	2	71	3	3	12	1
Change to finance leases due to transfer between stages	-	1	-1	-	-	-1
Transfer from stage 1	-	-60	-	60	-	-
Transfer from stage 2	-	61	-1	-65	1	4
Transfer from stage 3	-	1	-	5	-1	-5
Derecognitions and repayments	-2	-136	-3	-42	-14	-6
Balance as at Jun. 30, 2022	**2**	**484**	**4**	**137**	**12**	**22**

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, 2021	62	74,559	38	2,445	129	260	1	9
Addition/increase in loan drawdowns	63	42,493	36	1,768	19	63	1	56
Change to financial guarantee contracts and loan commitments due to transfer between stages	11	-817	-12	791	1	26	-	-
Transfer from stage 1	-3	-1,140	3	1,139	-	1	-	-
Transfer from stage 2	14	323	-15	-354	1	31	-	-
Transfer from stage 3	-	-	-	6	-	-6	-	-
Derecognitions and repayments	-45	-39,023	-30	-1,921	-39	-164	-2	-10
Changes to models/risk parameters	-23	-	12	-	1	-	-	-
Additions	21	-	31	-	25	-	1	-
Reversals	-44	-	-19	-	-24	-	-1	-
Amortization, fair value changes, and other changes in measurement	-	76	-	3	-	1	-	-
Exchange differences and other changes	-	-55	-	29	-18	-	-	-
Balance as at Jun. 30, 2021	68	77,233	44	3,115	93	186	-	55
Balance as at Jan. 1, 2022	63	79,176	39	3,155	110	271	1	2
Addition/increase in loan drawdowns	43	54,634	24	1,821	43	151	2	7
Change to financial guarantee contracts and loan commitments due to transfer between stages	2	-2,612	-2	2,593	-	18	-	-
Transfer from stage 1	-4	-3,009	4	2,996	-	13	-	-
Transfer from stage 2	5	395	-6	-404	-	9	-	-
Transfer from stage 3	-	2	-	1	-	-4	-	-
Derecognitions and repayments	-43	-50,486	-20	-2,115	-46	-164	-5	-8
Changes to models/risk parameters	-5	-	15	-	-5	-	2	-
Additions	14	-	26	-	25	-	2	-
Reversals	-19	-	-11	-	-30	-	-1	-
Amortization, fair value changes, and other changes in measurement	-	179	-	11	-	1	-	-
Exchange differences and other changes	-	-181	-	220	-5	-	-	-
Balance as at Jun. 30, 2022	**59**	**80,710**	**57**	**5,684**	**97**	**276**	**-**	**1**

» 47 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.

€ million	Jan. 1–Jun. 30, 2022 New issues	Jan. 1–Jun. 30, 2022 Repurchases	Jan. 1–Jun. 30, 2022 Repayments	Jan. 1–Jun. 30, 2021 New issues	Jan. 1–Jun. 30, 2021 Repurchases	Jan. 1–Jun. 30, 2021 Repayments
DEBT CERTIFICATES ISSUED INCLUDING BONDS	**35,817**	**-544**	**-23,553**	16,626	-1,548	-10,147
Bonds issued	**5,838**	**-531**	**-3,540**	6,668	-905	-3,379
Mortgage Pfandbriefe	2,527	-46	-879	2,492	-19	-856
Public-sector Pfandbriefe	-	-	-411	-	-	-197
Other bonds	3,311	-485	-2,250	4,176	-886	-2,326
Other debt certificates issued	**29,979**	**-13**	**-20,013**	9,958	-643	-6,768
FINANCIAL LIABILITIES HELD FOR TRADING	**3,302**	**-304**	**-3,773**	5,962	-520	-4,368
SUBORDINATED CAPITAL	**51**	**-2**	**-25**	215	-2	-353
Total	**39,170**	**-850**	**-27,351**	22,803	-2,070	-14,868

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

E Other disclosures

» 48 Contingent liabilities

€ million	Jun. 30, 2022	Dec. 31, 2021
Contingent liabilities arising from contributions to the resolution fund for CRR credit institutions	137	111
Contingent liabilities in respect of litigation risk	8	22
Total	**146**	**134**

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.

In addition, the contingent liabilities in respect of litigation risk comprise a small number of court proceedings relating to different cases. Where provisions have been recognized for particular claims, no contingent liabilities are recognized.

» 49 Financial guarantee contracts and loan commitments

€ million	Jun. 30, 2022	Dec. 31, 2021
Financial guarantee contracts	**10,251**	**9,750**
Loan guarantees	4,810	4,776
Letters of credit	1,084	965
Other guarantees and warranties	4,357	4,010
Loan commitments	**76,420**	**72,854**
Credit facilities to banks	27,515	24,900
Credit facilities to customers	38,674	37,326
Guarantee credits	1,109	1,059
Letters of credit	147	147
Global limits	8,975	9,422
Total	**86,671**	**82,604**

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

» 50 Trust activities

Trust assets and trust liabilities amounted to €2,252 million as at June 30, 2022 (December 31, 2021: €2,312 million).

» 51 Disclosures on revenue from contracts with customers

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

JANUARY 1 TO JUNE 30, 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	-	-	2	
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	22	-	-	
Other fee and commission income	38	-	88	
Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	36	-	
Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	36	-	
Other operating income	9	-	4	
Total	**69**	**72**	**95**	
Main geographical markets				
Germany	64	66	95	
Rest of Europe	5	6	-	
Rest of World	-	-	-	
Total	**69**	**72**	**95**	
Type of revenue recognition				
At a point in time	60	5	95	
Over a period of time	9	67	-	
Total	**69**	**72**	**95**	

	UMH	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	Other/ Consolidation	**Total**
	1,793	293	-	121	-	-	-51	2,156
	14	-	-	167	-	-	-2	179
	-	131	-	1	-	-	28	161
	-	52	2	-	-	-	17	74
	-	33	3	-	-	1	-2	35
	-	7	-	-	-	-	-	7
	-	-	-	-	-	-	-	22
	-	26	11	1	2	-	-77	89
	-	-	-	-	-	-	-1	35
	-	-	-	-	-	-	-	36
	5	-	-	-	-	-	23	41
	1,812	**543**	**16**	**290**	**2**	**1**	**-65**	**2,835**
	1,354	543	16	121	2	1	-74	2,187
	458	-	-	168	-	-	9	646
	-	-	-	1	-	-	-	1
	1,812	**543**	**16**	**290**	**2**	**1**	**-65**	**2,835**
	279	196	14	51	2	1	-68	634
	1,533	348	2	239	-	-	3	2,200
	1,812	**543**	**16**	**290**	**2**	**1**	**-65**	**2,835**

JANUARY 1 TO JUNE 30, 2021

€ 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	-	-	2	
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	22	-	-	
Other fee and commission income	37	-	69	
Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	21	-	
Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	32	-	
Other operating income	-	-	5	
Total	**59**	**53**	**76**	
Main geographical markets				
Germany	54	53	76	
Rest of Europe	5	-	-	
Rest of World	-	-	-	
Total	**59**	**53**	**76**	
Type of revenue recognition				
At a point in time	59	2	76	
Over a period of time	-	51	-	
Total	**59**	**53**	**76**	

	UMH	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DVB	Other/ Consolidation	**Total**
	1,979	262	-	111	-	-	-40	2,312
	7	-	-	193	-	-	-2	197
	-	123	-	1	-	-	23	147
	-	38	4	-	-	9	8	60
	-	32	4	-	-	-	-2	34
	-	5	-	-	-	-	-	5
	-	-	-	-	-	-	-	22
	-	32	5	-	2	1	-67	79
	-	-	-	-	-	-	-	21
	-	-	-	-	-	-	-	32
	4	-	-	-	-	-	19	27
	1,990	**491**	**12**	**305**	**2**	**10**	**-61**	**2,937**
	1,543	491	12	86	2	1	-69	2,249
	447	-	-	218	-	9	7	686
	-	-	-	1	-	-	-	1
	1,990	**491**	**12**	**305**	**2**	**10**	**-61**	**2,937**
	263	177	10	106	2	1	-98	598
	1,727	315	2	199	-	9	36	2,339
	1,990	**491**	**12**	**305**	**2**	**10**	**-61**	**2,937**

» 52 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 AG, TeamBank AG, and DZ HYP AG. The bidder group's total volume of €32,405 million (December 31, 2021: €32,416 million) was recognized under deposits from banks on the balance sheet.

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 market-oriented basic interest rate in the first half of 2022 was minus 0.5 percent. It was accounted for in accordance with IFRS 9 and was recognized pro rata in net interest income in an amount of €81 million. 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. Because this condition was met, the interest rate for the period January 1, 2022 to June 23, 2022 was minus 1.0 percent. As an additional interest-rate advantage has therefore been granted by the ECB, which is a government agency within the meaning of IAS 20.3, this additional interest-rate advantage achieved is accounted for as a government grant in accordance with IAS 20. As a result, additional income of €78 million was recognized in net interest income in the reporting period. For the period from after June 23, 2022 to June 30, 2022, the interest rate to be applied was the average deposit facility rate during the term of the relevant TLTRO III tranche.

In addition to the TLTRO III program, government grants of €25 million were deducted from the carrying amount of investment property held by insurance companies (December 31, 2021: €23 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 (first half of 2021: €0 million).

» 53 Employees

Average number of employees by employee group:

	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2021
Female employees	**15,030**	**14,699**
Full-time employees	9,249	9,130
Part-time employees	5,781	5,569
Male employees	**17,818**	**17,521**
Full-time employees	16,565	16,344
Part-time employees	1,253	1,177
Total	**32,848**	**32,220**

» 54 Board of Managing Directors

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

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

Uwe Berghaus
Responsibilities: Corporate Banking Baden-Württemberg; Corporate Banking Bavaria; Corporate Banking North and East; Corporate Banking West/Central; Investment Promotion; Central Corporate Banking

Dr. Christian Brauckmann
Responsibilities: IT; Services & Organisation

Ulrike Brouzi
Responsibilities: Bank Finance; Compliance; Group Finance; Group Financial Services

Wolfgang Köhler
Responsibilities: Capital Markets Trading; Capital Markets Institutional Clients; Capital Markets Retail Clients; Group Treasury

Michael Speth
Responsibilities: Group Risk Controlling; Group Risk Management & Services; Credit

Thomas Ullrich
Responsibilities: Group Human Resources; Operations; Payments & Accounts; Transaction Management

» 55 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
R+V Allgemeine Versicherung AG

Pia Erning
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank
(Member of the Supervisory Board since May 25, 2022)

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)

Renate Mack
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank
(Member of the Supervisory Board until May 25, 2022)

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

Uwe Spitzbarth
Departmental coordinator
ver.di Bundesverwaltung (until July 31, 2022)

Sigrid Stenzel
Labor union secretary
ver.di Niedersachsen-Bremen

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