Volksbanken Raiffeisenbanken
Cooperative Financial Network

2023 Half-Year Financial Report

DZ BANK Group

Key figures

DZ BANK GROUP

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
FINANCIAL PERFORMANCE		
Income [1]	4,326	3,239
Loss allowances	-52	-60
Profit before taxes	1,954	938
Net profit	1,412	577
Cost/income ratio (percent)	53.6	69.2

	Jun. 30, 2023	Dec. 31, 2022
FINANCIAL POSITION		
Assets		
Loans and advances to banks	130,065	123,444
Loans and advances to customers	205,407	203,646
Financial assets held for trading	37,790	48,909
Investments	46,710	43,393
Investments held by insurance companies	111,206	105,548
Remaining assets	122,195	103,458
Equity and liabilities		
Deposits from banks	181,505	186,787
Deposits from customers	164,391	159,429
Debt certificates issued including bonds	100,053	82,349
Financial liabilities held for trading	52,807	52,478
Insurance contract liabilities	102,239	97,649
Remaining liabilities	21,501	21,596
Equity	30,877	28,109
TOTAL ASSETS/TOTAL EQUITY AND LIABILITIES	653,374	628,397
Volume of business	**1,179,069**	**1,132,301**

	Jun. 30, 2023	Dec. 31, 2022
RISK POSITION		
LIQUIDITY ADEQUACY		
DZ BANK Group		
Minimum liquidity surplus (€ billion)	12.8	14.3
DZ BANK banking group		
Liquidity coverage ratio (LCR, percent)	137.1	145.9
Net stable funding ratio (NSFR, percent)	119.3	122.3
CAPITAL ADEQUACY		
DZ BANK Group		
Economic capital adequacy (percent)	212.8	222.4
DZ BANK financial conglomerate		
Coverage ratio (percent)	151.0	151.2
DZ BANK banking group		
Common equity Tier 1 capital ratio (percent)	15.6	13.7
Tier 1 capital ratio (percent)	17.8	15.2
Total capital ratio (percent)	20.3	18.0
Leverage ratio (percent)	6.0	4.7
MREL ratio as a percentage of risk-weighted assets	41.1	38.3
MREL ratio as a percentage of the leverage ratio exposure	13.8	11.9
Subordinated MREL ratio as a percentage of risk-weighted assets	30.5	28.5
Subordinated MREL ratio as a percentage of the leverage ratio exposure	10.2	8.9
AVERAGE NUMBER OF EMPLOYEES	**33,524**	**32,985**
LONG-TERM RATING		
Standard & Poor's	A+	A+
Moody's Investors Service	Aa2	Aa2
Fitch Ratings	AA-	AA-

1 Total of 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.

Contents

Note
The figures in this report are rounded to the nearest whole number. This may give rise to small discrepancies between the totals shown in the tables and diagrams and totals calculated from the individual values shown.

The English version of this report is a convenience translation. In cases of doubt, the German original version shall prevail.

Uwe Fröhlich (left) and Dr. Cornelius Riese, Co-Chief Executive Officers

Dear Shareholders,

Despite continuing challenges, we can be very satisfied with our business performance in the year to date. In the first half of 2023, the DZ BANK Group generated a profit before taxes of €1.95 billion, which represented a significant year-on-year increase (first half of 2022: €938 million).

Although the shift in interest-rate policy has fundamentally improved the business environment for financial services providers, high inflation, the restrictive monetary policy that the major central banks have therefore had to adopt, and the uncertainty about energy supplies in Germany are acting as a brake on the economy. In its latest forecast, the International Monetary Fund (IMF) now predicts that the German economy will shrink by 0.3 percent this year, putting it at the bottom of the list compared with other European countries. Nonetheless, the entities in the DZ BANK Group delivered a good operating performance against the backdrop of a still unremarkable risk situation. This was thanks to our customers' confidence in our abilities and to our close collaboration with the local cooperative banks.

Customer business was brisk overall at DZ BANK – central institution and corporate bank, where sales of capital market products to corporate customers were particularly buoyant. Demand was especially high for interest-rate hedging, money market business, currency transactions, and securitizations, contributing to the very good results of the Capital Markets business line. Sales of investment certificates and interest-rate products to retail customers saw a further sharp rise. The central institution and corporate bank also maintained its robust performance in the Transaction Banking business line, which included an increase in the number of payments processing transactions handled.

Business was also largely satisfying at the group entities in the other segments. For example, R+V Versicherung returned to reporting a positive contribution to earnings. This was due to the good level of customer business, the very healthy net gain on investments held by insurance companies on the back of the recovery of the capital markets, and a level of claims that has been unremarkable so far. Bucking the industry trend, Union Investment was able to generate high inflows and maintain its leading position in mutual funds. It also reported a good level of profit before taxes for the first six months of the year. Following the strategic realignment in private banking, DZ PRIVATBANK continued along its growth trajectory, achieving steady rises in contributions to earnings.

These encouraging results for the first half of the year reflect the dedication and hard work of all our employees. On behalf of the entire Board of Managing Directors, we would like to express our gratitude and appreciation to them.

The key results in detail:

At €1.86 billion, the **net interest income** of the DZ BANK Group was significantly higher than the figure for the prior-year period (first half of 2022: €1.48 billion). This was primarily thanks to healthy customer business at the central institution and corporate bank. There was also an accounting-related shift – not affecting overall profit or loss – from gains and losses on trading activities to net interest income. **Net fee and commission income** held steady at €1.31 billion (first half of 2022: €1.36 billion), primarily reflecting the consistently good level of inflows at Union Investment. The central institution and corporate bank saw an increase in brokerage expenses due to the success of sales activities in the year to date. **Gains and losses on trading activities** amounted to a net gain of €293 million (first half of 2022: net gain of €359 million), indicating the very healthy customer business at the central institution and corporate bank. The net gain was also boosted by IFRS-related valuation effects. **Gains and losses on investments** improved to a net loss of €8 million (first half of 2022: net loss of €53 million). The figure for the prior-year period had been weighed down by losses on the disposal of bonds at Bausparkasse Schwäbisch Hall and of own-account investments at Union Investment. **Other gains and losses on valuation of financial instruments** deteriorated to a net gain of €63 million (first half of 2022: net gain of €105 million). This can be explained by negative valuation effects at the central institution and corporate bank. **Net income from insurance business** improved markedly to €745 million (first half of 2022: net expense of €178 million). This key figure had been heavily affected by the net loss under gains and losses on investments held by insurance companies at R+V Versicherung in the prior-year period. **Loss allowances** were on a par with the low level seen in the first half of the previous year, with net additions of €52 million (first half of 2022: net addition of €60 million). **Administrative expenses** came to €2.32 billion (first half of 2022: €2.24 billion).

The DZ BANK Group's capital situation improved markedly following an accounting-related decline in 2022. As a result of the introduction of IFRS 17 for equity and liabilities at R+V Versicherung, the common equity Tier 1 capital ratio rose to 15.6 percent as at June 30, 2023 (December 31, 2022: 13.7 percent). Our successful placement of €1.1 billion of AT1 bonds also helped to strengthen our capital base.

Given the good level of capital, we will propose the distribution of a dividend of 20 cents per share to our shareholders at an Extraordinary General Meeting to be held in the fourth quarter.

In view of the positive course of business so far, we are raising our forecast and anticipate that our profit before taxes for 2023 will be above €2.5 billion.

As part of the refinement of our strategy, we are setting ourselves ambitious goals. For example, we have expanded our sustainability targets across the group and, at DZ BANK AG, have defined specific decarbonization pathways for five carbon-intensive sectors. We believe we can make the greatest difference by providing funding for activities aimed at achieving net-zero emissions, and we are already among the leading financial institutions in sustainability-related areas of business.

At the same time, we are working on projects that will secure our long-term success. We are driving the digitalization of existing business models and processes, contributing to strategic initiatives involving the entire cooperative financial network, and developing our own solutions for smart data, blockchain, and AI technologies. In this context, we are planning to go live with a crypto-depositary platform for institutional customers by the end of the year. The implementation of these and other projects calls for a lot of hard work and significant investment. We have the necessary capital base and expertise, but are also keeping a close eye on costs. And we regard unlocking potential for greater efficiency in the DZ BANK Group and in the individual entities as an ongoing task.

The positive course of business in the first half of this year is a reflection of the courage, perseverance, and confidence in the strength of our cooperative financial network and the long-term success of our strategy. Secure in this knowledge, we can tackle the tasks and challenges that lie ahead.

Kind regards,

Uwe Fröhlich Co-Chief Executive Officer	Dr. Cornelius Riese Co-Chief Executive Officer

Interim group management report

I DZ BANK Group fundamentals

1 Business model and strategic focus

The business model and strategic focus of the DZ BANK Group are described in detail on page 10 onward of the 2022 Annual Report. Those disclosures are also applicable to the first half of 2023.

2 Management of the DZ BANK Group

The management of the DZ BANK Group is described in detail on page 19 onward of the 2022 Annual Report. Those disclosures are also applicable to the first half of 2023.

II Business report

1 Economic conditions

The German economy had to navigate choppy waters in the first half of 2023. The long-feared shortfall in the supply of energy did not materialize and energy prices were down from their peak in 2022. Nevertheless, energy prices were still considerably higher than they had been before the outbreak of the ongoing war in Ukraine, despite lower prices in the wholesale markets and government compensation measures in connection with the cap on energy prices. These high energy prices drove up inflation, which continued to act as a brake on consumer spending. At the same time, diminishing demand from abroad took its toll on industrial output and exports, while rising interest rates and stricter financing conditions weighed heavily on capital investment and housebuilding. Despite this difficult situation, the German labor market proved robust. However, the German economy saw a fall in gross domestic product (GDP) of 0.1 percent in the first quarter of 2023 compared with the previous quarter.

Despite bouts of turmoil in the US and Swiss banking sectors, key sentiment indicators both for corporates and consumers improved from the start of 2023 onward, albeit at a low level. But the brightening of corporate sentiment ground to a halt in the middle of the second quarter of 2023. Gloomier business expectations suggested difficulties in the pipeline for new orders, particularly for industry. German GDP in the second quarter was unchanged on the previous quarter.

Adjusted for inflation, the average decrease in economic output for the first half of 2023 compared with the second half of 2022 was therefore 0.3 percent. Compared with the first half of 2022, the decrease was 0.2 percent.

The aforementioned negative factors also affected the economy of the eurozone in the first six months of 2023, albeit to a lesser extent overall than the German economy. This was partly because some member states were less severely affected by the high energy prices. Following a 0.7 percent year-on-year rise in GDP in the second half of 2022 compared with the first half of 2022, the eurozone recorded slight growth of 0.1 percent in economic output in the first half of 2023 compared with the second half of 2022. This was because, although GDP stagnated in the first quarter of 2023, the economy expanded a little – by 0.3 percent – in the second quarter of 2023 compared with the previous quarter, with particularly pronounced increases in Spain’s and France’s GDP.

The US economy faced a variety of economic risks in the first half of 2023. The inflation rate remained very high, forcing the US Federal Reserve (Fed) to continue raising interest rates. Both of these factors are problematic for the economy. For example, a number of small and medium-sized US banks collapsed, in some cases as an indirect consequence of the Fed’s interest-rate hikes. Concerns about the banking industry have now abated, but further disruption in the sector cannot be ruled out. Another factor was the political dispute about raising the US debt ceiling, with Congress managing to reach an agreement shortly before the US would have been at risk of defaulting on its debt. Nevertheless, the US economy generated solid growth in the first and second quarter of 2023, supported by strong demand for services, the alleviation of supply chain problems, government investment programs, and a healthy labor market.

China abruptly ended its strict zero-COVID policy at the end of 2022, and the Chinese economy then rallied strongly in the first quarter of 2023. The service sector and retail were the main beneficiaries. Although the effects of this reopening were still discernible in the second quarter of 2023, momentum waned markedly.

However, weak global demand increasingly took its toll on industry throughout both quarters. The central bank loosened monetary policy slightly in the second quarter.

2 The financial industry amid continued efforts to stabilize the economy of the eurozone

The war in Ukraine created uncertainty in the capital markets in both the reporting period and the prior-year period. Trading was also affected by concerns about inflation in the first six months of 2023.

The STOXX Europe 600, a share index comprising 600 large listed European companies, stood at 461.93 points as at June 30, 2023, which was 37.04 points higher than at the end of the previous year (December 31, 2022: 424.89 points). By contrast, the index had dropped by 80.60 points in the prior-year period.

Some EU countries still exceeded the ratios for new and overall indebtedness required for compliance with the stability criteria specified in the Fiscal Compact agreed by the EU member states at the beginning of 2012. In the Fiscal Compact, the signatory countries committed to reducing their debt (as a proportion of GDP) each year by one twentieth of the difference between the debt level and the Maastricht limit of 60 percent of GDP.

At the end of the first quarter of 2023, the total borrowing of the 20 eurozone countries equated to 91.2 percent of their GDP, a decrease of 3.8 percentage points compared with the figure of 95.0 percent as at March 31, 2022.

Italy’s public debt as a percentage of GDP stood at 143.5 percent in the first quarter of 2023 (first quarter of 2022: 151.4 percent), which is the highest in the eurozone after that of Greece.

Portugal’s public debt as a percentage of GDP was 113.8 percent in the first quarter of 2023, compared with 126.4 percent in the first quarter of 2022.

In Spain, public debt as a percentage of GDP stood at 112.8 percent in the first quarter of 2023 (first quarter of 2022: 117.4 percent).

Based on a policy of quantitative easing, the European Central Bank (ECB) has supported the markets for government bonds in recent years, thereby creating the necessary time over the last few years for the European Monetary Union (EMU) countries burdened with excessive debt to reduce their budget deficits. Nonetheless, even in the years prior to the COVID-19 pandemic, the countries specified above had not made sufficient efforts to reduce their high levels of indebtedness, which are above the Maastricht limit of 60 percent.

By the third quarter of 2022, the central banks in the US and eurozone were pursuing more restrictive monetary policy and made it clear that they would not waver from their cycle of interest-rate hikes aimed at tackling stubbornly high inflation.

At its meeting on June 15, 2023, the ECB decided to raise the rate for the deposit facility to 3.50 percent. The main refinancing rate was set at 4.00 percent, while the rate for the marginal lending facility was set at 4.25 percent. On December 16, 2021, the ECB Governing Council had decided that net asset purchases under the pandemic emergency purchase program (PEPP) with a maximum volume of €1,850.0 billion would be discontinued at the end of March 2022. The maturing principal payments from securities purchased under the PEPP will be reinvested until at least the end of 2024. On March 10, 2022, the ECB Governing Council decided to gradually reduce the monthly volume of assets bought under the asset purchase program (APP). Net new purchases under the APP were discontinued in July 2022. The maturing principal payments from securities purchased under the APP were fully reinvested until February 2023, with only some reinvested after that date. On June 15, 2023, the ECB Governing Council decided that the reinvestment of maturing principal payments under the APP would cease with effect from July 2023.

On June 14, 2023, the Fed announced that it would keep the federal funds rate unchanged in the range of 5.00 to 5.25 percent following ten increases in succession.

In accordance with the Fed's decision of December 15, 2021, the federal funds rate had been kept unchanged in the range of 0.00 percent to 0.25 percent. On March 16, 2022, there was a shift in the Fed's interest-rate policy, and the key interest rate was raised by 0.25 percentage points, the first increase since 2018. This was followed by further hikes of 0.50 percentage points in May 2022 and 0.75 percentage points in June 2022. The asset purchases of the Federal Reserve were wound up in March 2022. Since June 2022, the central bank has been slimming down its balance sheet by no longer fully reinvesting securities when they mature. At present, the Fed is reducing its balance sheet by US$ 95.0 billion per month.

3 Financial performance

3.1 Financial performance at a glance

Despite the persistently challenging market conditions resulting from the sharp rise in interest rates, high inflation, and the war in Ukraine, the DZ BANK Group reported an encouraging profit before taxes of €1,954 million in the reporting period (first half of 2022: €938 million).

The year-on-year changes in the key figures that make up the net profit generated by the DZ BANK Group were as described below.

Fig. II. 1 – INCOME STATEMENT

€ million	**Jan. 1–Jun. 30, 2023**	Jan. 1–Jun. 30, 2022
Net interest income	1,863	1,475
Net fee and commission income	1,314	1,364
Gains and losses on trading activities	293	359
Gains and losses on investments	-8	-53
Other gains and losses on valuation of financial instruments	63	105
Gains and losses from the derecognition of financial assets measured at amortized cost	5	11
Net income from insurance business	745	-178
Loss allowances	-52	-60
Administrative expenses	-2,320	-2,242
Staff expenses	-1,044	-1,001
Other administrative expenses[1]	-1,276	-1,240
Other net operating income	51	156
Profit before taxes	1,954	938
Income taxes	-542	-362
Net profit	**1,412**	577

1 General and administrative expenses plus depreciation/amortization expense.

Operating income in the DZ BANK Group amounted to €4,326 million (first half of 2022: €3,239 million). This figure 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.

Net interest income rose by €388 million year on year to €1,863 million (first half of 2022: €1,475 million).

Within this figure, interest income from lending and money market business went up by €2,739 million to €5,101 million (first half of 2022: €2,362 million) and interest income from bonds and other fixed-income securities by €194 million to €404 million (first half of 2022: €210 million), predominantly due to the general rise in interest rates.

There was a positive change in interest on portfolio hedges of interest-rate risk (portfolios comprising financial assets), which improved by €799 million to net income of €595 million (first half of 2022: net expense of €204 million). By contrast, there was a negative change in interest on portfolio hedges of interest-rate risk (portfolios comprising financial liabilities), which deteriorated by €231 million to a net expense of €187 million (first half of 2022: net income of €44 million).

Interest expense for deposits from banks and customers rose by €2,387 million to €3,294 million (first half of 2022: €907 million) for volume-related reasons and due to the general rise in interest rates. The figure for the prior-year period had included a reduction in interest expense for home savings deposits as a result of a positive one-off item of €140 million connected to the reversal of provisions relating to building society operations. Interest expense on debt certificates issued including bonds went up by €477 million to €720 million in the reporting period (first half of 2022: €243 million). This was mainly due to expansion of the portfolio of issued commercial paper.

Net fee and commission income fell by €50 million to €1,314 million (first half of 2022: €1,364 million). Net fee and commission income from securities business decreased by €116 million to €1,060 million (first half of 2022: €1,176 million). Within this total, there was a €15 million reduction in performance-related management fees to €3 million (first half of 2022: €18 million) and a €15 million reduction in the volume-related net income contribution to €902 million (first half of 2022: €917 million) in the Union Investment Group. However, net fee and commission income from lending and trust activities rose by €11 million to €51 million (first half of 2022: €40 million), from financial guarantee contracts and loan commitments by €9 million to €38 million (first half of 2022: €29 million), and from payments processing (including card processing) by €5 million to €82 million (first half of 2022: €77 million), while other net fee and commission income improved by €53 million to €29 million (first half of 2022: net expense of €24 million).

Gains and losses on trading activities in the first six months of 2023 came to a net gain of €293 million compared with a net gain of €359 million for the prior-year period. This change was due to the significant volatility of market prices, which – as a result of risk management – had opposing effects on gains and losses on non-derivative financial instruments and embedded derivatives on the one hand and on gains and losses on derivatives on the other. Gains and losses on non-derivative financial instruments and embedded derivatives deteriorated by €4,565 million to a net loss of €937 million (first half of 2022: net gain of €3,628 million). By contrast, gains and losses on derivatives improved by €4,603 million to a net gain of €1,216 million (first half of 2022: net loss of €3,387 million). The net gain under gains and losses on exchange differences fell by €104 million to €14 million (first half of 2022: €118 million).

Gains and losses on investments amounted to a net loss of €8 million (first half of 2022: net loss of €53 million). Within this figure, gains and losses on the disposal of bonds and other fixed-income securities improved by €13 million to a net loss of €1 million (first half of 2022: net loss of €14 million). The figure for the first half of 2022 had been affected by the disposal of securities in the BSH subgroup, whereas there were no sales during the reporting period. Gains and losses on the disposal of shares and other variable-yield securities improved by €47 million to a net loss of €2 million (first half of 2022: net loss of €49 million), mainly because the figure for the prior-year period had included a realized loss resulting from the disposal of investment fund units from the Union Investment Group's own-account investments.

Gains and losses on investments in associates amounted to a net loss of €5 million (first half of 2022: net gain of €11 million).

The net gain under **other gains and losses on valuation of financial instruments** fell by €42 million to €63 million (first half of 2022: €105 million), largely because of the movement of credit spreads on bonds from eurozone periphery countries. This decrease was due to the deterioration in gains and losses on financial instruments designated as at fair value through profit or loss of €103 million to a net loss of €21 million (first half of 2022: net gain of €82 million) and in gains and losses from fair value hedge accounting of €33 million to a net loss of €27 million (first half of 2022: net gain of €6 million). By contrast, gains and losses on financial assets mandatorily measured at fair value through profit or loss improved by €93 million to a net gain of €43 million (first half of 2022: net loss of €50 million) and the net gain on derivatives used for purposes other than trading rose by €2 million to €68 million (first half of 2022: €66 million).

Net income from insurance business comprises the insurance service result, gains and losses on investments held by insurance companies and other insurance company gains and losses, insurance finance income or expenses, and gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business.

IFRS 17 Insurance Contracts superseded the previous standard for accounting for insurance contracts (IFRS 4 Insurance Contracts) with effect from January 1, 2023 and is required to be applied to insurance contracts, reinsurance contracts, and investment contracts with discretionary participation features. IFRS 17 requires comparative information to be presented for the period immediately preceding the date of initial application of IFRS 17. Retrospective initial application thus resulted in adjustments to the income statement for the prior-year period.

Net income from insurance business improved by €923 million to €745 million (first half of 2022: net expense of €178 million). This positive change was primarily due to the improvement – driven by the situation in the capital markets – in gains and losses on investments held by insurance companies and other insurance company gains and losses of €5,677 million to a net gain of €2,075 million (first half of 2022: net loss of €3,602 million). By contrast, insurance finance income or expenses deteriorated by €4,863 million to a net expense of €2,496 million (first half of 2022: net income of €2,367 million), largely in relation to policyholders' share of investment returns. The insurance service result amounted to €1,163 million (first half of 2022: €1,051 million).

There was a net addition to **loss allowances** of €52 million (first half of 2022: net addition of €60 million). The net addition to loss allowances for loans and advances to customers was €81 million (first half of 2022: net addition of €42 million). By contrast, there was a net reversal of other loss allowances for loans and advances of €14 million (first half of 2022: net addition of €7 million), a net reversal of loss allowances for loans and advances to banks of €9 million (first half of 2022: net addition of €13 million), and a net reversal of loss allowances for investments of €6 million (first half of 2022: net reversal of €3 million).

Further disclosures on the nature and extent of risks arising from financial instruments can be found in note 46 in the notes to the interim consolidated financial statements.

Administrative expenses increased by €78 million to €2,320 million (first half of 2022: €2,242 million). Within this figure, staff expenses advanced by €43 million to €1,044 million, compared with €1,001 million in the first half of 2022. This increase was predominantly due to pay rises and appointments to vacant positions. Other administrative expenses rose by €36 million to €1,276 million (first half of 2022: €1,240 million), largely because of higher expenses for consultancy and IT.

Other net operating income amounted to €51 million (first half of 2022: €156 million).

Within this figure, impairment losses on other intangible assets increased by €50 million to €50 million (first half of 2022: €0 million) owing to the impairment of recognized customer relationships in the Union Investment Group, the net gain on non-current assets and disposal groups classified as held for sale fell by

€24 million to €3 million (first half of 2022: €27 million), and residual other net operating income declined by €18 million to €25 million (first half of 2022: €43 million), partly due to the recognition of cancelled, non-interest-bearing home savings deposits of €28 million. Furthermore, gains on the disposal of other assets contracted by €12 million to €11 million (first half of 2022: €23 million).

Profit before taxes for the first half of 2023 stood at €1,954 million, compared with €938 million in the first half of 2022.

The **cost/income ratio** (i.e. the ratio of administrative expenses to operating income) for the reporting period came to 53.6 percent (first half of 2022: 69.2 percent).

The **regulatory return on risk-adjusted capital (RORAC)** was 21.1 percent (first half of 2022: 9.6 percent).

Income taxes amounted to €542 million in the period under review (first half of 2022: €362 million).

Net profit for the first half of 2023 was €1,412 million, compared with €577 million for the first half of 2022.

3.2 Financial performance in detail

The following sections describe the details of the financial performance of the DZ BANK Group's operating segments in the first half of 2023 compared with the corresponding period of 2022.

3.2.1 BSH

Net interest income in the BSH subgroup fell by €175 million to €244 million (first half of 2022: €419 million), predominantly due to positive effects from the reversal of provisions relating to building society operations in the prior-year period and an increase in interest expense for borrowing during the reporting period.

Interest expense in building society operations (including interest expense on hedges) went up by €169 million to €351 million (first half of 2022: €182 million). Within this figure, interest expense for home savings deposits amounted to €327 million (first half of 2022: €185 million). This included additions to provisions relating to building society operations of €89 million (first half of 2022: €70 million) and a sum of €226 million attributable to the interest rates applicable to current tariffs (first half of 2022: €249 million). The prior-year period had been influenced by a positive one-off item of €140 million connected to the reversal of provisions relating to building society operations. The interest-rate swaps used to manage interest income and expense in the context of portfolio fair value hedge accounting reduced net interest income by a total of €24 million (first half of 2022: increase in net interest income of €3 million).

In the case of loans issued under advance or interim financing arrangements and other building loans, income amounted to €527 million (first half of 2022: €528 million). Income from home savings loans amounted to €43 million (first half of 2022: €34 million).

Interest income arising on investments rose by €45 million to €188 million (first half of 2022: €143 million). Interest expense for borrowing increased by €64 million to €69 million (first half of 2022: €5 million).

BSH incorporates the fees, commissions, and transaction costs directly assignable to the acquisition of home savings contracts and loan agreements into the effective interest method applied to home savings deposits and building loans. In the reporting period, this decreased net interest income by €100 million (first half of 2022: €104 million).

Net fee and commission income amounted to a net expense of €6 million (first half of 2022: net income of €13 million), largely due to the growth of new home savings business.

In the home savings business, BSH entered into approximately 261 thousand (first half of 2022: 219 thousand) new home savings contracts with a volume of €17.9 billion (first half of 2022: €16.1 billion) in Germany.

In the home finance business, the realized volume of new business came to €4.7 billion (first half of 2022: €9.3 billion) in Germany.

Gains and losses on investments stood at €0 million (first half of 2022: net loss of €46 million). The figure for the first half of 2022 had been affected by the disposal of bonds, whereas there were no disposals during the reporting period.

Loss allowances amounted to a net addition totaling €4 million (first half of 2022: net addition of €6 million).

Administrative expenses increased by €11 million to €269 million (first half of 2022: €258 million). At €136 million, staff expenses in the BSH subgroup were €7 million higher than the figure for the prior-year period of €129 million. This was mainly as a result of the first-time consolidation of BAUFINEX GmbH and Schwäbisch Hall Wohnen GmbH. Other administrative expenses increased by €4 million to €133 million (first half of 2022: €129 million), largely owing to a rise in office expenses and property costs that was partly offset by lower expenses for the deposit guarantee fund at subsidiary Fundamenta-Lakáskassza (FLK).

Other net operating income went down by €24 million to €18 million (first half of 2022: €42 million). This is because the figure for the prior-year period had been influenced by the recognition of cancelled, non-interest-bearing home savings deposits amounting to €28 million, whereas just €3 million was recognized in the reporting period.

As a result of the changes described above, there was a **loss before taxes** of €14 million, which represented a deterioration of €182 million compared with the profit before taxes of €168 million in the first half of 2022.

The **cost/income ratio** in the period under review was greater than 100.0 percent (first half of 2022: 59.6 percent).

Regulatory RORAC was minus 2.3 percent (first half of 2022: 25.9 percent).

3.2.2 R+V

IFRS 17 Insurance Contracts superseded the previous standard for accounting for insurance contracts (IFRS 4 Insurance Contracts) with effect from January 1, 2023. IFRS 17 requires comparative information to be presented for the period immediately preceding the date of initial application of IFRS 17. Retrospective initial application thus resulted in adjustments to the income statement for the prior-year period.

The **insurance service result** came to €1,152 million (first half of 2022: €975 million), thanks to the tight integration of the R+V subgroup into the cooperative financial network. This figure included insurance revenue amounting to €6,209 million (first half of 2022: €6,380 million) and insurance service expenses of €4,968 million (first half of 2022: €5,342 million). Net expenses from reinsurance contracts held stood at €89 million (first half of 2022: €63 million).

In the life and health insurance business, insurance revenue amounted to €1,773 million (first half of 2022: €2,086 million). Insurance service expenses in this business amounted to €1,165 million (first half of 2022: €1,084 million). This included amortization of the contractual service margin in an amount of €114 million (first half of 2022: €128 million) and release of the risk adjustment in an amount of €31 million (first half of 2022: €6 million).

In the non-life insurance business, insurance revenue rose by €121 million to €3,493 million (first half of 2022: €3,371 million). The main influence on this revenue was premiums earned on portfolios measured under the premium allocation approach. The insurance service expenses of this business stood at €3,257 million (first half of 2022: €3,435 million). Of this sum, €2,386 million (first half of 2022: €2,313 million) was attributable to expenses for claims, comprising payments for claims and the change in the liability for incurred claims. It also includes the change in losses on insurance contracts, which amounted to a decrease of €62 million (first half of 2022: €46 million); the pattern of business means that such losses generally arise at the start of the year and are offset over the course of the year. Other insurance service expenses totaled €809 million (first half of 2022: €813 million) and primarily consisted of insurance acquisition cash flows and administration costs. In the period to June 30, 2023, claims in the non-life insurance business remained at a moderate level. Net expenses from reinsurance contracts held in this business totaled €81 million (first half of 2022: net income of €4 million). The combined ratio (gross), which is the ratio of insurance service expenses to insurance revenue, stood at 93.3 percent (first half of 2022: 101.91 percent).

Insurance revenue in the inward reinsurance business amounted to €944 million (first half of 2022: €922 million). This included not only premium income but also amortization of the contractual service margin in an amount of €114 million (first half of 2022: €137 million) under the general measurement model. Insurance service expenses came to €545 million (first half of 2022: €823 million). The level of claims in the inward reinsurance business was unremarkable during the reporting period. Net expenses from reinsurance contracts amounted to €10 million (first half of 2022: €68 million).

Gains and losses on investments held by insurance companies and other insurance company gains and losses improved by €5,680 million to a net gain of €2,104 million (first half of 2022: net loss of €3,576 million). This figure includes the fair value-based gains and losses on investments held by insurance companies in respect of insurance products constituting unit-linked life insurance for the account and at the risk of employees, employers, and holders of life insurance policies (unit-linked contracts), which amounted to a net gain of €1,168 million (first half of 2022: net loss of €2,447 million). The gains and losses on investments held by insurance companies attributable to unit-linked contract products generally have no impact on profit/loss before taxes, because this line item is matched by an insurance liability addition or reversal of the same amount.

Long-term interest rates were far higher than in the first half of 2022. The ten-year Bund/swap rate was 3.01 percent as at June 30, 2023 (June 30, 2022: 2.16 percent). Spreads on interest-bearing securities largely held steady during the reporting period and had a more positive impact on gains and losses on investments held by insurance companies and other insurance company gains and losses than in the prior-year period, when spreads had widened. A weighted spread calculated in accordance with R+V’s portfolio structure stood at 84.5 points as at June 30, 2023 (December 31, 2022: 89.8 points). In the comparative period, this spread had risen from 66.7 points as at December 31, 2021 to 100.2 points as at June 30, 2022.

During the reporting period, equity markets relevant to R+V performed better than in the first half of 2022. For example, the EURO STOXX 50, a share index comprising 50 large, listed companies in the EMU, saw a rise of 605 points from the start of 2023, closing the reporting period on 4,399 points (December 31, 2022: 3,794 points). The index had dropped by 843 points in the prior-year period.

Movements in exchange rates between the euro and various currencies were generally less favorable in the first half of 2023 than in the prior-year period. For example, the US dollar/euro exchange rate on June 30, 2023 was 0.9166, compared with 0.9370 as at December 31, 2022. In the first half of 2022, the US dollar/euro exchange rate had changed from 0.8794 as at December 31, 2021 to 0.9565 on June 30, 2022.

Overall, these trends in the reporting period essentially resulted in a €6,067 million positive change – resulting from the effects of changes in positive fair values – in unrealized gains and losses to a net gain of €1,335 million (first half of 2022: net loss of €4,732 million), a €581 million improvement in the contribution to earnings from the derecognition of investments to a loss of €101 million (first half of 2022: loss of €682 million), a

€36 million improvement in the balance of depreciation, amortization, impairment losses, and reversals of impairment losses to a net expense of €23 million (first half of 2022: net expense of €59 million), and a €21 million rise in net income under current income and expense to €1,185 million (first half of 2022: net income of €1,164 million). However, there was a €775 million deterioration in foreign-exchange gains and losses to a net loss of €94 million (first half of 2022: net gain of €681 million). Furthermore, other non-insurance gains and losses declined by €250 million to a net loss of €198 million (first half of 2022: net gain of €53 million). Changes in gains and losses on investments held by insurance companies are offset to an extent by corresponding changes in insurance finance income or expenses, so the effect on profit or loss is only partial.

Insurance finance income or expenses deteriorated by €4,863 million to a net expense of €2,496 million (first half of 2022: net income of €2,367 million). In the life and health insurance business, this line item deteriorated by €4,788 million to a net expense of €2,373 million (first half of 2022: net income of €2,415 million), which was mainly due to the aforementioned compensatory effect of some parts of gains and losses on investments held by insurance companies being reclassified to the reserve from other comprehensive income. Insurance finance income or expenses came to a net expense of €68 million in the non-life insurance business (first half of 2022: net expense of €9 million) and to a net expense of €54 million in inward reinsurance (first half of 2022: net expense of €39 million). The proportion within insurance finance income or expenses relating to discounting at the discount rate used at initial measurement (locked-in discount rate) amounted to a net expense of €59 million in non-life insurance (first half of 2022: net expense of €30 million) and a net expense of €54 million in inward reinsurance (first half of 2022: net expense of €39 million).

The factors described above resulted in a **profit before taxes** of €762 million (first half of 2022: loss before taxes of €233 million).

Regulatory RORAC was 17.1 percent (first half of 2022: minus 5.0 percent).

3.2.3 TeamBank

Net interest income was up year on year at €268 million (first half of 2022: €247 million), largely due to an €11 million rise attributable to the growth in the average volume of loans and advances and the increase in income from investments to €13 million as a result of positive interest rates (first half of 2022: expense of €2 million). Average loans and advances to customers in the reporting period came to €9,648 million (first half of 2022: €9,355 million).

As at June 30, 2023, loans and advances to customers totaled €9,713 million (December 31, 2022: €9,583 million). The number of customers rose to 1,031 thousand (December 31, 2022: 1,010 thousand). TeamBank had made credit facilities from easyCredit-Finanzreserve and the Finanzieller Spielraum product totaling €3,303 million available to its customers as at June 30, 2023 (December 31, 2022: €3,041 million). In the period under review, 29.1 percent (first half of 2022: 20.8 percent) of new business was generated through easyCredit-Finanzreserve and Finanzieller Spielraum.

As at June 30, 2023, TeamBank was working with 663 (December 31, 2022: 669) of Germany's 722 (December 31, 2022: 729) cooperative banks and with 159 (December 31, 2022: 154) partner banks in Austria.

Net fee and commission income declined by €30 million to a net expense of €22 million (first half of 2022: net income of €8 million), mainly owing to the €26 million reduction in fee and commission income from the brokerage of credit insurance policies as a consequence of the German Act on Supporting the Regulation of Crowdfunding Service Providers (SFBG).

The net addition to **loss allowances** amounted to €51 million (first half of 2022: net addition of €53 million).

Administrative expenses held more or less steady at €143 million (first half of 2022: €141 million). Within this figure, staff expenses totaled €52 million (first half of 2022: €53 million) and other administrative expenses came to €91 million (first half of 2022: €88 million).

Profit before taxes stood at €57 million and was thus down by €11 million on the figure for the first half of 2022 of €68 million.

TeamBank's **cost/income ratio** came to 57.0 percent (first half of 2022: 53.8 percent).

Regulatory RORAC was 23.4 percent (first half of 2022: 22.9 percent).

3.2.4 UMH

Net interest income amounted to €17 million (first half of 2022: €0 million), predominantly due to income from credit balances with banks.

Net fee and commission income fell by €12 million to €988 million (first half of 2022: €1,000 million). The change in net fee and commission income was predominantly due to the factors described below.

Because of the decrease in the average assets under management of the Union Investment Group, which fell by €13.4 billion to €424.1 billion (first half of 2022: €437.5 billion), the volume-related contribution to net fee and commission income declined to €902 million (first half of 2022: €917 million).

The assets under management of the Union Investment Group comprise the assets and the securities portfolios measured at their current market value, also referred to as free assets or asset management, for which Union Investment offers investment recommendations (advisory) or bears responsibility for portfolio management (insourcing). The assets are managed both for third parties and in the name of the group. Changes in the managed assets occur as a result of factors such as net inflows, changes in securities prices, and exchange-rate effects.

Net income from performance-related management fees amounted to €3 million (first half of 2022: €18 million). The decrease was largely the result of few funds fulfilling the conditions for the transfer of a performance-related management fee in the period under review. Income from real estate fund transaction fees came to €22 million in the period under review (first half of 2022: €20 million). Expenses for the performance bonus for sales partners reduced to €27 million (first half of 2022: €47 million).

Union Investment generated net inflows from its retail business of €6.2 billion (first half of 2022: €8.1 billion) in collaboration with the local cooperative banks.

The number of traditional fund-linked savings plans, which are used by retail customers as investments aimed at long-term capital accumulation, stood at 3.8 million contracts as at June 30, 2023, with a decrease in the 12-month savings volume to €6.7 billion (December 31, 2022: €7.1 billion).

The total assets in the portfolio of Riester pension products amounted to €25.2 billion (December 31, 2022: €23.3 billion).

The number of fund-linked savings plans managed by Union Investment in its retail business as at June 30, 2023 totaled 6.5 million (December 31, 2022: 6.5 million). These plans included contracts under employer-funded capital formation schemes as well as the traditional savings plans and Riester pension contracts referred to above.

The open-ended real estate funds offered by the Union Investment Group, which are an intrinsic-value-based component of the investment mix, generated net new business totaling €0.4 billion (first half of 2022: €1.8 billion).

Assets under management in the PrivatFonds family amounted to €22.3 billion as at June 30, 2022 (December 31, 2022: €22.7 billion).

In its institutional business, the Union Investment Group registered net outflows of €0.5 billion (first half of 2022: net inflows of €1.5 billion).

The portfolio volume of funds conforming with article 8 or article 9 of the EU Sustainable Finance Disclosure Regulation (SFDR) amounted to €126.3 billion (December 31, 2022: €122.4 billion). As at June 30, 2023, this figure included €87.5 billion in assets defined as sustainable by Union Investment based on its own criteria (December 31, 2022: €81.2 billion).

Gains and losses on investments amounted to a net loss of €2 million (first half of 2022: net loss of €49 million), largely due to the net loss realized on the disposal of investment fund units from Union Investment's own-account investments.

Other gains and losses on valuation of financial instruments improved by €127 million to a net gain of €71 million (first half of 2022: net loss of €56 million), which was largely attributable to the net gain of €52 million from the valuation of guarantee commitments (first half of 2022: net loss of €20 million) and the net gain of €18 million arising on the valuation of Union Investment's own-account investments (first half of 2022: net loss of €36 million).

Administrative expenses increased by €31 million to €595 million (first half of 2022: €564 million). Staff expenses went up by €15 million to €291 million (first half of 2022: €276 million) owing to higher average pay and appointments to new and vacant posts. Other administrative expenses climbed by €16 million to €303 million (first half of 2022: €287 million), mainly because of higher expenses incurred in connection with IT, consultancy, information procurement, public relations, marketing, and office management.

Other net operating income amounted to a net expense of €37 million (first half of 2022: net income of €39 million). This change was mainly attributable to impairment losses on recognized customer relationships and smaller reversals of provisions.

Based on the changes described above, **profit before taxes** amounted to €442 million (first half of 2022: €371 million).

The **cost/income ratio** came to 57.4 percent in the first half of this year (first half of 2022: 60.4 percent).

Regulatory RORAC was greater than 100.0 percent (first half of 2022: greater than 100.0 percent).

3.2.5 DZ BANK – CICB

In the DZ BANK – CICB operating segment, internal management reporting is used as the basis for presentation of the income statement, which means that the figures include internal transactions. These internal transactions are eliminated in the Other/Consolidation segment so that the net profit for the group is reported correctly.

Net interest income is primarily attributable to the lending business portfolios (Corporate Banking business line), the portfolios from the capital markets business (including the portfolios of Group Treasury), and the long-term equity investments allocated to the central institution and corporate bank. Net interest income rose by €184 million to €658 million (first half of 2022: €474 million).

In the Corporate Banking business line, net interest income went up by €4 million to €282 million (first half of 2022: €278 million). The net interest income in the four regional corporate customer divisions plus Central Corporate Banking increased to €160 million (first half of 2022: €154 million). The €6 million rise in the operating lending business was due to the growth of the lending volume.

Net interest income in the Structured Finance division amounted to €81 million, a decrease of €8 million compared with the figure for the first half of 2022 of €89 million. The increased volume of lending did not make up for the lower margins, which were partly due to the competitive situation.

In the Investment Promotion division, net interest income advanced by €6 million to €41 million (first half of 2022: €35 million). This year-on-year increase primarily resulted from new business commitments and portfolio growth in 2022, and from the fact that some of the associated development loans were only made available over the course of this year.

Net interest income from money market and capital markets business swelled by €273 million to €341 million (first half of 2022: €68 million). This increase was firstly attributable to the deposit-taking operating business in the short-dated maturity segment, particularly deposits from corporate customers. Secondly, the rise in interest rates in the money market led to increased net interest income from the investment of liquidity in the balance of non-interest-bearing assets and liabilities.

As bonus interest is no longer paid in connection with participation in the TLTRO III program, no such bonus interest was received in the first half of 2023 (first half of 2022: €71 million).

Other net interest income from loan administration fees declined by €2 million to €12 million (first half of 2022: €14 million).

Income from profit-pooling, profit-transfer, and partial profit-transfer agreements, together with income from other shareholdings and current income from investments in subsidiaries, amounted to €23 million (first half of 2022: €41 million). The year-on-year decrease was attributable to the fall in income from long-term equity investments at DZ Vierte Beteiligungsgesellschaft mbH – owing to the merger in the second half of 2022 (first half of 2022: €8 million) – and at Deutsche WertpapierService Bank AG (first half of 2023: €0 million; first half of 2022: €6 million). Furthermore, income from long-term equity investments at VR Equitypartner GmbH went down by €8 million to €3 million.

Net fee and commission income declined by €59 million to €203 million (first half of 2022: €262 million).

The principal sources of income were service fees in the Corporate Banking business line (in particular, from lending business including guarantees and international business), in the Capital Markets business line (mainly from securities issuance and brokerage business, agents' fees, transactions on futures and options exchanges, financial services, and the provision of information), and in the Transaction Banking business line (primarily from payments processing including credit card processing, safe custody, and gains/losses from the currency service business).

In the Corporate Banking business line, net fee and commission income was €17 million higher than in the prior-year period at €106 million (first half of 2022: €89 million). Of this increase, €6 million was attributable to financial guarantee contracts / loan commitments, €5 million to fees and commissions in connection with loan processing, €3 million to fees and commission on loans of the New York branch, and €2 million to advice in relation to mergers & acquisitions.

In the Capital Markets business line, the contribution to net fee and commission income declined by €97 million to €31 million (first half of 2022: €128 million). One of the main reasons for this was the increase in brokerage expenses in the first half of the year.

Net fee and commission income in the Transaction Banking business line was up year on year at €95 million, a rise of €13 million compared with the restated figure of €82 million for the first half of 2022. Of this rise, €8 million was attributable to an increase in payments processing transactions and €4 million to safe custody and securities management business on the back of a higher volume.

As part of service procurement arrangements, DZ BANK has transferred processing services in the payments processing business to equensWorldline SE and Cash Logistik Security AG, and in capital markets business / transaction banking to Deutsche WertpapierService Bank AG. The service procurement agreement with Schwäbisch Hall Kreditservice was terminated at the end of 2022. The expenses arising in connection with obtaining services from the above external processing companies amounted to a total of €105 million (first half of 2022: €101 million) and were reported under the net fee and commission income of the Capital Markets / Transaction Banking business lines in an amount of €105 million (first half of 2022: €96 million).

Gains and losses on trading activities amounted to a net gain of €584 million (first half of 2022: net gain of €347 million).

Gains and losses on trading activities reflect the business activity of the Capital Markets business line and gains and losses on money market business entered into for trading purposes (mainly repurchase agreements) and on derivatives of the Group Treasury division ('financial assets and liabilities measured at fair value through profit or loss' [fair value PL]). The fair value gains and losses on financial assets and liabilities designated as at fair value through profit or loss (fair value option) are – apart from credit rating effects – also included in gains and losses on trading activities. The credit-rating-related effects pertaining to these financial instruments are included in other gains and losses on valuation of financial instruments if the instruments are financial assets or in equity if the instruments are financial liabilities.

Gains and losses on operating trading activities in the Capital Markets business line amounted to a net gain of €369 million, compared with €207 million in the prior-year period.

Gains and losses on operating trading activities in the first half of 2023 were influenced by a more favorable capital market environment than in the prior-year period. This could be seen from narrowing spreads, which particularly benefited fixed-income trading.

As had also been the case in the first six months of 2022, IFRS-related effects made a positive contribution to gains and losses on trading activities during the reporting period. One of the key factors in this context was changes in the fair value gains and losses relating to own issues (including pull-to-par effects) in the fair value PL and fair value option subcategories, which were higher overall than in the first half of 2022. These changes amounted to an increase of €225 million in the reporting period and included pull-to-par effects amounting to a decrease of €36 million (first half of 2022: increase of €57 million, including pull-to-par effects amounting to an increase of €15 million).

In the prior-year period, there had also been a positive impact of €62 million from derivative hedging transactions that were related to finance within the DZ BANK Group and were therefore not permitted to be included in hedge accounting. A small expense of €16 million arose in the first half of 2023.

Gains and losses on investments came to a net loss of €1 million and were therefore unchanged on the first half of 2022. The net loss in the reporting period resulted from expenses of €95 million from the sale of securities in the category 'fair value through other comprehensive income' combined with gains of €91 million arising from the unwinding of hedges accounted for in the category 'fair value through other comprehensive income' in the context of portfolio fair value hedge accounting. Securities in the category 'fair value through profit or loss' generated a net gain of €3 million.

Other gains and losses on valuation of financial instruments declined to a net loss of €91 million (first half of 2022: net loss of €6 million). Within this figure, credit-risk-related measurement effects relating to financial assets measured using the fair value option declined by €75 million to a net loss of €53 million (first half of 2022: net gain of €21 million) and the net loss from ineffectiveness in hedge accounting increased by €24 million to €41 million (first half of 2022: net loss of €17 million). Conversely, the valuation of financial instruments measured at fair value through profit or loss improved by €17 million to a net gain of €7 million (first half of 2022: net loss of €10 million).

The net gain under **gains and losses from the derecognition of financial assets measured at amortized cost** was unchanged year on year at €5 million.

Overall, **loss allowances** amounted to a net reversal of €36 million (first half of 2022: net addition of €44 million). The net additions in respect of the lending business and investments totaled €1 million (first half of 2022: net additions of €61 million). Within this figure, there were net reversals of €27 million related to loss allowances in stage 1 (first half of 2022: net reversals of €3 million), net reversals of €14 million related to loss allowances in stage 2 (first half of 2022: net additions of €60 million), and net additions of €42 million related to loss allowances in stage 3 (first half of 2022: net additions of €4 million). The net reversal in respect of recoveries on loans and advances previously impaired, directly recognized impairment losses, other gains and losses on purchased or originated credit-impaired assets (POCI assets), and additions to other provisions for loans and advances was €37 million (first half of 2022: net reversal of €17 million).

In the first half of 2023, the net reversals of €41 million in stages 1 and 2 were mainly attributable to the change in the macroeconomic shift factors. Furthermore, loss allowances were increased in stage 3 owing to additions in respect of individual counterparties owing to changes in credit ratings. These were partly offset by reversals as a result of improvements in the credit ratings of some counterparties.

Administrative expenses increased by €53 million to €732 million (first half of 2022: €679 million).

Staff expenses rose by €23 million to €319 million (first half of 2022: €296 million) owing to increases in wages and salaries and in the associated expenses for social security. Pension and other post-employment benefit expenses were on a par with the prior-year period at €18 million.

Other administrative expenses went up by €30 million to €413 million (first half of 2022: €383 million). Within this figure, the expenses for the restructuring fund for banks (bank levy) and contributions to the BVR protection scheme amounted to €88 million and were thus virtually unchanged (first half of 2022: €87 million).

Furthermore, consultancy expenses increased by €15 million to €98 million (first half of 2022: €83 million), office expenses by €5 million to €19 million (first half of 2022: €14 million), IT costs by €4 million to €95 million (first half of 2022: €91 million), expenses for property and occupancy costs by €4 million to €27 million (first half of 2022: €23 million), and expenses for information procurement by €3 million to €25 million (first half of 2022: €22 million). The depreciation and amortization charges included in other administrative expenses went down by €2 million to €36 million (first half of 2022: €38 million). The breakdown of these charges was as follows: depreciation of right-of-use assets €14 million (first half of 2022: €15 million), depreciation of property, plant and equipment, and investment property €12 million (first half of 2022: €15 million), and amortization of other intangible assets €10 million (first half of 2022: €8 million).

Other net operating income, which totaled €35 million (first half of 2022: €12 million), included income from the reversal of provisions and accruals of €45 million (first half of 2022: €20 million).

Profit before taxes amounted to €697 million in the reporting period, which was €328 million higher than the figure of €369 million reported for the comparative period.

The **cost/income ratio** came to 52.5 percent in the first half of 2023 (first half of 2022: 62.1 percent).

Regulatory RORAC was 25.7 percent (first half of 2022: 12.6 percent).

3.2.6 DZ HYP

At €346 million, the **net interest income** of DZ HYP was €41 million lower than in the prior-year period (first half of 2022: €387 million). This change largely related to the lower level of early redemption payments received in the first half of 2023, which amounted to €1 million (first half of 2022: €31 million), and bonus interest of €7 million in the prior-year period resulting from DZ HYP's participation in the ECB's TLTRO III program; there was no such bonus interest in the reporting period.

The volume of real estate loans, which is the main driver of net interest income, stood at €56,771 million as at June 30, 2023 (December 31, 2022: €56,686 million).

The volume of new business (including public-sector finance) stood at €3,626 million (first half of 2022: €5,174 million). In the corporate customer business, the volume of new business came to €3,058 million (first half of 2022: €3,964 million). In the retail customer business, the volume of new commitments stood at €349 million (first half of 2022: €1,050 million). In the public-sector business, DZ HYP generated a new business volume of €219 million (first half of 2022: €160 million).

The volume of new lending jointly generated with the local cooperative banks in the corporate customer business amounted to €1,501 million (first half of 2022: €1,531 million).

Net fee and commission income amounted to €5 million (first half of 2022: €12 million). The figure for the prior-year period had included income of €11 million from participation in the DZ BANK Group's bidder group in the ECB's TLTRO III tender procedures; there was no such income in the reporting period.

Gains and losses on investments deteriorated to €0 million (first half of 2022: net gain of €33 million). The net gain for the first half of 2022 included income of €30 million resulting from the sale of Portuguese government bonds.

The net gain under **other gains and losses on valuation of financial instruments** declined by €46 million to €27 million (first half of 2022: €73 million). The main influence on this figure was the movement of credit spreads. For example, the gains and losses on valuation of bonds from the peripheral countries of the eurozone amounted to a net gain of €15 million in the six months under review (first half of 2022: net gain of €44 million).

Loss allowances amounted to a net addition of €20 million (first half of 2022: net addition of €14 million). There were additions in stage 3 in connection with specific material exposures during the reporting period. In the prior-year period, the main influence on loss allowances had been due to adjustments to the model-driven calculation.

Administrative expenses decreased by €9 million to €153 million (first half of 2022: €162 million). Staff expenses amounted to €55 million (first half of 2022: €53 million). Other administrative expenses declined to €98 million (first half of 2022: €109 million), largely because of the reduction in expenses for the bank levy.

Profit before taxes fell to €212 million (first half of 2022: €335 million).

The **cost/income ratio** came to 39.6 percent (first half of 2022: 31.7 percent).

Regulatory RORAC was 31.4 percent (first half of 2022: 48.8 percent).

3.2.7 DZ PRIVATBANK

Net interest income at DZ PRIVATBANK rose by €36 million to €70 million (first half of 2022: €34 million). This improvement was mainly attributable to higher income in the lending and money market businesses due to the changed interest-rate regime and market opportunities being seized in liquidity management.

The average volume of guaranteed LuxCredit loans issued by DZ PRIVATBANK, which acts as the competence center for foreign-currency lending and investing in the interest-earning business, amounted to €5.1 billion (first half of 2022: €5.1 billion).

Net fee and commission income fell by €3 million to €109 million (first half of 2022: €112 million). Contributions to earnings in private banking and the fund services business are the main drivers of net fee and commission income.

As at June 30, 2023, high-net-worth individuals' assets under management, which comprise the volume of securities, derivatives, and deposits of customers in the private banking business, amounted to €22.8 billion (June 30, 2022: €20.8 billion; restated).

The value of funds under management amounted to €178.1 billion (June 30, 2022: €168.9 billion). The number of fund-related mandates was 560 (June 30, 2022: 571).

Administrative expenses increased by €7 million to €144 million (first half of 2022: €137 million). At €77 million, staff expenses were on a par with the prior-year period (first half of 2022: €76 million). Other administrative expenses amounted to €67 million (first half of 2022: €62 million). This year-on-year rise was essentially due to increased regulatory contributions and higher costs for IT and consultancy.

Profit before taxes climbed to €53 million (first half of 2022: €19 million).

The **cost/income ratio** came to 73.1 percent (first half of 2022: 88.4 percent).

Regulatory RORAC was 33.0 percent (first half of 2022: 11.1 percent).

3.2.8 VR Smart Finanz

Net interest income at VR Smart Finanz amounted to €60 million (first half of 2022: €58 million). The increase in net interest income was mainly due to a slight year-on-year rise in the lending and object finance portfolio volume to €2,985 million (June 30, 2022: €2,944 million) and higher net margins.

New lending and object finance business with customers in the small business, self-employed, and SME segments was encouraging in the reporting period, increasing by €141 million or 30.4 percent to €605 million (first half of 2022: €464 million). The volume of new business for the 'VR Smart express' hire purchase solution came to €271 million (first half of 2022: €225 million), while new business for the other object finance solutions totaled €124 million (first half of 2022: €80 million). New business involving the 'VR Smart flexibel' business loan increased to €210 million (first half of 2022: €135 million).

Net fee and commission income, which amounted to a net expense of €14 million (first half of 2022: net expense of €15 million), was predominantly influenced by the small uptick in fees and commissions paid to the cooperative banks.

Loss allowances amounted to a net addition of €12 million in the period under review (first half of 2022: net addition of €3 million). The increased expenses were mainly due to the rise in defaults in respect of 'VR Smart flexibel' and 'VR Smart express' and to large additions to loss allowances in stages 1 and 2.

Administrative expenses went down by €1 million to €37 million (first half of 2022: €38 million) as a result of the management of costs. Staff expenses held steady at €22 million (first half of 2022: €22 million).

The **loss before taxes** of VR Smart Finanz amounted to €6 million, primarily owing to the higher loss allowances (first half of 2022: profit before taxes of €3 million).

The **cost/income ratio** came to 86.0 percent (first half of 2022: 88.4 percent).

Regulatory RORAC was minus 7.7 percent (first half of 2022: 3.5 percent).

3.2.9 DZ BANK – holding function

Net interest income contains the interest expense on subordinated capital and senior non-preferred paper purchased by group entities as well as issued subordinated capital and senior non-preferred paper. It also contains the net interest income/expense from the funding of liquidity from the balance of non-interest-bearing assets and liabilities.

Net interest income amounted to a net expense of €55 million in the period under review (first half of 2022: net expense of €9 million).

The net interest expense on purchased and issued subordinated capital and senior non-preferred paper increased by €19 million to €36 million (first half of 2022: €17 million).

The net interest expense from the funding of liquidity from the balance of non-interest-bearing assets and liabilities amounted to €19 million in the period under review (first half of 2022: net interest income of €8 million). The deterioration was due to higher market interest rates in the short-dated segment.

Administrative expenses increased by €6 million year on year to €139 million (first half of 2022: €133 million).

The protection levies (in particular the bank levy and contributions to the BVR protection scheme) declined by €13 million to €45 million (first half of 2022: €58 million). Furthermore, IT and project expenses increased from €32 million in the first six months of 2022 to €41 million in the period under review. Expenses from the group management function rose by €6 million to €36 million (first half of 2022: €30 million). Other expenses for the benefit of the group and local cooperative banks swelled by €4 million to €17 million (first half of 2022: €13 million).

3.2.10 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.

4 Net assets

As at June 30, 2023, the DZ BANK Group's **total assets** had increased by €24,977 million to €653,374 million (December 31, 2022: €628,397 million).

The **volume of business** amounted to €1,179,069 million (December 31, 2022: €1,132,301 million). This figure comprised the total assets, the assets under management at UMH as at June 30, 2023 amounting to €432,327 million (December 31, 2022: €413,115 million), the financial guarantee contracts and loan commitments amounting to €91,286 million (December 31, 2022: €88,618 million), and the volume of trust activities amounting to €2,082 million (December 31, 2022: €2,171 million).

Cash and cash equivalents went up by €19,634 million to €113,351 million (December 31, 2022: €93,717 million) as a result of the corresponding rise in balances with central banks. The increase was predominantly attributable to DZ BANK – CICB (liquidity management function).

Loans and advances to banks rose to €130,065 million (December 31, 2022: €123,444 million). Loans and advances to banks in Germany swelled to €123,057 million (December 31, 2022: €114,015 million), while loans and advances to foreign banks increased to €7,008 million (December 31, 2022: €9,429 million).

Loans and advances to customers amounted to €205,407 million, which was higher than the figure of €203,646 million reported as at December 31, 2022. Loans and advances to customers in Germany grew to €177,997 million (December 31, 2022: €176,145 million), whereas loans and advances to foreign customers declined to €27,410 million (December 31, 2022: €27,501 million).

Financial assets held for trading amounted to €37,790 million (December 31, 2022: €48,909 million). Within this amount, derivatives (positive fair values) stood at €18,850 million (December 31, 2022: €21,474 million), bonds and other fixed-income securities at €9,661 million (December 31, 2022: €7,729 million), shares and other variable-yield securities at €1,386 million (December 31, 2022: €1,388 million), receivables at €7,893 million (December 31, 2022: €18,318 million), money market placements at €6,868 million (December 31, 2022: €17,058 million), and promissory notes and registered bonds at €1,025 million (December 31, 2022: €1,259 million).

Investments increased by €3,317 million to €46,710 million (December 31, 2022: €43,393 million). The main reasons for this change were an increase of €2,594 million in bonds and other fixed-income securities to €43,325 million (December 31, 2022: €40,731 million) and an increase of €729 million in shares and other variable-yield securities to €2,691 million (December 31, 2022: €1,962 million).

Investments held by insurance companies grew by €5,658 million to €111,206 million (December 31, 2022: €105,548 million). This was due to a €3,019 million rise in fixed-income securities to €50,671 million (December 31, 2022: €47,652 million), a €2,839 million rise in assets related to unit-linked contracts to €19,268 million (December 31, 2022: €16,429 million), a €405 million rise in mortgage loans to €11,365 million (December 31, 2022: €10,960 million), and a €205 million rise in other loans to €1,039 million (December 31, 2022: €834 million). The overall increase was partly offset by, in particular, a €188 million decrease in derivatives (positive fair values) to €90 million (December 31, 2022: €278 million) and a €60 million decrease in registered bonds to €5,370 million (December 31, 2022: €5,430 million).

Deposits from banks as at December 31, 2022 amounted to €181,505 million, which was €5,282 million lower than the figure reported as at December 31, 2022 of €186,787 million. Deposits from domestic banks went down by €13,093 million to €157,619 million (December 31, 2022: €170,712 million), whereas deposits from foreign banks rose by €7,811 million to €23,886 million (December 31, 2022: €16,075 million). As at June 30, 2023, the nominal value of the DZ BANK Group's participation in the ECB's TLTRO III program was €9.5 billion (December 31, 2022: €11.0 billion).

Deposits from customers grew by €4,962 million to €164,391 million (December 31, 2022: €159,429 million). Deposits from domestic customers grew by €6,317 million to €135,996 million (December 31, 2022: €129,679 million). By contrast, deposits from foreign customers shrank by €1,355 million to €28,395 million (December 31, 2022: €29,750 million).

At the end of the reporting period, the carrying amount of **debt certificates issued including bonds** was €100,053 million (December 31, 2022: €82,349 million), predominantly because of increased issues of mortgage Pfandbriefe and a rise in commercial paper. Within the total figure, bonds issued came to €80,062 million (December 31, 2022: €68,271 million), while the portfolio of other debt certificates stood at €19,991 million (December 31, 2022: €14,077 million).

Financial liabilities held for trading went up by €329 million to €52,807 million (December 31, 2022: €52,478 million). Within this figure, derivatives (negative fair values) decreased by €4,783 million. However, deposits rose by €2,468 million, bonds issued by €1,568 million, and short positions by €1,077 million.

Insurance contract liabilities increased by €4,590 million to €102,239 million (December 31, 2022: €97,649 million). This was predominantly due to the €4,816 million rise in the liability for remaining coverage to €90,805 million (December 31, 2022: €85,989 million), combined with a fall of €226 million in the liability for incurred claims to €11,433 million (December 31, 2022: €11,659 million).

As at June 30, 2023, **equity** had advanced by €2,768 million to €30,877 million (December 31, 2022: €28,109 million). The increase was mainly due to growth of €1,545 million in retained earnings to €16,301 million (December 31, 2022: €14,756 million) and to the rise in additional equity components to €3,293 million (December 31, 2022: €2,150 million) resulting from the issue of a tranche of additional Tier 1 notes (AT1 bonds) in a total volume of €1,143 million.

The **capital adequacy** of the DZ BANK financial conglomerate, the DZ BANK banking group, and the R+V Versicherung AG insurance group is described in the risk report within this interim group management report (chapter VI.5).

5 Financial position

Liquidity management for the entities in the DZ BANK Group is carried out by the Group Treasury division at DZ BANK and on a decentralized basis by the individual subsidiaries. The individual entities are provided with funding by DZ BANK (group funding) or the entities exchange cash among themselves via DZ BANK (group clearing). Liquidity is managed within DZ BANK centrally by the Group Treasury division in Frankfurt and by the associated treasury units in its international branches, although Frankfurt has primary responsibility.

In the context of liquidity management, the DZ BANK Group distinguishes between operational liquidity (liquidity in the maturity band of up to one year) and structural liquidity (liquidity in the maturity band of more than one year).

The DZ BANK Group has a diversified funding base for **operational liquidity**. A considerable portion is accounted for by money market activities resulting from the cash-pooling function with the local cooperative banks. This enables cooperative banks to invest available liquidity with DZ BANK or obtain liquidity from

DZ BANK if they need it. This regularly results in a liquidity surplus, which provides one of the main bases for short-term funding in the unsecured money markets. Corporate customers and institutional clients are another important source of funding for covering operational liquidity requirements.

For funding purposes, the DZ BANK Group also issues money market products based on debt certificates under a standardized groupwide multi-issuer euro commercial paper program through its offices and branches in Frankfurt, New York, Hong Kong, London, and Luxembourg. In addition, a US CP head office program is used centrally by DZ BANK Frankfurt.

Key repo and securities lending activities, together with the collateral management process, are managed centrally in DZ BANK's Group Treasury division as a basis for secured money market financing activities. Funding on the interbank market is not strategically important to the DZ BANK Group.

The DZ BANK Group also has at its disposal liquid securities that form part of its counterbalancing capacity. These securities can be used as collateral in monetary policy funding transactions with central banks, or in connection with secured funding in private markets.

Structural liquidity activities are used to manage and satisfy the long-term funding requirements (more than one year) of DZ BANK and, in coordination with the group entities, those of the DZ BANK Group.

As at June 30, 2023, the nominal value of the DZ BANK Group's participation in the ECB's TLTRO III program was €9.5 billion (December 31, 2022: €11.0 billion).

The Group Treasury division at DZ BANK draws up a groupwide **liquidity outlook** annually. This involves determining the funding requirements of the DZ BANK Group for the next financial year on the basis of the coordinated business plans of the individual companies. The liquidity outlook is updated throughout the year.

The risk report within this interim group management report includes disclosures on **liquidity adequacy** (chapter VI.4). The year-on-year changes in cash flows from operating activities, investing activities, and financing activities are shown in the **statement of cash flows** in the interim consolidated financial statements.

III Events after the balance sheet date

There were no events of particular importance after the end of the first half of 2023.

IV Outlook

1 Economic conditions

1.1 Global economic trends
Persistently high inflation and the jump in interest rates are weighing on the global economic outlook. Although consumer prices have now probably peaked in most countries and inflation rates are expected to come down again, inflation is currently still very high in many areas. This is holding back consumer spending and curbing the inclination to make purchases. Moreover, the rapid interest-rate increases have swiftly become reflected in banks' new lending business, which has led to a slowdown in mortgage finance in particular. However, high interest rates are weighing not only on investment in construction, which is simultaneously being hit by sharply rising costs, but also on companies' spending on capital equipment.

The recovery from the economic slump triggered by the war in Ukraine, the energy crisis, and the ensuing mild winter recession in the eurozone is struggling to gain traction in this environment. In the United States, on the other hand, a recession is probably yet to come. A further unexpected rise in interest rates would put additional pressure on the economy, as would further escalation of the war in Ukraine or a renewed flare-up of the energy crisis.

The risk of new protectionist measures in trade relations between the United States, Europe, and China has increased, as can be seen from the debate surrounding the US Inflation Reduction Act. Geopolitical tensions, such as over the position of Taiwan, may prompt a further escalation of trade disputes. This would adversely affect the global economy and hit the heavily export-dependent German economy particularly hard.

For certain products, high energy prices will take quite some time to filter through the various production stages before reaching end customers, so inflation rates are likely to decline only gradually. High core inflation, fueled by healthy wage increases in various industries and regions, is the greatest cause for concern. This means that, despite their projected downward trajectory, average inflation rates for 2023 as a whole are expected to remain far above the target levels of many central banks.

1.2 Trends in the USA
The US economy has so far proved resilient in the face of recessionary risks. The service sector in particular has been boosted by strong post-pandemic demand in recent months, which has supported economic growth. The labor market has also remained robust. However, key indicators continue to signal that the economy is heading toward a recession. High interest rates and still significantly elevated inflation are key factors that point to a looming economic downturn. Consumers are likely to become increasingly reluctant to spend and companies will scale back their investment activities. DZ BANK now expects the US economy to slip into a mild recession over the course of the second half of 2023. For 2023 as a whole, DZ BANK predicts that economic output will grow by just 0.8 percent and that inflation will slow to a rate of 4.4 percent. The labor market is currently a major source of risk. Unless it weakens noticeably in the coming months, the US Federal Reserve will be forced to take more decisive action in order to prevent even greater upward wage pressure. Such an intervention would further increase the likelihood of a recession. Turmoil in the banking sector also remains a risk factor for the US economy. Concerns about the financial industry have abated somewhat in recent months, but heightened risks in this sector cannot be ruled out.

1.3 Trends in the eurozone
The eurozone's gross domestic product (GDP) shrank slightly in the first quarter. It was the second consecutive quarter of negative growth, which means that the eurozone economy experienced a mild winter recession.

Consumer spending declined in the period January to March due to high inflation. Capital expenditure increased slightly and the trade balance showed positive growth indications, but only because imports fell more strongly than exports. The threat of severe supply shortages in the energy sector did not materialize. However, the war in Ukraine and the sanctions imposed against Russia continue to cause uncertainty and thus remain a drag on Europe's economy.

Conditions in the industrial sector are particularly challenging. Order book buffers are declining as new order levels dwindle. In light of weak demand at an international level and high interest rates, the outlook for the industrial and construction sectors remains gloomy. This coincides with a recent slowdown in the recovery of consumer confidence. In particular, consumers' inclination to make major purchases is still very limited. Despite this weak macroeconomic picture, positive stimulus is expected to come from the still robust conditions in the labor market, which are keeping household incomes supported. The tourism and leisure sector, meanwhile, is likely to enjoy a continuing boost from post-pandemic catch-up effects.

All in all, the prospects for economic growth in the eurozone remain subdued. Challenging conditions in the industrial sector and for foreign trade will put a damper on growth in the coming quarters. However, the positive situation in the service sector and stable labor market conditions will provide some support for the economy. Consumers should slowly regain their appetite for spending as inflationary pressures gradually diminish. For the current year, DZ BANK predicts growth at a rate of 0.6 percent. DZ BANK expects the inflation rate to decrease from 8.4 percent in 2022 to 5.8 percent in 2023, but this means it will still be well above the ECB's inflation target.

1.4 Trends in Germany

Concerns about a substantial gas shortage in Germany in the six winter months of 2022/2023 did not turn into a reality. Thanks to increased gas supply from other gas-exporting nations and the start-up of Germany's first liquid gas terminal at the start of 2023, the country was able to fill its gas storage facilities to a high level more quickly than in the previous winter, despite having to forego gas imports from Russia. Nonetheless, gas usage had to be reduced in order to avoid shortages. In particular, production restrictions in the energy-intensive industrial sector acted as a brake on economic growth. Consumer price inflation slowed but remained at high levels, curbing consumer spending. As a result, the German economy experienced a recession over the six winter months of 2022/2023.

The real estate sector is now also showing clear signs of weakness. Initially, the prolonged upward trend in the German real estate market continued in 2022. However, demand for property, which had previously been fueled by historically low financing rates and capital market yields, suddenly slumped in the second quarter of 2022 owing to higher interest rates. Having previously risen sharply, residential real estate prices peaked in mid-2022 and are expected to fall by between 4 percent and 6 percent in 2023. Properties that are energy-efficient and/or use renewable energy sources for heating are now particularly sought-after. Commercial real estate prices stagnated in 2021 and fell slightly in 2022, mainly due to the pandemic's impact on the retail sector. Compared with residential real estate, commercial properties could see much sharper price falls of around 10 percent or more in 2023. Despite the persistently high price level in the real estate market, the generally tight supply of properties should counteract an even more pronounced price correction, not least because the rapid rise in financing and construction costs has brought many construction projects to a halt. This makes a marked reduction in completions likely in 2023.

The economic outlook for the coming months remains muted. DZ BANK anticipates only a minimal upturn. In addition, high inflation is eating into consumers' budgets. Rising interest rates and stricter financing conditions are also taking their toll on the economy. Exports are also likely to experience headwinds in the deteriorating foreign trade environment. All of this makes a robust recovery unlikely in the coming quarters. The outlook thus remains fairly bleak, as confirmed by sentiment indicators such as the ifo business climate index and the ZEW Indicator of Economic Sentiment. DZ BANK anticipates a slight decline of 0.2 percent in GDP for 2023.

Inflation is slowly coming down now. Relief measures introduced by the German government (gas and electricity price caps) have somewhat mitigated the energy-price-related fallout from record-high inflation rates. Global market prices for gas and oil are now helping to contain consumer prices too. The gradual easing of supply bottlenecks in the industrial sector and diminishing upward pressure on food prices are also taking some wind out of the sails of inflation. However, inflationary pressure in the service sector is likely to remain high as wages continue to rise. For 2023, DZ BANK anticipates a moderate decline in inflation from 8.7 percent to 6.1 percent. Based on these forecast figures, the German economy is experiencing a period of stagflation.

1.5 Trends in the financial sector

With regard to the agenda of regulatory reforms and the wider macroeconomic downturn, the overall situation in the financial sector has not changed materially compared with the outlook published in the 2022 group management report. Structural changes driven by competition as well as the implementation of various ESG standards are further key factors that are shaping conditions in the financial sector.

The shift in monetary policy that began in 2022 was continued by the major central banks in the reporting period and was further intensified in some instances. This marks a radical departure from the expansionary monetary policy regime of previous years, which had been adopted by the central banks in response to the financial markets crisis. The objective of current policy is to curb inflation, which has risen in the wake of geopolitical crises, and to counteract a stagflationary macroeconomic environment.

In mid-2022, the US Federal Reserve began to trim down its balance sheet by reducing the exposures built up under its asset purchase program and started to raise the federal funds rate, which now stands at 5.25 percent to 5.50 percent. In the reporting period, the European Central Bank (ECB) also reduced its holdings under the asset purchase program (APP) and will cease to reinvest maturing principal payments under the program from July 2023. By contrast, maturing principal payments from securities acquired under the pandemic emergency purchase program (PEPP) will continue to be reinvested until at least the end of 2024. Alongside these measures, the ECB decided to continue raising its key interest rates at a moderate pace, which meant that the main refinancing rate reached 4 percent by the end of June 2023 and 4.25 percent by the end of July 2023. The eurozone yield curve, which had been relatively mildly inverted until recently, has consequently become more strongly inverted but remains at a lower nominal level overall than the US dollar yield curve. The current cycle of interest-rate increases, which remains unparalleled in the history of the ECB in terms of duration and pace, highlights the determination of the central bank to bring inflation back down to the long-term target level of 2 percent. A transmission protection instrument (TPI) was introduced to take account of the risk of fragmentation within the eurozone resulting from the bank's approach. Nonetheless, a substantial further increase in interest rates is regarded as unlikely. Instead, it is expected that the central banks will pause to monitor the impact of the measures they have already adopted.

The overall rise in interest rates should continue to provide a tailwind for interest-driven business in the financial sector, which in turn should have a positive effect on overall earnings. However, the rise in interest rates is also putting mounting pressure on the property market. The risk of loan defaults is therefore rising, especially against the backdrop of persistently high inflation and the slower-than-expected economic recovery (see chapters IV.1.1 and IV.1.4 above for further details). In the reporting period, Germany saw a further fall in the number of planning applications and, by extension, a decline in demand for mortgage loans. These leading indicators, which tend to move several years ahead of actual construction activity, point toward diminishing demand in the real estate market. At the same time, prices for existing properties have fallen only moderately, although (in some cases pronounced) differences have been observable depending on region, market segment, and state of repair (see also chapter IV.1.4). The extent to which higher financing costs may trigger price corrections that necessitate the recognition of impairment losses on real estate assets will need to be monitored on an ongoing basis. In the residential sector, this trend runs counter to persistently strong demand for new housing, which in Germany is partly fueled by a growing influx of migrants from crisis-stricken regions.

The loss of confidence in the banking market triggered by the insolvencies of several US regional banks (explained in chapter IV.3.3 of the risk report) spiked in the first quarter of 2023 due to the crisis at Credit Suisse Group AG, Zurich (Credit Suisse) and its rescue by its competitor UBS Group AG, Zurich (UBS Group). An escalation to a general crisis of confidence in the banking market, which would have tremendous consequences for the entire financial sector, has so far been averted thanks to swift and decisive action by political decision-makers in the United States and Switzerland that have allowed the situation to cool off. There are lingering concerns that a rapid and sustained rise in interest rates could undermine the confidence of investors in US regional banks, which typically have a high level of exposure to commercial real estate. This could cause the crisis of confidence in the banking market to flare up again. However, the European and German banking sectors continue to be regarded as largely resilient to contagion from a banking crisis thanks to the agenda of reforms implemented in recent years by central banks and supervisory authorities in the eurozone.

Waning supply chain disruptions and occasional slight falls in lower energy prices are providing positive macroeconomic impetus, but persistently high inflation rates and looming geopolitical conflicts are presenting major challenges for the global economy. In addition to Russia's ongoing war in Ukraine, which is having an adverse impact on energy and food prices, trade disputes between the United States and China could result in barriers to trade that would have far-reaching consequences for the global economy. Negative knock-on effects, including for the financial sector, cannot be ruled out over the further course of the year. Additional information on overarching macroeconomic risk factors can be found in chapter VI.3 of the risk report.

2 Financial performance

The forecasts below are based on the outcome of the DZ BANK Group's projection process. Changes in the underlying assumptions, particularly as a result of the macroeconomic conditions described above, may lead to deviations from the forecasts.

The changeover in financial reporting standards for insurance companies from IFRS 4 to IFRS 17 has been implemented with effect from the current reporting year. The comparisons between the figures for 2022 and the forecasts for the current year that are provided in the outlook are based on pro forma reference figures as at December 31, 2022 that have been calculated on the basis of IFRS 17.

According to the current forecast, net interest income including net income from long-term equity investments will increase slightly in 2023 from its already high level. Net interest income is expected to be stabilized by the forecast growth in the interest-bearing business, especially in the operating segments in the DZ BANK Group that are sensitive to interest rates.

Net fee and commission income will probably fall noticeably in 2023 compared with 2022.

Gains and losses on trading activities are expected to deteriorate substantially following exceptionally high net gains in 2022. This is because positive valuation effects that had bolstered gains and losses on trading activities in the previous year will not be repeated in 2023.

Gains and losses on investments are anticipated to improve considerably to a net gain in 2023, partly because the figure for 2022 was depressed by sales of investments and other factors, as mentioned in the 2022 group management report.

Other gains and losses on valuation of financial instruments are also expected to improve substantially to a net gain in 2023, as negative valuation effects that had impacted the prior-year figure will not be repeated.

Net income from insurance business should rise sharply in 2023 in line with expectations. In relation to the R+V segment, this forecast is mainly based on the projected normalization of gains and losses on investments held by insurance companies and thus a substantial year-on-year improvement.

Expenses for loss allowances are still expected to go up significantly in the reporting year, partly due to new business and other factors not taken into account in the existing parameter-based loss allowances.

Given the absence of the positive non-recurring items that arose in 2022, the current forecast for 2023 predicts a substantial fall in other net operating income.

Profit before taxes in 2023 is predicted to be up significantly compared with 2022 even though macroeconomic conditions look set to remain challenging.

The cost/income ratio for the DZ BANK Group is likely to fall moderately in 2023 as a result of the expected noticeable year-on-year increase in income paired with only a small rise in expenses.

Regulatory RORAC, the risk-adjusted performance measure based on regulatory risk capital, will probably rise appreciablythis year compared with 2022 owing to the high level of profit before taxes.

3 Liquidity and capital adequacy

The DZ BANK Group is assuming that it can continue to maintain an appropriate level of liquidity adequacy in the second half of 2023. Further information on liquidity adequacy can be found in the risk report (chapter VI.4).

As matters currently stand, the DZ BANK Group's capital adequacy will continue to be assured for the second half of 2023 from both economic and regulatory perspectives; that is to say, it will continue to have at its disposal the available internal capital and regulatory own funds necessary to cover the risks associated with the finance business and other risks arising from the group's business operations. Further information on capital adequacy can be found in the risk report (chapter VI.5).

V Opportunity report

1 Management of opportunities

The DZ BANK Group defines **opportunities** as situations in which potential income can be unlocked and/or potential cost savings can be achieved.

The management of opportunities is integrated into the **annual strategic planning process**. The potential for returns is identified and analyzed on the basis of various macroeconomic scenarios, trends, and changes in the market environment, and then included in strategic financial planning. Details about the strategic planning process are presented in chapter I.2.4 in 'DZ BANK Group fundamentals' in the 2022 group management report.

Opportunity management is an integral component of **governance** and is therefore taken into account in the general management approach, in the management of subsidiaries via appointments to key posts, and in the DZ BANK Group's committees. Details about the governance of the DZ BANK Group can be found in chapter I.2.2 in 'DZ BANK Group fundamentals' in the 2022 group management report.

2 Potential opportunities

2.1 Potential opportunities from macroeconomic developments

The statements made in the outlook on the expected business performance of the DZ BANK Group in the year ahead are based on the macroeconomic scenario that DZ BANK considers to be the most likely.

If economic conditions in the relevant markets are better than expected, opportunities may arise for the DZ BANK Group. In a positive scenario such as this, a further lessening of global supply chain disruptions thanks to factors like the easing of geopolitical tensions – most notably in the trade disputes between China and the US – would alleviate supply-side shortfalls in the global markets and avoid further barriers to trade. The recession that is considered imminent for the major industrialized countries would be milder and shorter-lived than expected, or even avoided altogether, provided that commodity prices and energy prices settle at a lower, predictable level, potentially supported by a foreseeable end to the war in Ukraine. Under the continuing assumption of moderate wage increases despite the remarkable stability of labor markets to date, the major central banks could potentially conclude their cycle of interest-rate hikes in 2023 and leave key interest rates at a sufficiently high level that real interest rates become restrictive. This would bring the goal of a return to price stability another step closer. Moreover, the DZ BANK Group's financial performance would benefit if the real estate markets managed to weather the current high interest-rate environment without significant price corrections. Stable prices for commercial real estate would be an important source of support for US regional banks in particular, which tend to be heavily invested in this segment. This, in turn, would help to avert a crisis of confidence in the banking market as a whole.

All of the positive factors outlined above are highly unlikely to materialize together. From the DZ BANK Group's perspective, however, even the occurrence of individual factors would create an environment for the financial sector that would probably benefit the individual business models and the financial position and financial performance of the DZ BANK Group as a whole. Stable conditions in the financial and capital markets, combined with a steeper yield curve, would have a positive impact on the net interest income and net fee and commission income generated from customer business and on net income from insurance business. In particular, an assumed economic recovery could potentially limit the net expense recognized for loss allowances and thereby help to increase the Group's net profit.

2.2 Potential opportunities from regulatory initiatives

Regulatory changes and initiatives may provide banks and insurance companies with the opportunity to offer products or services that are better tailored to customers' needs. For example, sustainability aspects are becoming increasingly important for many customers when making purchases and investments. Initiatives at European level, such as sustainable finance strategies and proposals for an EU green bond standard, underline the significance of sustainability aspects for the financial sector. Further development of these initiatives may lead to customers and the markets participating in sustainable finance initiatives on a greater scale, which would provide banks and insurance companies with the opportunity to strengthen the unique selling points of their products and services and to unlock potential growth in the sustainable finance business. This would have a positive impact on, for example, net fee and commission income and net interest income.

2.3 Potential opportunities from strategic initiatives

The strategic focus in the DZ BANK Group (see chapter I.1 in 'DZ BANK Group fundamentals' in the 2022 group management report) follows the guiding principle of fulfilling the role of a **network-oriented central institution and financial services group**. Business activities are centered on the local cooperative banks and their customers. The objective of this strategic approach is to consolidate the positioning of the cooperative financial network as one of the leading financial services providers in Germany on a long-term basis. The partnership between the cooperative banks and the entities in the DZ BANK Group is built on the principles of subsidiarity, decentralization, and regional market responsibility.

The DZ BANK Group develops and implements **strategic initiatives and programs** at three levels:

– Firstly, the entities in the DZ BANK Group work on strategic projects and initiatives in collaboration with the cooperative banks and Atruvia, with the BVR taking a leading role. The strategy agenda entitled 'Shaping the future cooperatively' provides a framework within which the entities of the cooperative financial network are implementing the initiatives in the strategic KundenFokus (customer focus) project with the aim of establishing an omnichannel model to strengthen their competitiveness.

– Secondly, the entities in the DZ BANK Group have jointly identified key areas of collaboration (such as operating models and sustainability) that offer potential to reinforce their future viability and profitability. The aim is to continue to develop and take action in these areas of collaboration over the coming years.

– At the third level, each individual entity in the DZ BANK Group pursues its own strategic initiatives. One example is the 'Verbund First 4.0' strategic program at DZ BANK, which is designed to ensure the organization's resilience for the future. The program is aimed at improvements in three key areas: market presence (network-focused, customer-oriented, and digital), control and production processes (efficient, effective, and focused), and corporate culture (performance-driven and integrative). The 'Verbund First 4.0' strategic program is updated continually in line with requirements. This transformation is being driven predominantly by key topics such as sustainability, digitalization, and employer branding.

  BSH describes its long-term objective through its vision of being the leading product and solutions provider in the homes and housebuilding cooperative ecosystem. It intends to remain the no. 1 in the home savings market and, together with the cooperative banks, to become the no. 1 in home finance. In addition, it is making inroads into new areas of growth for homes and housebuilding by maintaining a firm focus on customers and facilitating close collaboration between the cooperative banks and BSH's field staff on marketing. BSH is a center of excellence (provider of products and solutions) for consumer home finance, supporting the cooperative banks and playing an important part in strengthening the cooperative financial network's market position. The evolution of BSH's role into that of a solutions provider for its bank partners and its integration into the homes and housebuilding cooperative ecosystem address the demand for end-to-end solutions and the development of new business models centered around customers' basic needs alongside and beyond financial products / the value chain.

  DZ HYP is forging ahead with digitalization in many areas of its business. In consumer home finance, it is further expanding its role as a decentralized product supplier for the banks in the cooperative financial network. Competitive products, rapid processes, and a risk-adjusted pricing model give banks scope to generate income through fees and commissions and through cross-selling options. The plan is to complete the multi-stage expansion of integration with digital platforms by the end of 2023 so that additional customer groups can be targeted with best-in-class products and services. The main aspects of DZ HYP's FK Digital project in its corporate customer business are deploying data optimally within processes, improving interfaces, and unlocking the associated potential for greater efficiency while, at the same time, catering to the current and future requirements of market players and supervisory authorities alike. This should also help to further optimize the bank's streamlined, profitable approach incorporating intensive customer relationship management. The bank has also drawn up a strategy for setting up the DZ HYP cloud infrastructure, which it has begun to implement.

R+V's vision is to be the cooperative center of excellence for insurance, healthcare cover, and retirement pensions, working closely with its sales partners. Its strategic program, 'WIR@R+V', is designed to boost earnings power by putting a greater emphasis on profitability so that it can continue to make a significant contribution to the success of business in the cooperative financial network. R+V also remains firmly focused on its growth strategy of strengthening areas of importance for the future, namely healthcare, membership, sustainability, and the omnichannel approach. By delivering a consistently robust business performance, it can maintain sufficient financial strength to be able to remain a reliable partner and deliver on its value propositions in the long term.

Positive effects from the strategic programs and initiatives could have a beneficial impact on, for example, net fee and commission income, net interest income, or administrative expenses.

VI Risk report

1 Disclosure principles

In its capacity as the parent company in the DZ BANK Group, DZ BANK is publishing this half-year risk report in order to meet the transparency requirements for risks applicable to the DZ BANK Group as specified in **section 115** and **section 117 of the German Securities Trading Act (WpHG)** and **German Accounting Standard (GAS) 16** in conjunction with GAS 20. This report also implements the applicable international risk reporting requirements on the basis of **International Accounting Standard (IAS) 34**, although the legal standards applicable to annual reporting under the International Financial Reporting Standards (IFRS) – IFRS 7.31-42 (nature and extent of risks arising from financial instruments) and IFRS 17.121-132 (nature and extent of risks that arise from contracts within the scope of IFRS 17) – are taken into account. With effect from the start of 2023, the provisions of IFRS 17.121-132 replace the rules that applied until the previous year (IFRS 4.38–39A).

In preparing this risk report, DZ BANK also takes account of the **recommended risk-related disclosures** issued by the Financial Stability Board, the European Banking Authority, and the European Securities and Markets Authority that are designed to improve the usefulness of the disclosures in the decision-making process.

The quantitative disclosures in this risk report are based on information that is presented to the Board of Managing Directors and used for internal management purposes (known as the **management approach**). The disclosure of this information, which is important for knowledgeable users, is designed to ensure that external reporting is useful when such users need to make decisions.

This half-year report provides an overview of the **core elements of the risk management system** of the DZ BANK Group. The risk management system is presented in full in the risk report in the 2022 group management report ('2022 risk report'). The disclosures in the 2022 risk report are also applicable to the first half of 2023, unless otherwise indicated in this report.

DZ BANK Group

2 Summary

2.1 Risk management system

2.1.1 Fundamental features of risk management

Risks result from adverse developments affecting financial position or financial performance, and essentially comprise the risk of an unexpected future liquidity shortfall or unexpected future losses. A distinction is made between liquidity and capital. Risks that materialize can affect both of these resources.

The risk management system is based on the risk appetite statement – the fundamental document for determining risk appetite in the DZ BANK Group – and the specific details and additions in **risk strategies**, which are consistent with the business strategies that are developed and approved by the Board of Managing Directors. The **risk appetite statement** contains risk policy guidelines and risk strategy guidance that are applicable throughout the group. It also sets out quantitative requirements reflecting risk appetite.

The methods used to **measure risk** are an integral element of the risk management system. They are regularly reviewed, refined where necessary, and adapted to changes in internal and external requirements. Risk model calculations are used to manage the DZ BANK Group.

The DZ BANK Group has a **risk management system** that is updated on an ongoing basis in line with changes to the business and regulatory environment. The risk management system is designed to enable them to identify material risks – particularly risks to their survival as a going concern – at an early stage and to initiate the necessary control measures. The system therefore incorporates various elements, including organizational arrangements, methods, IT systems, the limit system based on economic risk-bearing capacity, stress testing of all material risk types, and internal reporting.

The tools used for the purposes of risk management are also designed to enable the DZ BANK Group to respond appropriately to **significant market movements**. For example, the market data used for the centralized, model-driven measurement of market risk is updated every trading day and significant market movements therefore lead to an immediate increase in the volatility of risk factors and, consequently, changes in market risk. In addition, changes in credit ratings and correlations affect the modeled level of credit risk. Conservative crisis scenarios for short-term and medium-term liquidity are intended to ensure that liquidity risk management takes adequate account of market crises.

2.1.2 KPIs

Risks affecting liquidity and capital resources are managed on the basis of groupwide liquidity risk management and groupwide risk capital management. The purpose of **liquidity risk management** is to ensure adequate levels of liquidity reserves are in place in respect of risks arising from future payment obligations (liquidity adequacy). The aim of **risk capital management** is to ensure the availability of capital resources that are commensurate with the risks assumed (capital adequacy).

The key risk management figures used in respect of **liquidity** are the minimum liquidity surplus, the liquidity coverage ratio (LCR), and the net stable funding ratio (NSFR). The key risk management figures used in respect of **capital** are economic capital adequacy, the coverage ratio for the financial conglomerate, and the regulatory capital ratios, plus the leverage ratio, the ratios for the minimum requirement for own funds and eligible liabilities (MREL), and the subordinated MREL ratios.

2.1.3 Management units and sectors

The DZ BANK Group is managed using the main types of risk, taking into account particular features relating to DZ BANK and its material subsidiaries (referred to below as **management units**).

All entities in the DZ BANK Group are integrated into the groupwide risk management system. The DZ BANK Group largely comprises the DZ BANK banking group and R+V. The management units form the core of the financial services group.

The insurance business operated at R+V differs in material respects from the other businesses of the DZ BANK Group. For example, actuarial risk is subject to factors that are different from those affecting the risks typically assumed in banking business. Furthermore, policyholders have a share in any gains or losses from investments in connection with life insurance, as specified in statutory requirements, and this must be appropriately taken into account in the measurement of risk. Not least, the supervisory authorities also treat banking business and insurance business differently and this is reflected in differing regulatory regimes for banks and insurance companies.

Because of these circumstances, two sectors – Bank sector and Insurance sector – have been created within the DZ BANK Group for the purposes of economic risk management. The management units are assigned to these sectors as follows:

Bank sector:
- DZ BANK
- BSH
- DZ HYP
- DZ PRIVATBANK
- TeamBank
- UMH
- VR Smart Finanz

Insurance sector:
- R+V

The management units represent the operating segments of the DZ BANK Group. From a risk perspective, the 'DZ BANK' management unit equates to the central institution and corporate bank operating segment and the holding function.

Furthermore, **DZ BANK** and **DZ HYP** have elected to apply the **liquidity waiver** pursuant to article 8 of the Capital Requirements Regulation (CRR). The waiver enables the LCR and NSFR to be applied at the level of a single liquidity subgroup consisting of DZ BANK and DZ HYP. This means that it is no longer necessary to comply with the regulatory liquidity requirements at the level of the two individual institutions.

DZ HYP has applied the **capital waiver** pursuant to section 2a (1), (2), and (5) of the German Banking Act (KWG) in conjunction with article 7 (1) CRR, under which – provided certain conditions are met – regulatory supervision at individual bank level may be replaced by supervision of the entire banking group.

The management units are deemed to be material in terms of their contribution to the DZ BANK Group's aggregate risk and are directly incorporated into the group's risk management system. The other subsidiaries and investee entities of DZ BANK are integrated into the risk management system either indirectly as part of equity investment risk or directly as part of other types of risk. This is decided for each of them annually.

The management units' subsidiaries and investees are also included in the DZ BANK Group's risk management system – indirectly via the majority-owned entities – with due regard to the minimum standards applicable throughout the group.

Risk is managed groupwide on a consolidated basis.

2.2 Risk factors and risks

The entities in the DZ BANK Group are exposed to a number of risk factors. These include adverse factors concerning the entity's environment that either affect multiple types of risk (general risk factors) or are typical of specific types of risk (specific risk factors). Disclosures on **general risk factors** can be found in chapter VI.3. The **specific risk factors** are shown in the risk-type-specific chapters of the 2022 risk report. The disclosures there continue to apply unchanged to the current year.

The main features of the directly managed **risks** and their significance for the operating segments in the Bank and Insurance sectors were shown in Fig. VII.3 and Fig. VII.4 respectively of the 2022 risk report. The risks shown there correspond to the outcome of the risk inventory check and reflect the risks that are material to the DZ BANK Group. This presentation also applies to the first six months of the current year.

2.3 Risk profile and risk appetite

The DZ BANK Group's **business model** and the associated business models used by the management units determine the risk profile.

The values for the measurement of **liquidity and capital adequacy** presented in Fig. VI.1 reflect the liquidity risks and the risks backed by capital assumed by the DZ BANK Group. They illustrate the **risk profile** of the DZ BANK Group. The values for these KPIs are compared against the (internal) minimum threshold values specified by the Board of Managing Directors of DZ BANK – also referred to below as **risk appetite** – and against the (external) minimum targets laid down by the supervisory authorities. The KPIs are explained in more detail later in this risk report.

The MREL ratio as a percentage of the leverage ratio exposure and the subordinated MREL ratio as a percentage of the leverage ratio exposure were added to the liquidity and capital adequacy KPI systems at the start of this year.

In addition, an internal observation threshold was introduced for each KPI included in Fig. VI.1 at the start of 2023. These observation thresholds mark the transition point from a comfortable risk situation to a state of heightened alert, whereas the minimum thresholds represent a mandatory internal limit that must be maintained. Both thresholds are elements of the risk appetite statement. They are defined by the Board of Managing Directors of DZ BANK and presented to the Risk Committee of DZ BANK's Supervisory Board for acknowledgement.

With the entry into effect of **IFRS 17** (previous standard: IFRS 4) on January 1, 2023, the accounting treatment of insurance contracts, in particular the treatment of liabilities to policyholders recognized under equity and liabilities, has been changed at R+V. Until this point, a temporary accounting effect had applied, as only R+V's financial instruments that are predominantly recognized on the asset side of the balance sheet were measured at fair value under IFRS 9 as at December 31, 2022. This led to a temporary technical interest-rate risk caused by the strong increase in interest rates in 2022. The result was a negative contribution to earnings and, consequently, a decrease in common equity Tier 1 capital at the level of the DZ BANK banking group as at December 31, 2022.

Fig. VI.2 shows the material regulatory key figures affected by the implementation of IFRS 17, assuming for regulatory purposes that the new standard had already been applied as at December 31, 2022 (column 'Dec. 31, 2022 including effect of IFRS 17'), and, as a comparison, the actual regulatory key figures reported for this balance sheet date. The first regulatory key figures affected by the transition to IFRS 17 were those reported as at June 30, 2023, as these figures are typically based on the most recent adopted annual financial statements or audited interim financial statements. As at the reporting date, DZ BANK had permission from the European Central Bank (ECB) to include its interim profit and, by extension, further dynamic equity components.

The other key figures included in Fig. VI.1 are not affected by the transition to IFRS 17. The coverage ratio for the DZ BANK financial conglomerate and economic capital adequacy are based on the provisions of Solvency II, meaning that both assets and equity and liabilities are already measured at fair value. The LCR and the minimum liquidity surplus are also unaffected by the transition. The LCR involves only a comparison of liquid assets and net outflows, while the minimum liquidity surplus is based on a cash flow analysis that is independent of the accounting treatment.

FIG. VI.1 – LIQUIDITY AND CAPITAL ADEQUACY KPIS

	Measured figure		External minimum target		Internal minimum threshold		Internal observation threshold	
	Jun. 30, 2023	Dec. 31, 2022	2023	2022	2023	2022	2023	2022
LIQUIDITY ADEQUACY								
DZ BANK Group (economic perspective)								
Minimum liquidity surplus (€ billion)[1]	12.8	14.3	0.0	0.0	4.0	4.0	5.0	
DZ BANK banking group (normative perspective)								
Liquidity coverage ratio (LCR, percent)	137.1	145.9	100.0	100.0	110.0	110.0	120.0	
Net stable funding ratio (NSFR, percent)	119.3	122.3	100.0	100.0	106.0	105.0	107.0	
CAPITAL ADEQUACY								
DZ BANK Group (economic perspective)								
Economic capital adequacy (percent)	212.8	222.4	100.0	100.0	120.0	120.0	140.0	
DZ BANK financial conglomerate (normative perspective)								
Coverage ratio (percent)	151.0	151.2	100.0	100.0	113.0	110.0	121.0	
DZ BANK banking group (normative perspective)								
Common equity Tier 1 capital ratio (percent)[2]	15.6	13.7	9.8	9.0	11.3	10.0	12.5	
Tier 1 capital ratio (percent)[2]	17.8	15.2	11.7	10.8	13.3	11.9	14.3	
Total capital ratio (percent)[2]	20.3	18.0	14.1	13.2	15.8	14.3	16.8	
Leverage ratio (percent)[2]	6.0	4.7	3.0	3.0	4.0	4.0	4.3	
MREL ratio as a percentage of risk-weighted assets[3]	41.1	38.3	25.1	25.1	26.8	26.8	27.1	
MREL ratio as a percentage of the leverage ratio exposure	13.8	11.9	7.3	7.3	7.5		7.6	
Subordinated MREL ratio as a percentage of risk-weighted assets[3]	30.5	28.5	23.8	23.8	25.5	25.5	26.0	
Subordinated MREL ratio as a percentage of the leverage ratio exposure	10.2	8.9	7.1	7.1	7.3		7.4	

Not available

1 The measured value relates to the stress scenario with the lowest minimum liquidity surplus.
2 The external minimum targets are the binding regulatory minimum capital requirements. Further details can be found in chapter VI.5.2.2.
3 Calculated as the ratio of the total of regulatory own funds and eligible bail-in-able liabilities to the total risk exposure amount (TREA).

FIG. VI.2 – LIQUIDITY AND CAPITAL ADEQUACY KPIS (NORMATIVE PERSPECTIVE) OF THE DZ BANK BANKING GROUP, TAKING ACCOUNT OF THE IFRS 17 EFFECT AS AT DECEMBER 31, 2022

	Jun. 30, 2023	Dec. 31, 2022 including effect of IFRS 17	Dec. 31, 2022
Liquidity adequacy of the DZ BANK banking group			
Net stable funding ratio (NSFR, percent)	119.3	121.9	122.3
Capital adequacy of the DZ BANK banking group			
Common equity Tier 1 capital ratio (percent)	15.6	15.2	13.7
Tier 1 capital ratio (percent)	17.8	16.7	15.2
Total capital ratio (percent)	20.3	19.2	18.0
Leverage ratio (percent)	6.0	5.7	4.7
MREL ratio as a percentage of risk-weighted assets	41.1	37.7	38.3
MREL ratio as a percentage of the leverage ratio exposure	13.8	12.8	11.9
Subordinated MREL ratio as a percentage of risk-weighted assets	30.5	28.8	28.5
Subordinated MREL ratio as a percentage of the leverage ratio exposure	10.2	9.8	8.9

2.4 Solvency and risk-bearing capacity

The **solvency** of DZ BANK and its subsidiaries was never in jeopardy at any point during the reporting period. They also complied with regulatory requirements for liquidity adequacy. By holding ample liquidity reserves, the group aims to be able to protect its liquidity against any potential crisis-related threats.

The DZ BANK Group remained within its economic **risk-bearing capacity** in the first half of 2023 and also complied with regulatory requirements for capital adequacy on every reporting date.

3 General risk factors

3.1 General risk factors that have not changed materially

The general risk factors that were material to the DZ BANK Group and remained unchanged compared with 2022 are set out below. Details of these risk factors can be found in the 2022 risk report.

Regulatory risk factors: Regulatory capital buffers not adhered to

Macroeconomic risk factors:
- Further escalation of the war in Ukraine; energy shortages
- A further unexpected rise in interest rates
- Inflation – stagflation
- Correction in real estate markets
- Economic policy divergence in the eurozone

In the first half of 2023, there were **no rating downgrades for DZ BANK**.

3.2 General risk factors that have changed materially

Disclosures on the risk factors listed below were published in the 2022 risk report. Due to material changes in the first six months of the year, these disclosures have been updated below.

3.2.1 Switch in interest-rate benchmarks

The publication of US dollar Libor was discontinued by the administrator with effect from June 30, 2023. For the 1-month, 3-month, and 6-month tenors, a non-representative 'synthetic US dollar Libor' will be published until September 30, 2024, which can be used on an interim basis for existing business that is difficult to amend ('tough legacy').

Most of the outstanding transactions and contracts referencing US dollar Libor as well as measurement and risk calculation methods have been amended by DZ BANK as planned and in keeping with relevant deadlines so that they use SOFR-based interest rates and yield curves instead. Certain individual contracts will be switched over after June 30, 2023 but before the end of the current interest period in which the interest rate is still based on US dollar Libor, or alternatively with the help of the synthetic US dollar Libor.

Upon implementation of these steps, the replacement of US dollar Libor at DZ BANK will be complete. Risks associated with this process will therefore no longer apply to the DZ BANK Group going forward.

3.2.2 Geopolitical tensions and resulting trade friction

The risk factors 'Geopolitical tensions' and 'International trade disputes and supply chain problems' described in the 2022 risk report have been combined under the risk factor 'Geopolitical tensions and resulting trade friction' as these are closely interlinked matters.

Some regions of the world are experiencing conflict that extends beyond their borders and is resulting in tensions between superpowers. This is particularly true of Asia.

Attention has recently shifted back to the dispute between **China and Taiwan**, in which Taiwan believes it is at constant risk of invasion. The US reiterated its security guarantees for Taiwan in response to a more aggressive stance from the Chinese government and a series of military maneuvers. As China does not recognize Taiwan's independence, this dispute is likely to continue fueling tensions between China and the US. However, it is difficult to gauge China's willingness to escalate the dispute. There is also potential for conflict between China and Japan due to Chinese territorial claims on islands situated close to Taiwan that are administered by Japan.

Disputes also exist in other regions. Although they currently appear to be contained within these regions, they intersect with geostrategic interests of other countries and, in unfavorable circumstances, could potentially spread to other regions. This is the case for **Iran** and **countries of the former Soviet Union** that remain under Russian influence.

In addition, the protracted dispute on the **Korean peninsula** is being stoked by North Korea's nuclear weapons program and its many military provocations, for example missile testing off the coast of South Korea. Any escalation would directly affect the interests of the superpowers China and the US and could potentially widen into a conflict with global consequences.

These geopolitical tensions can **adversely affect global trade**. In addition to the effects of disrupted supply chains described in chapter V.1 of the outlook, there is a risk of a renewed escalation of trade disputes between the US, China, and the European Union (EU). This could have negative consequences for the global economy, and for the export-dependent German economy in particular. The sanctions imposed on Russia by western countries in response to the war in Ukraine create further potential for tension between the EU and the US on the one hand and, on the other, countries that either fail to implement these sanctions or only partially impose them, for example China. For companies in Germany, restrictions on global trade may, on the one hand, lead to higher import prices and a shortage of base products, and on the other, cause a decline in exports.

The impacts of these geopolitical tensions on **credit risk** in the Bank sector and on **market risk** in the Insurance sector are described in chapter VI.6.4 and chapter VI.13.2 respectively.

3.3 New general risk factors

In the first half of 2023, the **crisis of confidence in the banking market** emerged as a new macroeconomic risk factor that sparked turmoil in the US banking sector and led to the collapse of a number of US regional banks.

The underlying causes were outflows of customer deposits along with unrealized valuation losses on bonds held by affected banks, which were triggered by the sharp rise in interest rates in 2022. In combination, these two effects caused a liquidity squeeze at some of the affected US regional banks. Moreover, in Europe, Credit Suisse fell into financial distress and was taken over by UBS Group.

The situation in the banking markets in the US and Europe has calmed down again somewhat since the flare-up of this crisis of confidence in March 2023. Especially in the US, the exposure of regional banks to commercial real estate constitutes a risk. Rising credit losses in this segment and higher refinancing costs could cause certain further individual US regional banks to fall into distress in the future.

As at the reporting date, the crisis of confidence in the banking sector did not have a material adverse impact on the liquidity adequacy or liquidity risk of the DZ BANK Group. There was no significant impact on credit risk in the Bank sector or market risk in the Insurance sector either.

4 Liquidity adequacy

4.1 Economic perspective

4.1.1 Quantitative variables in liquidity risk

Liquid securities

The available liquid securities have a significant influence on the level of the minimum liquidity surplus. Liquid securities are a component of the **counterbalancing capacity** and are largely held in the portfolios managed by DZ BANK's Group Treasury and Capital Markets Trading divisions or in the portfolios of the treasury units at the subsidiaries of DZ BANK. Only bearer bonds are counted as liquid securities.

Liquid securities comprise highly liquid securities that are suitable for collateralizing funding in private markets, securities eligible as collateral for central bank loans, and other securities that can be liquidated in the one-year forecast period that is relevant for liquidity risk.

Securities are only eligible as liquid securities if they are not pledged as collateral, e.g. for secured funding. Securities that have been borrowed or taken as collateral for derivatives business or in connection with secured funding only become eligible when they are freely transferable. Eligibility is recognized on a daily basis and also takes into account factors such as restrictions on the period in which the securities are freely available.

Liquid securities represent the largest proportion of the counterbalancing capacity and make a major contribution to maintaining solvency in the stress scenarios with defined limits at all times during the relevant forecast period. In the first month, which is a particularly critical period in a crisis, liquid securities are almost exclusively responsible for maintaining solvency in the stress scenarios with defined limits.

Fig. VI.3 shows the liquidity value of the liquid securities that would result from secured funding or if the securities were sold. The total liquidity value as at June 30, 2023 amounted to €26.8 billion (December 31, 2022: €35.4 billion). The decline in liquid securities eligible for GC Pooling resulted from a reduction in reverse repo transactions.

Unsecured short- and medium-term funding

Other than liquid securities, the main factors determining the minimum liquidity surplus are the availability and composition of the sources of funding.

The DZ BANK Group has a highly diversified funding base for operational liquidity. A considerable portion is accounted for by money market activities resulting from the cash-pooling function with the **local cooperative banks**. Under these arrangements, the cooperative banks can invest excess liquidity with DZ BANK at any time. From the perspective of DZ BANK, which does not have any direct retail banking business as it is the central institution, this excess liquidity is treated as indirect retail deposits. Conversely, if the cooperative banks need liquidity, they can obtain it from DZ BANK. This regularly results in a liquidity surplus, which provides one of the main bases for short-term funding in the unsecured money markets.

FIG. VI.3 – LIQUID SECURITIES

€ billion	Jun. 30, 2023	Dec. 31, 2022
Liquid securities eligible for GC Pooling (ECB Basket)[1]	**12.1**	**22.3**
Securities in own portfolio	17.6	16.0
Securities received as collateral	5.5	17.4
Securities provided as collateral	-11.0	-11.1
Liquid securities eligible as collateral for central bank loans	**10.3**	**9.1**
Securities in own portfolio	18.1	16.7
Securities received as collateral	3.7	4.1
Securities provided as collateral	-11.4	-11.7
Other liquid securities	**4.4**	**3.9**
Securities in own portfolio	3.9	3.7
Securities received as collateral	0.5	0.3
Securities provided as collateral	-0.1	-0.1
Total	**26.8**	**35.4**
Securities in own portfolio	39.6	36.4
Securities received as collateral	9.6	21.8
Securities provided as collateral	-22.5	-22.9

1 GC = general collateral, ECB Basket = eligible collateral for ECB funding.

Corporate customers and **institutional customers** are another important source of funding for covering operational liquidity requirements. In the context of liquidity risk, corporate customers are those customers that are not banks and are not classified as institutional customers.
For funding purposes, the management units also issue **money market products based on debt certificates** under a standardized groupwide multi-issuer euro commercial paper program through the offices and branches in Frankfurt am Main, New York, Hong Kong, London, and Luxembourg. DZ BANK also runs a US-dollar-denominated commercial paper program for Frankfurt am Main. Funding on the **interbank market** is not strategically important to the DZ BANK Group.

The range of funding sources in the unsecured money markets is shown in Fig. VI.4. The changes in the composition of the sources of funding compared with December 31, 2022 arose because customers and investors were more focused on diversification than in the previous year due to the interest-rate situation. They mostly related to reallocations from current account deposits to fixed-term deposits. In addition, monetary policy measures implemented by the ECB prompted changes to short-term and medium-term funding arrangements.

FIG. VI.4 – UNSECURED SHORT-TERM AND MEDIUM-TERM FUNDING

€ billion	Jun. 30, 2023	Dec. 31, 2022
Deposits	**83.1**	**98.7**
Deposits of local cooperative banks	48.4	57.3
Current account deposits of other customers	34.7	41.4
Money market borrowing	**79.7**	**57.1**
Central banks, interbank, and customer banks	15.3	9.4
Corporate customers and institutional customers	44.4	33.6
Certificates of deposit/commercial paper	19.9	14.1

Further information on liquidity management and funding can be found in chapter II.5 of the business report.

4.1.2 Risk position

Economic liquidity adequacy is assured if none of the four stress scenarios with defined limits exhibit a negative value for the key risk indicator 'minimum liquidity surplus'. Fig. VI.5 shows the results of measuring liquidity risk. The results are based on a daily calculation and comparison of forward cash exposure and counterbalancing capacity. The values reported are the values that occur on the day on which the liquidity surplus calculated over the forecast period of one year is at its lowest point.

FIG. VI.5 – LIQUIDITY UP TO 1 YEAR IN THE STRESS SCENARIOS WITH DEFINED LIMITS: MINIMUM LIQUIDITY SURPLUSES

	Forward cash exposure		Counterbalancing capacity		Minimum liquidity surplus[1]	
€ billion	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022
Downgrading	-42.9	-39.1	86.3	67.8	43.4	28.7
Corporate crisis	-46.1	-30.2	58.9	44.5	12.8	14.3
Market crisis	-49.1	-32.9	74.8	57.6	25.7	24.7
Combination crisis	-47.8	-31.8	67.4	51.4	19.6	19.6

1 The values with an orange background are the minimum liquidity surplus in the squeeze scenario.

The reduction in the forward cash exposure and the increase in the counterbalancing capacity mainly resulted from maturing targeted longer-term refinancing operations (TLTRO).

The liquidity risk value measured as at June 30, 2023 for the stress scenario with defined limits with the lowest minimum liquidity surplus (squeeze scenario) was €12.8 billion (December 31, 2022: €14.3 billion). The decrease in the minimum liquidity surplus was largely due to a multitude of individual changes in the underlying exposures on which the calculation of the minimum liquidity surplus is based.

The minimum liquidity surplus exceeded the **external minimum target** laid down by the supervisory authorities, the **internal observation threshold**, and the **internal minimum threshold**. The target/threshold values are shown in Fig. VI.1. The **limit** of €1.0 billion (unchanged compared with 2022) was also adhered to.

The minimum liquidity surplus as at June 30, 2023 was positive in the stress scenarios with defined limits that were determined on the basis of risk appetite. This is due to the fact that the counterbalancing capacity was above the cumulative cash outflows on each day of the defined forecast period in every scenario, which indicates that the cash outflows assumed to take place in a crisis could be comfortably covered.

The rise in interest rates during the first half of 2023 led to significant movements in the market for interest-rate derivatives and to funding changes, making the minimum liquidity surplus more volatile.

4.2 Normative perspective

4.2.1 Liquidity coverage ratio

The LCR measures the availability of an adequate buffer in the form of liquid assets that enables an institution to compensate for a possible imbalance between inflows and outflows of cash in a 30-day stress scenario. The LCR is the ratio of liquid assets held ('liquidity buffer') to net cash outflows.

The LCR figure for the DZ BANK banking group can be found in Fig. VI.6.

FIG. VI.6 – LIQUIDITY COVERAGE RATIO AND ITS COMPONENTS

	Jun. 30, 2023	Dec. 31, 2022
Total liquidity buffer (€ billion)	130.1	122.0
Total net liquidity outflows (€ billion)	94.9	83.6
LCR (percent)	**137.1**	**145.9**

The decrease in the LCR from 145.9 percent as at December 31, 2022 to 137.1 percent as at June 30, 2023 was attributable to a decline in excess liquidity cover (calculated by deducting the net liquidity outflows from the liquidity buffer), which was the result of a greater increase in the net liquidity outflows relative to the rise in the liquidity buffer.

The expansion of the liquidity buffer was mainly due to the growth of balances with central banks on the back of higher volumes of unsecured funding from deposits and own issues. Declining operational deposits from the cooperative financial network were replaced by issues of short-dated commercial paper and non-operational deposits, primarily from financial customers. Whereas deposits from financial customers and maturing commercial paper have to be included in cash outflows with a weighting factor of 100 percent, operational deposits from the cooperative financial network are taken into account with a weighting factor of only 25 percent. These shifts within product categories resulted in an increase in the weighted net cash outflows and thus to a negative effect on excess cover. In addition, outflows for committed lines, primarily to banks in the cooperative financial network, increased in the reporting period, which further reduced excess cover.

As at the reporting date, the **external minimum target** laid down by the supervisory authorities, the **internal observation threshold**, and the **internal minimum threshold** were exceeded. The target/threshold values are shown in Fig. VI.1.

4.2.2 Net stable funding ratio

The NSFR is intended to limit mismatches between the maturity structures of assets-side and liabilities-side business. The ratio is the amount of available stable funding (equity and liabilities) relative to the amount of required stable funding (assets-side business). The funding sources are weighted according to their degree of stability and assets are weighted according to their degree of liquidity based on factors defined by the supervisory authority. The NSFR, which has a longer-term focus, complements the LCR, which has a short-term focus.

The NSFR calculated for the DZ BANK banking group is presented in Fig. VI.7.

FIG. VI.7 – NET STABLE FUNDING RATIO AND ITS COMPONENTS

	Jun. 30, 2023	Dec. 31, 2022
Available stable funding (weighted equity and liabilities; € billion)	275.9	269.5
Required stable funding (weighted assets; € billion)	231.3	220.3
Excess cover/shortfall (€ billion)[1]	44.6	49.2
NSFR (percent)	**119.3**	**122.3**

1 Excess cover = positive values, shortfall = negative values.

Excess cover in relation to the NSFR is the difference between the available stable funding and the required stable funding.

The fall in the NSFR from 122.3 percent as at December 31, 2022 to 119.3 percent as at June 30, 2023 was mainly due to a reduction in the excess cover. The decline in excess cover was primarily a result of a sharper rise in the required amount of stable funding due to a rise in loans, especially to banks in the cooperative financial network. On the other hand, there was an increase in sources of stable funding in the form of own issues, which was partially offset by a fall in privileged deposits of the cooperative financial network. The effect of the initial application of IFRS 17 is negligible for the purposes of the NSFR as it is reflected symmetrically on both sides of the balance sheet. Further information on the initial application of IFRS 17 is provided in chapter VI.2.3.

As at the reporting date, the NSFR was above the **internal minimum threshold** and the **internal observation threshold**. The ratio also exceeded the **external minimum target** laid down by the supervisory authorities. The target/threshold values are shown in Fig. VI.1.

5 Capital adequacy

5.1 Economic perspective

The annual recalculation of the overall solvency requirement took place as at December 31, 2022 owing to scheduled changes to the parameters for the risk measurement procedures carried out in the second quarter of 2023 for the Insurance sector on the basis of R+V's 2022 consolidated financial statements and the updating of actuarial assumptions. The recalculation reflects updated measurements of insurance liabilities based on annual actuarial analyses and updates to parameters in the risk capital calculation. Because of the complexity and the amount of time involved, the parameters are not completely updated in the in-year calculation and an appropriate projection is made.

The recalculation led to changes in the available internal capital, key risk indicators, and economic capital adequacy. The figures as at December 31, 2022 given in this risk report have been restated accordingly and are not directly comparable with the figures in the 2022 risk report.

The DZ BANK Group's **available internal capital** as at June 30, 2023 stood at €30,668 million. The comparable figure as at December 31, 2022 was €30,879 million. This decline in available internal capital compared with the end of 2022 resulted primarily from the adjustment of the valuation curves in response to the rise in interest rates in the first half of 2023. In consequence, reserves and liabilities on the balance sheet declined, especially in the Bank sector.

The **limit** derived from the available internal capital and which applied as at June 30, 2023 was €19,698 million (December 31, 2022: €22,215 million).

As at June 30, 2023, **aggregate risk** was calculated at €14,411 million. The comparable figure as at December 31, 2022 was €13,886 million. The increase was primarily driven by higher credit risk and business risk in the Bank sector.

As at June 30, 2023, the **economic capital adequacy ratio** for the DZ BANK Group was calculated at 212.8 percent. The comparable figure as at December 31, 2022 was 222.4 percent. Available internal capital decreased compared with December 31, 2022, whereas aggregate risk increased over the same period. This led to a decline in economic capital adequacy.

As at the reporting date, the economic capital adequacy ratio was above the **external minimum target**, the **internal observation threshold**, and the **internal minimum threshold**. The target/threshold values are shown in Fig. VI.1.

Fig. VI.8 provides an overview of economic capital adequacy and its components.

FIG. VI.8 – ECONOMIC CAPITAL ADEQUACY OF THE DZ BANK GROUP

	Jun. 30, 2023	Dec. 31, 2022
Available internal capital (€ million)[1]	30,668	30,879
Limit (€ million)	19,698	22,215
Aggregate risk (€ million)[1]	14,411	13,886
Economic capital adequacy (percent)[1]	**212.8**	**222.4**

1 Value as at December 31, 2022 after recalculation of R+V's overall solvency requirement. Different values were stated in the 2022 risk report.

The risk capital requirement (Bank sector) and the overall solvency requirement (Insurance sector) also contain any **decentralized capital buffer requirement**. To simplify matters, only the terms 'risk capital requirement' and 'overall solvency requirement' will be used in the remainder of this risk report. These include the decentralized capital buffer requirement.

The limits and risk capital requirements for the **Bank sector**, broken down by risk type, are shown in Fig. VI.9.

FIG. VI.9 – LIMITS AND RISK CAPITAL REQUIREMENTS IN THE BANK SECTOR

	Limit		Risk capital requirement	
€ million	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022
Credit risk	4,988	6,387	3,876	3,766
Equity investment risk	1,281	1,230	1,012	997
Market risk	6,470	6,680	3,781	3,730
Technical risk of a home savings and loan company[1]	820	785	673	698
Business risk[2]	450	280	390	43
Operational risk	1,148	1,112	968	966
Total (after diversification)	**14,218**	**15,380**	**9,986**	**9,485**

1 Including business risk and reputational risk of BSH.
2 Apart from that of BSH, reputational risk is contained in the risk capital requirement for business risk.

Fig. VI.10 sets out the limits and overall solvency requirements for the **Insurance sector**, broken down by risk type, and includes policyholder participation. The definition of the limits and determination of overall solvency requirements take into account the ability to offset deferred taxes against losses (which arises where deferred tax liabilities can be eliminated in the loss scenario). Diversification effects between the risk types are also taken into consideration. Owing to these effects of correlation, the overall solvency requirement and limit for each risk type are not cumulative.

FIG. VI.10 – LIMITS AND OVERALL SOLVENCY REQUIREMENTS IN THE INSURANCE SECTOR

	Limit		Overall solvency requirement	
€ million	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022[1]
Life actuarial risk[2]	1,100	1,200	808	1,060
Health actuarial risk	235	300	207	167
Non-life actuarial risk	2,000	3,000	1,754	1,878
Market risk	3,850	3,880	3,499	3,415
Counterparty default risk	270	350	198	224
Operational risk	750	1,000	653	598
Risks from entities in other financial sectors	150	180	135	135
Total (after diversification)	**4,800**	**6,155**	**4,026**	**3,930**

1 Values after recalculation of the overall solvency requirement. Different values were stated in the 2022 risk report.
2 Reputational risk is implicitly included in the overall solvency requirement for life actuarial risk (lapse risk).

In addition to the figures shown in Fig. VI.9 and Fig. VI.10, the aggregate risk includes **a centralized capital buffer requirement across all types of risk**, which was calculated at €399 million as at June 30, 2023 (December 31, 2022: €470 million). The corresponding **limit** remained unchanged compared with the prior-year figure at €680 million. The decrease in the centralized capital buffer requirement during the first half of 2023 was predominantly due to the annual adjustment of the measurement of the longevity risk resulting from provisions for pensions and other post-employment benefits in the Bank sector to the higher discount rate.

5.2 Normative perspective

5.2.1 DZ BANK financial conglomerate

The DZ BANK financial conglomerate comprises the DZ BANK banking group and the R+V Versicherung AG insurance group. The changes in the coverage ratio and in the own funds and solvency requirements of the DZ BANK financial conglomerate are shown in Fig. VI.11.

FIG. VI.11 – REGULATORY CAPITAL ADEQUACY OF THE DZ BANK FINANCIAL CONGLOMERATE[1]

	Jun. 30, 2023	Dec. 31, 2022[2]
Own funds (€ million)	37,889	36,458
Solvency requirements (€ million)	25,093	24,119
Coverage ratio (percent)	**151.0**	**151.2**

1 The values for the DZ BANK banking group included in the calculations were determined in accordance with the CRR transitional guidance.
2 Final figures. Preliminary figures were stated in the 2022 risk report.

The slight decrease in the coverage ratio calculated for the DZ BANK financial conglomerate from 151.2 percent as at December 31, 2022 to 151.0 percent as at June 30, 2023 was attributable, in particular, to the increase in the solvency requirements. The change in the coverage ratio was attributable to effects in the DZ BANK banking group and in the R+V Versicherung AG insurance group (see also chapters VI.5.2.2 and VI.5.2.3).

The final coverage ratio calculated for the financial conglomerate as at June 30, 2023 was higher than the **external minimum target** laid down by the supervisory authorities, the **internal observation threshold**, and the **internal minimum threshold**. The target/threshold and measurement values are shown in Fig. VI.1.

5.2.2 DZ BANK banking group

Regulatory capital ratios

The regulatory **own funds** of the DZ BANK banking group as at June 30, 2023 determined in accordance with the CRR transitional guidance amounted to a total of €30,628 million (December 31, 2022: €24,719 million). This equated to a rise in own funds of €5,909 million compared with the end of 2022, mainly comprising an increase in common equity Tier 1 capital of €4,867 million and an increase in additional Tier 1 capital of €1,143 million.

The biggest factors contributing to the rise in **common equity Tier 1 capital** from €18,762 million as at December 31, 2022 to €23,628 million as at June 30, 2023 were the initial application of IFRS 17 at R+V at €4,290 million, interim profit of €739 million that was approved by the ECB in accordance with article 26 (2) CRR, taking account of all foreseeable levies and dividends, and the fact that the voluntary capital deduction for non-performing exposures (NPEs) of €144 million was not repeated in the reporting period. Since January 1, 2023, the voluntary deduction for NPEs has been replaced with a higher amount of capital maintained under the Basel Pillar 2 requirement. By contrast, adjustments for effects relating to own credit ratings under regulatory adjustment items increased to €319 million. Regulatory adjustments are adjustments relating to individual accounting-related measurement effects in common equity Tier 1 capital.
Additional Tier 1 capital advanced by €1,143 million, from €2,150 million as at December 31, 2022 to €3,293 million as at June 30, 2023. This increase in additional Tier 1 capital is attributable to a placement of AT1 paper by DZ BANK in 2023.

Risk-weighted assets went up by €13,690 million, from €137,379 million as at December 31, 2022 to €151,069 million as at June 30, 2023, mainly due to the initial application of IFRS 17 and the associated positive effect on the equity-accounted long-term equity investment of DZ BANK in R+V. The rise in risk-weighted assets was partially offset by the fall in capital charges for operational risk and market risk.

As at June 30, 2023, the DZ BANK banking group's **common equity Tier 1 capital ratio** was 15.6 percent, an increase of 1.9 percentage points compared with December 31, 2022 (13.7 percent). The **Tier 1 capital ratio** of 17.8 percent calculated as at the reporting date was 2.6 percentage points higher than the figure as at December 31, 2022 (15.2 percent). The **total capital ratio** also went up, from 18.0 percent as at December 31, 2022 to 20.3 percent as at June 30, 2023.

Fig. VI.12 provides an overview of the DZ BANK banking group's regulatory capital ratios.

FIG. VI.12 – REGULATORY CAPITAL RATIOS[1]

	Jun. 30, 2023	Dec. 31, 2022
Capital		
Common equity Tier 1 capital (€ million)	23,628	18,762
Additional Tier 1 capital (€ million)	3,293	2,150
Tier 1 capital (€ million)	**26,921**	**20,912**
Total Tier 2 capital (€ million)	3,707	3,807
Own funds (€ million)	**30,628**	**24,719**
Risk-weighted assets		
Credit risk including long-term equity investments (€ million)	135,630	119,283
Market risk (€ million)	6,222	7,369
Operational risk (€ million)	9,217	10,727
Total (€ million)	**151,069**	**137,379**
Capital ratios		
Common equity Tier 1 capital ratio (percent)	15.6	13.7
Tier 1 capital ratio (percent)	17.8	15.2
Total capital ratio (percent)	20.3	18.0

1 In accordance with the CRR transitional guidance.

Regulatory minimum capital requirements specified by the SREP

The minimum capital requirements that the DZ BANK banking group has to comply with in 2023 under the Supervisory Review and Evaluation Process for Basel Pillar 2 (SREP) comprise those components of Pillar 1 laid down as mandatory by law and those individually specified by the banking supervisor. Institution-specific requirements under the additional capital requirements in Pillar 2, determined in the outcome of the SREP conducted for the DZ BANK banking group in 2022, also have to be satisfied. In this process, the banking supervisor specifies a mandatory add-on (**Pillar 2 requirement**) that is factored into the external minimum targets for the capital ratios and into the basis of calculation used to determine the threshold for the maximum distributable amount (MDA). Distributions are restricted if capital falls below the MDA threshold.

The mandatory minimum capital requirements relevant to the DZ BANK banking group under the SREP, and their components, are shown in Fig. VI.13.

FIG. VI.13 – REGULATORY MINIMUM CAPITAL REQUIREMENTS OF THE DZ BANK BANKING GROUP

Percent	2023	2022
Minimum requirement for common equity Tier 1 capital	4.50	4.50
Additional Pillar 2 capital requirement	1.02	0.96
Capital conservation buffer	2.50	2.50
Countercyclical capital buffer[1]	0.66	0.05
Systemic risk buffer[1]	0.16	
O-SII capital buffer	1.00	1.00
Mandatory minimum requirement for common equity Tier 1 capital	**9.84**	**9.00**
Minimum requirement for additional Tier 1 capital	1.50	1.50
Additional Pillar 2 capital requirement	0.34	0.32
Mandatory minimum requirement for Tier 1 capital	**11.68**	**10.82**
Minimum requirement for Tier 2 capital[2]	2.00	2.00
Additional Pillar 2 capital requirement	0.46	0.43
Mandatory minimum requirement for total capital	**14.13**	**13.25**

Not relevant

1 The values for the countercyclical capital buffer and the systemic risk buffer are recalculated at each reporting date. Unlike the other reported values, which apply to the entire financial year, the countercyclical capital buffers shown for 2023 and 2022 relate solely to the reporting dates. The systemic risk buffer was not relevant in 2022.
2 The minimum requirement can also be satisfied with common equity Tier 1 capital.

Compared with December 31, 2022, the minimum capital requirements for 2023 were up by 0.88 percentage points as at June 30, 2023. This is primarily due to an increase in the additional capital requirements in Pillar 2 from January 1, 2023 and an increase in the countercyclical capital buffer and the introduction of the systemic risk buffer from February 1, 2023. In a general administrative act dated January 31, 2022, the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) [German Federal Financial Supervisory Authority] raised Germany's countercyclical capital buffer rate from 0 percent to 0.75 percent. In a general administrative act dated March 30, 2022, BaFin then introduced a systemic risk buffer for the domestic residential real estate sector of 2 percent of the risk-weighted assets attributable to these exposures.

Compliance with the minimum capital requirements

The **external minimum targets**, **internal observation thresholds**, and **internal minimum thresholds** applicable to the DZ BANK banking group for the common equity Tier 1 capital ratio, the Tier 1 capital ratio, and the total capital ratio were exceeded as at June 30, 2023. The threshold values are shown in Fig. VI.1. The external minimum target values are shown in Fig. VI.13.

Leverage ratio

The **leverage ratio** of the DZ BANK banking group determined in accordance with the CRR transitional guidance went up by 1.3 percentage points from 4.7 percent as at December 31, 2022 to 6.0 percent as at June 30, 2023. This was mainly due to a sharp rise in common equity Tier 1 capital in connection with the implementation of IFRS 17 at R+V. The €9.9 billion increase in the total exposure over the same period had a mitigating effect on the rise in the leverage ratio.

The requirements applicable to the DZ BANK banking group – the **external minimum target**, the **internal observation threshold**, and the **internal minimum threshold** – were all exceeded as at the reporting date. The target/threshold values are shown in Fig. VI.1.

MREL ratios

The **MREL ratio as a percentage of risk-weighted assets** is the ratio of the total of the regulatory own funds of the DZ BANK banking group and the eligible external MREL liabilities of DZ BANK to the total risk exposure amount (risk-weighted assets) of the DZ BANK banking group. The MREL ratio as a percentage of risk-weighted assets measured for the DZ BANK banking group was 41.1 percent as at June 30, 2023 (December 31, 2022: 38.3 percent). The rise in this key figure compared with the end of 2022 was attributable to a rise in senior preferred liabilities of €2,182 million and growth in own funds of €5,909 million. As at June 30, 2023, the MREL volume stood at €62,105 million, an increase of €9,465 million compared with December 31, 2022.

Since January 1, 2023, the **MREL ratio as a percentage of the leverage ratio exposure** has been used alongside the MREL ratio as a percentage of risk-weighted assets for the purposes of managing the DZ BANK banking group. This MREL ratio is the ratio of the total of the regulatory own funds of the DZ BANK banking group and the eligible external, subordinated MREL liabilities of DZ BANK to the leverage ratio exposure of the DZ BANK banking group. As at June 30, 2023, the MREL ratio as a percentage of the leverage ratio exposure was 13.8 percent (December 31, 2022: 11.9 percent). The rise in this ratio was attributable to a rise in the MREL volume.

The **external minimum targets**, **internal observation thresholds**, and **internal minimum thresholds** applicable to the two MREL ratios were exceeded as at June 30, 2023. The target/threshold values and measured values are shown in Fig. VI.1.

Subordinated MREL ratios

The **subordinated MREL ratio as a percentage of risk-weighted assets** is the ratio of the total of the regulatory own funds of the DZ BANK banking group and the eligible external, subordinated MREL liabilities of DZ BANK to the total risk exposure amount (risk-weighted assets) of the DZ BANK banking group. As at June 30, 2023, this key figure stood at 30.5 percent (December 31, 2022: 28.5 percent). The rise in the subordinated MREL ratio as a percentage of risk-weighted assets was predominantly driven by the substantial growth of the subordinated volume, which – in turn – was mainly attributable to an increase of €1,909 million in the portfolio of senior non-preferred liabilities and an increase of €5,909 million in own funds.

Since January 1, 2023, the **subordinated MREL ratio as a percentage of the leverage ratio exposure** has been used alongside the subordinated MREL ratio as a percentage of risk-weighted assets for the purposes of to managing the DZ BANK banking group. It is the ratio of the total of the regulatory own funds of the DZ BANK banking group and the eligible external, subordinated MREL liabilities of DZ BANK to the leverage ratio exposure of the DZ BANK banking group. As at June 30, 2023, the subordinated MREL ratio as a percentage of the leverage ratio exposure was 10.2 percent (December 31, 2022: 8.9 percent). The rise in this ratio was also attributable to the marked increase in the subordinated volume.

The **external minimum targets**, **internal observation thresholds**, and **internal minimum thresholds** applicable to the two subordinated MREL ratios were exceeded as at June 30, 2023. The target/threshold values and measured values are shown in Fig. VI.1.

5.2.3 R+V Versicherung AG insurance group

The regulatory solvency requirements for insurance companies and insurance groups provide a means of evaluating the overall risk position in the R+V Versicherung AG insurance group. The R+V Versicherung AG insurance group met the solvency requirements under Solvency II as at June 30, 2023.

The projections applied in the internal planning show that the R+V Versicherung AG insurance group's solvency ratio will continue to exceed the solvency requirement as at December 31, 2023.

Bank sector

6 Credit risk

6.1 Overview of the credit risk situation

Economic conditions remained challenging in the first half of 2023. This was due to a variety of factors, including continuing interest-rate increases, persistent inflation, and adverse macroeconomic effects arising from the war in Ukraine, the China-Taiwan conflict, and disrupted supply chains. In addition, confidence in the banking sector was shaken, especially in the first quarter of 2023, by several smaller US banks defaulting and Credit Suisse falling into financial distress.

The credit risk situation of the entities in the Bank sector was not materially impacted despite these unfavorable macroeconomic conditions. The exposure in the credit portfolios particularly affected by acute global crises (see chapter VI.6.4) was modest as at the reporting date, and the impairment requirement that emerged in the first six months of 2023 was at a moderate level. Changes in the credit portfolio will be monitored closely in the second half of the financial year, especially in view of these conditions.

6.2 Lending volume

6.2.1 Asset class structure of the credit portfolio

The reporting to the Board of Managing Directors on concentrations of credit risk includes a presentation of the credit portfolio broken down by asset class. This is done by dividing the credit portfolio into business-related homogeneous segments on the basis of characteristics such as industry code to reflect the sector, product type, and the rating system used to determine the credit rating. The characteristics are selected in such a way that the segments are subject to uniform risk drivers.

In its role as central institution for the cooperative financial network, DZ BANK provides funding for the entities in the Bank sector and for the cooperative banks. For this reason, the cooperative banks, which are assigned to the asset class **entities within the cooperative financial network**, account for one of the largest loans and receivables items in the group's credit portfolio.

DZ BANK also supports the cooperative banks in the provision of larger-scale funding to corporate customers. Corporate banking exposures relate to business with commercial customers, which is assigned mainly to one of the following asset classes: corporates, commercial real estate customers, and asset-based lending / project finance. The syndicated business resulting from the corporate customer lending business, the direct business of DZ BANK, the real estate lending business of DZ HYP and BSH, and DZ HYP's local authority lending business determine the asset-class breakdown for the remainder of the portfolio.

The **total lending volume** increased by 3 percent in the first half of the year, from €447.7 billion as at December 31, 2022 to €462.9 billion as at June 30, 2023. The rise in the lending volume was mainly due to an increase in volume in the 'entities within the cooperative financial network' and 'corporates' asset classes, which went up by €11.0 billion and €3.3 billion respectively compared with the end of 2022. DZ BANK accounted for most of the increase, which was driven by its lending business (primarily loans and money market lending) with entities in the cooperative financial network. Volumes in the Corporate Banking and Structured Finance divisions grew as well.

As at June 30, 2023, a significant proportion (40 percent) of the lending volume was concentrated in the financial sector (December 31, 2022: 39 percent). In addition to the local cooperative banks, the borrowers in this customer segment comprised banks from other sectors of the banking industry and other financial institutions.

Fig. VI.14 shows the breakdown of the credit portfolio by asset class.

FIG. VI.14 – BANK SECTOR: LENDING VOLUME, BY ASSET CLASS

€ billion	Jun. 30, 2023	Dec. 31, 2022
Entities within the cooperative financial network	143.9	132.9
Financials	43.3	42.7
Corporates	79.4	76.1
Asset-based lending/project finance	12.1	11.9
Public sector	36.1	36.0
Real estate (commercial and retail customers)	118.5	119.0
Retail business (excluding real estate customers)	18.0	18.0
ABSs and ABCPs[1]	8.9	8.5
Other	2.6	2.7
Total	**462.9**	**447.7**

1 ABSs = asset-backed securities, ABCPs = asset-backed commercial paper.

6.2.2 Geographical structure of the credit portfolio (excluding Germany)

Fig. VI.15 shows the geographical distribution of the credit portfolio by country group. Borrowers based in Germany are not included in this breakdown. The relevant country for the assignment to a country group is the one in which the economic risk arises. As at June 30, 2023, 67 percent of the total lending outside Germany was concentrated in Europe (December 31, 2022: 66 percent).

FIG. VI.15 – BANK SECTOR: LENDING VOLUME, BY COUNTRY GROUP

€ billion	Jun. 30, 2023	Dec. 31, 2022
Europe	53.4	50.3
of which: eurozone	33.5	31.5
North America	14.7	14.0
Central America	0.2	0.2
South America	1.0	1.0
Asia	7.5	7.3
Africa	1.2	1.3
Other	2.1	2.2
Total	**80.1**	**76.4**

6.2.3 Residual maturity structure of the credit portfolio

The breakdown of the credit portfolio by residual maturity as at June 30, 2023 presented in Fig. VI.16 shows that the lending volume had grown by €6.9 billion in the **short-term maturity band**, by €4.2 billion in the **medium-term maturity band**, and by €4.0 billion in the **long-term maturity band** compared with December 31, 2022. These increases are mainly attributable to DZ BANK.

FIG. VI.16 – BANK SECTOR: LENDING VOLUME, BY RESIDUAL MATURITY

€ billion	Jun. 30, 2023	Dec. 31, 2022
≤ 1 year	120.1	113.2
> 1 year to ≤ 5 years	116.7	112.4
> 5 years	226.1	222.1
Total	**462.9**	**447.7**

6.2.4 Rating structure of the credit portfolio

The proportion of the total lending volume accounted for by rating classes 1A to 3A (investment grade) remained unchanged at 87 percent between December 31, 2022 and June 30, 2023. Rating classes 3B to 4E (non-investment grade) represented 11 percent as at the reporting date, which was also unchanged compared with the end of 2022. Defaults, represented by rating classes 5A to 5E, accounted for less than 1 percent of the total lending volume as at June 30, 2023, and thus held steady compared with the end of 2022 as well.

Fig. VI.17 shows the lending volume by rating class according to the VR credit rating master scale.

FIG. VI.17 – BANK SECTOR: LENDING VOLUME, BY INTERNAL RATING CLASS

€ billion		Jun. 30, 2023	Dec. 31, 2022
Investment grade	1A	31.5	29.5
	1B	6.9	8.5
	1C	160.3	146.6
	1D	11.1	13.2
	1E	17.7	18.1
	2A	18.1	19.4
	2B	27.8	26.6
	2C	27.6	28.5
	2D	34.1	32.9
	2E	39.6	41.2
	3A	29.7	26.8
Non-investment grade	3B	15.9	14.7
	3C	11.7	11.9
	3D	8.9	8.6
	3E	4.6	4.2
	4A	2.8	2.3
	4B	3.8	3.7
	4C	1.7	1.2
	4D	0.4	0.9
	4E	2.9	3.3
Default		3.2	3.1
Not rated		2.6	2.6
Total		**462.9**	**447.7**

6.2.5 Collateralized lending volume

Fig. VI.18 shows the breakdown of the collateralized lending volume at overall portfolio level by type of collateral.

FIG. VI.18 – BANK SECTOR: COLLATERAL VALUE, BY TYPE OF COLLATERAL

€ billion	Jun. 30, 2023	Dec. 31, 2022
Guarantees, indemnities, risk subparticipation	7.4	7.4
Credit insurance	5.8	5.6
Land charges, mortgages, registered ship and aircraft mortgages	114.8	116.2
Pledged loans and advances, assignments, other pledged assets	2.2	2.0
Financial collateral	2.0	1.4
Other collateral	0.3	0.4
Total collateral	**132.5**	**133.0**
Lending volume	393.7	381.4
Uncollateralized lending volume	**261.2**	**248.3**
Collateralization rate (percent)	**33.7**	**34.9**

In the case of **traditional lending business**, lending volume is generally reported as a gross figure before the application of any offsetting agreements, whereas the gross lending volume in the **derivatives and money market business** is shown on a netted basis. In the derivatives and money market business, collateral values are relatively low and are in the form of personal and financial collateral. In the **securities business**, there is generally no further collateralization to supplement the collateral already taken into account. For this reason, securities business is not included in the presentation of the collateralized lending volume.

The total collateral value fell from €133.0 billion as at December 31, 2022 to €132.5 billion as at June 30, 2023. The collateralization rate was 33.7 percent as at the reporting date (December 31, 2022: 34.9 percent).

6.2.6 Volume of closely monitored and non-performing loans

Closely monitored loans and forborne exposure

Fig. VI.19 shows the volume of loans on the three monitoring lists – **yellow list**, **watchlist**, and **default list** – and the forborne exposure also included in these lists. A further item in the table shows the exposure managed as forborne but not subject to intensified loan management, i.e. not included in the lists.

The **closely monitored lending volume** fell by 2 percent from December 31, 2022 to June 30, 2023. This decline resulted from exposures being removed from the closely monitored category. In addition, certain individual exposures were shifted from the watchlist to the yellow list.

As at June 30, 2023, the total **forborne exposure** was roughly on a par with the figure as at December 31, 2022. The rise in forborne exposures included on the yellow list from €151 million as at December 31, 2022 to €423 million as at June 30, 2023 was mainly due to transfers from the watchlist to the yellow list.

These changes are attributable to improvements in the financial circumstances of affected borrowers and the associated rating upgrades.

FIG. VI.19 – BANK SECTOR: CLOSELY MONITORED LENDING VOLUME AND FORBORNE EXPOSURE

€ million	Jun. 30, 2023	Dec. 31, 2022
Yellow list lending volume	**3,968**	**3,458**
of which: forborne exposure	423	151
Watchlist lending volume	**5,342**	**6,221**
of which: forborne exposure	1,036	919
Default list lending volume	**3,191**	**3,124**
of which: forborne exposure	1,321	1,536
Total lending volume on monitoring lists	**12,501**	**12,804**
of which: forborne exposure	2,780	2,606
Off-monitoring-list forborne exposure	**307**	**394**
Total forborne exposure[1]	**3,087**	**2,999**

1 Both on and off the monitoring lists.

Non-performing loans

As at June 30, 2023, the volume of non-performing loans (NPL) had risen to €3.2 billion from €3.1 billion as at December 31, 2022. Against the backdrop of a slightly higher lending volume, the NPL ratio remained unchanged compared with the end of 2022 at 0.7 percent.

Fig. VI.20 shows key figures relating to the volume of non-performing loans.

FIG. VI.20 – BANK SECTOR: KEY FIGURES FOR NON-PERFORMING LOANS

	Jun. 30, 2023	Dec. 31, 2022
Total lending volume (€ billion)	462.9	447.7
Volume of non-performing loans (€ billion)[1]	3.2	3.1
Balance of loss allowances (€ billion)[2]	1.4	1.3
Coverage ratio (percent)[3]	76.2	75.7
NPL ratio (percent)[4]	0.7	0.7

1 Volume of non-performing loans excluding collateral.
2 IFRS specific loan loss allowances at stage 3, including provisions.
3 Loss allowances as specified in footnote 2, plus collateral, as a proportion of the volume of non-performing loans.
4 Volume of non-performing loans as a proportion of total lending volume.

6.3 Credit portfolios particularly affected by negative macroeconomic conditions

The following sections describe credit portfolios in which the effects of negative macroeconomic conditions were more noticeable than in the rest of the credit portfolios. The figures presented below are included in the disclosures for the lending volume as a whole (see chapter VI6.2.).

6.3.1 Economic policy divergence in the eurozone

As at June 30, 2023, loans and advances to borrowers in the countries directly affected by the economic policy divergence in the eurozone amounted to €3,687 million (December 31, 2022: €3,660 million). They mainly consisted of securities transactions.

Fig. VI.21 shows the country breakdown of the exposures.

FIG. VI.21 – BANK SECTOR: LOANS AND ADVANCES TO BORROWERS IN EUROZONE PERIPHERY COUNTRIES[1]

€ million	Jun. 30, 2023	Dec. 31, 2022
Portugal	197	192
Italy	1,425	1,374
Spain	2,065	2,093
Total	**3,687**	**3,660**

1 Unlike the other presentations of lending volume, traditional lending business in this case includes long-term equity investments.

6.3.2 Structural change in the automotive sector

The automotive sector has been in a state of upheaval for a number of years and faces certain challenges compared with other industries, such as low profit margins and a need for high levels of capital. The European Parliament's decision to end the sale of passenger cars with internal combustion engines by 2035 is likely to further accelerate the switch to electric vehicles and keep the pressure on the industry to transform. In addition, car manufacturers' production operations were impacted by supply chain disruptions in 2022 that were caused primarily by shortages of base products (especially semiconductors) and the war in Ukraine. Increased costs for commodities, energy, and transportation also weighed heavily on the industry.

Since the end of 2022, supply chains have been stabilizing and upward cost pressures have been easing. As a result, global passenger car sales rose significantly in the first half of 2023. However, there are now mounting indications that this recovery will lose momentum in the second half of the reporting year due to weakening demand in connection with the macroeconomic environment and persistently high inflation.

The volume of lending in DZ BANK's automotive finance portfolio came to €5.3 billion as at June 30, 2023 (December 31, 2022: €5.0 billion). This portfolio includes loans to automotive suppliers, which are analyzed separately in chapter VI.6.5.3.

6.3.3 Commercial real estate finance

Business model and macroeconomic risks

DZ HYP's lending business with corporates includes financing for hotels, office real estate, department stores, shopping malls, and inner-city commercial properties that are mainly used for retail/wholesale businesses not offering day-to-day essentials (retail/wholesale segment). In addition, DZ HYP also provides financing to property developers and project developers.

Since 2020, a growing number of general and specific sources of uncertainty have been identified for these asset classes in view of the COVID-19 pandemic and related government-imposed safeguards, structural changes of a potentially long-term nature, and the negative macroeconomic conditions described in chapter VI.3.1. So far, the affected credit portfolios have shown themselves to be crisis-resistant overall due to their conservative finance structures, the quality of the real estate, and borrower credit ratings. Most of the uncertainties that have so far arisen in connection with the pandemic have not materialized. Moreover, risks that have applied in recent years are now reflected in cash flows and property valuations.

Persistently high inflation rates and challenging macroeconomic conditions, as well as the negative forecasts associated with these, are currently creating uncertainty for the aforementioned asset classes. These external conditions entail the risk that already agreed tenancies as well as new tenancies may not go ahead as expected. Significant interest-rate hikes have also caused yields in the real estate markets to go up, which has led to as yet mostly moderate impairment losses and higher refinancing costs. The sustained stabilization of interest rates and a number of other positive changes, such as improvements along supply chains, a decline in freight costs and commodity prices, and stable conditions in the service sector, are required for a return to a normal level.

Risks specific to individual real estate finance segments

Hotel real estate carries the risk that comparatively lower real incomes paired with generally higher costs can result in a reduction in travel activity, as travel is predominantly non-essential.

For **office real estate**, uncertainties arise because a large proportion of actors in an economic system create their value added in offices. A decline in economic output and changes in the world of work (new concepts and remote working) can therefore potentially lead to lower demand for office space.

Department stores, shopping malls, and inner-city commercial properties that are mainly used for retail/wholesale businesses not offering day-to-day essentials are exposed to specific risks associated with falling levels of real income in an environment of generally higher costs. This discrepancy makes consumers generally less inclined to spend and, above all, curbs their appetite for larger purchases.

Transaction levels in the **property development and project development** market are currently very muted. Yields and prices have not yet settled into a new balance. In light of the uncertain macroeconomic environment, investors and tenants are taking a wait-and-see approach.

Lending volume by finance segment

As at June 30, 2023, the volume of corporate loans extended by DZ HYP amounted to a total of €46.4 billion (December 31, 2022: €46.8 billion). Of this total, the following amounts were attributable to the aforementioned asset classes as at the reporting date (figures as at December 31, 2022 shown in parentheses):

- Hotel financing: €2.3 billion (€2.4 billion)
- Office real estate financing: €14.7 billion (€14.6 billion)
- Department store financing: €0.5 billion (€0.6 billion)
- Shopping mall financing: €2.7 billion (€2.7 billion)
- Financing for inner-city commercial properties mainly used for retail/wholesale businesses not offering day-to-day essentials: €0.8 billion (€0.8 billion)
- Property developer and project developer financing: €5.0 billion (€5.1 billion)

Financing for property developers and project developers also includes certain portions of the financing for the aforementioned asset classes, in particular the financing of office real estate (June 30, 2023: €2.5 billion).

6.4 Credit portfolios particularly affected by acute global crises

The following sections describe credit portfolios in which the effects of geopolitical tensions were more noticeable than in the rest of the credit portfolios. The figures presented below are included in the disclosures for the lending volume as a whole (see chapter VI6.2.).

6.4.1 War in Ukraine

The exposure of Bank sector entities in countries directly affected by this war (Russia, Ukraine, and Belarus) totaled €674 million as at June 30, 2023 (December 31, 2022: €702 million). As at the reporting date, this subportfolio accounted for less than 1 percent of the Bank sector's total lending volume, as had been the case at the end of 2022. The exposure mainly comprised export and trade finance as well as one project finance transaction.

Taking account of recoverable collateral, the net lending volume was €115 million as at June 30, 2023 (December 31, 2022: €139 million). The collateral predominantly consists of cover provided by export credit agencies.
Fig. VI.22 shows the breakdown of the net lending volume by country affected.

FIG. VI.22 – BANK SECTOR: NET LENDING VOLUME IN COUNTRIES AFFECTED DIRECTLY BY THE WAR IN UKRAINE

€ million	Jun. 30, 2023	Dec. 31, 2022
Russia	112	130
Belarus	-	6
Ukraine	2	2
Total	**115**	**139**

6.4.2 Dispute between China and Taiwan

In light of the simmering dispute between China and Taiwan, the credit exposure of the entities in the Bank sector to borrowers based in Taiwan is being monitored very closely. As yet, no material deterioration in credit quality resulting from the dispute with China has been identified.

The net lending volume directly relating to the countries involved in this dispute was broken down as follows as at the reporting date (figures as at December 31, 2022 shown in parentheses):
- China: €1,105 million (€923 million)
- Taiwan: €131 million (€80 million)

6.5 Credit portfolios with increased risk content

The credit portfolios with increased risk content are analyzed separately because of their significance for the risk position. The figures presented below are included in the above analyses of the total lending volume (see chapter VI.6.2).

6.5.1 Finance for cruise ships

Following extensive corporate actions, the financed shipping companies all have a comfortable liquidity buffer. Business operations were very strong in the first half of 2023. The latest capacity utilization and booking figures are encouraging and have, in some cases, climbed above pre-pandemic figures from 2019. The outlook for the second half of the year is positive. However, risks to the economic recovery of these shipping companies continue to arise from higher fuel prices and higher interest rates and repayments, especially repayments owed in connection with temporary suspensions of repayments granted between April 2020 and March 2022 due to the pandemic. Some of these temporarily suspended repayments have already been made.

Cruise ship finance in the Bank sector is mainly brought together under **DZ BANK**. As at June 30, 2023, the volume of cruise ship finance amounted to €1,007 million (December 31, 2022: €1,052 million). Collateral worth €658 million was available as at June 30, 2023 (December 31, 2022: €722 million). Of this amount, €588 million was attributable to export credit insurance (December 31, 2022: €652 million).

6.5.2 Finance for cruise ship building

A distinction is made between cruise ship finance and the financing of cruise ship building. This segment, which only affects **DZ BANK** in the Bank sector, is still undergoing a large-scale transformation process. In consultation with the clients commissioning the construction of cruise ships, a base level of capacity utilization has been secured for the period until 2025/2026 by spreading out orders on hand. Substantial reductions in production capacity and headcount are planned in order to counteract low capacity utilization over the medium term. Renegotiations with clients helped to offset the impact of rising energy and procurement costs for the most part. Funding for the cost of the transformation process in this industry is backed by government guarantees. On the back of a number of challenging years, the credit quality of customers in this business segment remains troubled. This will likely still be the case in the second half of 2023, meaning that finance for cruise ship building continues to be classified as a portfolio with increased risk content.

The lending volume related to the financing of cruise ship building stood at €297 million as at June 30, 2023 (December 31, 2022: €332 million). Collateral worth €214 million was available as at June 30, 2023 (December 31, 2022: €181 million). Of this amount, €145 million was attributable to export credit insurance (December 31, 2022: €155 million).

6.5.3 Finance for automotive suppliers

Historical data shows that the automotive supply industry is characterized by high capital requirements but comparatively low margins and a relatively weak competitive position due to oligopoly-style structures in the automotive manufacturing industry.

The past year has highlighted that, compared with their suppliers, car manufacturers are significantly better positioned to be able to adapt to global supply chain disruptions, for example by changing their product mix. Financial performance in the automotive supply industry hinges primarily on the number of manufactured vehicles, which in the first half of 2023 was well below its record level from 2017.

In addition to the factors described in chapter VI.6.3.2 that apply to the automotive sector as a whole, conditions remain particularly challenging for automotive suppliers in Germany. Over the medium term, Asia is expected to be a significant source of growth stimulus in the coming years, even though growth rates in China are slowing. As new technologies and the demand associated with these often evolve in a very dynamic and unpredictable manner, such opportunities for growth also come with significant risks. Geopolitical tensions can have an additional adverse impact on the global division of labor in the automotive sector. An escalation of trade frictions with China, in particular, could have significant negative consequences for car manufacturers as well as for automotive suppliers. Against this backdrop, finance for automotive suppliers is now classified as a portfolio with increased risk content.

As at June 30, 2023, loans to companies in the automotive supply industry, which fall into DZ BANK’s ‘corporates’ asset class, totaled €3,293 million (December 31, 2022: €3,113 million). Collateral of €84 million was available as at June 30, 2023 (December 31, 2022: €128 million).

6.6 Risk position

6.6.1 Risks in the entire credit portfolio

The risk capital requirement for credit risk is based on a number of factors, including the size of single-borrower exposures, individual ratings, collateral, and the industry sector of each exposure.

As at June 30, 2023, the **risk capital requirement** amounted to €3,876 million (December 31, 2022: €3,766 million) with a **limit** of €4,988 million (December 31, 2022: €6,387 million). A scheduled review and adjustment of credit risk limits was carried out at the start of the year. At the level of the DZ BANK Group, the limits were reduced by €1,399 million to €4,988 million overall, in accordance with the risk limit utilization.

Fig. VI.23 shows the credit value-at-risk together with the average probability of default and expected loss.

FIG. VI.23 – BANK SECTOR: FACTORS DETERMINING THE CREDIT VALUE-AT-RISK

	Jun. 30, 2023	Dec. 31, 2022
Average probability of default (percent)	0.3	0.3
Expected loss (€ million)	464	460
Credit value-at-risk (€ million)	3,876	3,766

In the analysis of **individual concentrations** in the **Bank sector**, the 20 counterparties associated with the largest credit value-at-risk accounted for 25 percent of the total credit value-at-risk as at June 30, 2023 (December 31, 2022: 28 percent). These counterparties largely comprised borrowers from the financial sector (including the cooperative banks) with investment-grade ratings, individual borrowers with non-investment-grade ratings, and eurozone periphery countries.

6.6.2 Risks in the credit portfolios with increased risk content

The risk capital requirement for **Bank sector** credit portfolios exposed to increased credit risk is shown in Fig. VI.24.

FIG. VI.24 – BANK SECTOR: CREDIT VALUE-AT-RISK[1] FOR CREDIT PORTFOLIOS WITH INCREASED RISK CONTENT

€ million	Jun. 30, 2023	Dec. 31, 2022
Finance for cruise ships	7	14
Finance for cruise ship building	2	3
Finance for automotive suppliers	33	32

1 Excluding decentralized capital buffer requirement.

The reduction in credit value-at-risk for **finance for cruise ships** was mainly attributable to improved economic conditions in the industry and the resulting rating upgrade of one cruise ship operator.

7 Equity investment risk

The **carrying amounts of long-term equity investments** relevant for the measurement of equity investment risk amounted to €2,902 million as at June 30, 2023 (December 31, 2022: €2,858 million).

The **risk capital requirement** for equity investment risk was calculated to be €1,012 million as at June 30, 2023 (December 31, 2022: €997 million). The corresponding **limit** was €1,281 million (December 31, 2022: €1,230 million).

8 Market risk

8.1 Value-at-risk

Fig. VI.25 shows the average, maximum, and minimum values-at-risk measured over the first half of the year, including a further breakdown by type of market risk. Furthermore, Fig. VI.26 shows the change in market risk by trading day in the reporting period. In both figures, the value-at-risk relates to the **trading and banking books for regulatory purposes**.

The value-at-risk for the **interest-rate risk in the banking book for regulatory purposes** amounted to €51 million as at June 30, 2023 (December 31, 2022: €54 million).
The slight fall in value-at-risk in the banking book for regulatory purposes resulted mainly from minor adjustments to the composition of the portfolio in the course of ordinary business activities.

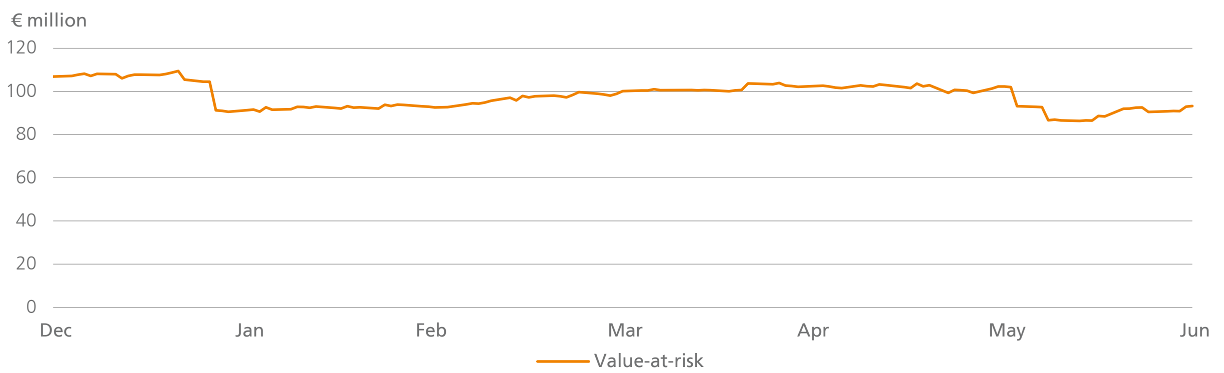
In the Bank sector, the value-at-risk fell to €93 million as at June 30, 2023 (December 31, 2022: €107 million). This was mainly because certain market data scenarios were no longer included in the rolling observation period for the historical simulation.

FIG. VI.25 – BANK SECTOR: CHANGE IN MARKET RISK BY RISK SUBTYPES[1, 2]

€ million	Interest-rate risk	Spread risk	Equity risk[3]	Currency risk	Commodity risk	Diversification effect [4,5]	Aggregate risk
Jun. 30, 2023	**50**	**73**	**10**	**3**	**2**	**-45**	**93**
Average	55	73	13	3	3	-48	98
Maximum	69	75	16	5	3	-59	109
Minimum	42	69	10	1	2	-37	86
Dec. 31, 2022	**53**	**70**	**11**	**3**	**3**	**-34**	**107**

1 The disclosures relate to general market risk and spread risk. Asset-management risk is not included.
2 Value-at-risk with 99.0% confidence level, 1-day holding period, 1-year observation period, based on a central market risk model for the Bank sector. Concentrations and effects of diversification were taken fully into account when calculating the risks.
3 Including funds, if not broken down into constituent parts.
4 Total effects of diversification between the types of market risk for all consolidated management units.
5 The minimum and maximum amounts for the different subcategories of market risk may stem from different points in time during the reporting period. Consequently, they cannot be aggregated to produce the minimum or maximum aggregate risk due to the diversification effect.

FIG. VI.26 – BANK SECTOR: CHANGE IN MARKET RISK BY TRADING DAY[1]



1 Value-at-risk with 99.0% confidence level, 1-day holding period, 1-year observation period, based on a central market risk model for the Bank sector. Concentrations and effects of diversification were taken fully into account when calculating the risks.

8.2 Risk capital requirement

As at June 30, 2023, the risk capital requirement for **market risk** amounted to €3,781 million (December 31, 2022: €3,730 million) with a limit of €6,470 million (December 31, 2022: €6,680 million).

The Bank sector's risk capital requirement encompasses the **asset-management risk of UMH**. Asset-management risk as at June 30, 2023 amounted to €256 million (December 31, 2022: €342 million). This decline was mainly due to a model adjustment.

9 Technical risk of a home savings and loan company

As at June 30, 2023, the **capital requirement** for the technical risk of a home savings and loan company amounted to €673 million (December 31, 2022: €698 million) with a **limit** of €820 million (December 31, 2022: €785 million). In the current market environment, the changes in customer behavior reflected in the risk scenario parameters and the decline in new business are resulting in slightly diminishing – i.e. risk-reducing – effects.

10 Business risk and reputational risk

As at June 30, 2023, the **risk capital requirement** for business risk (including reputational risk) amounted to €390 million (December 31, 2022: €43 million). The **limit** was €450 million as at the reporting date (December 31, 2022: €280 million). Reputational risk is included in the figures shown.

The risk capital requirement for business risk increased significantly compared with the end of 2022 due to more cautious planning concerning parameters with business risk implications. The limit was raised to tie in with this increase in risk.

11 Operational risk

11.1 Impact of the war in Ukraine

The monitoring of sanctions necessitates manual transaction checks that entail an increased workload. This may result, for example, in delays to the execution of transactions or, if applicable, penalty interest payments for trading that involves securities subject to sanctions. The resulting operational risks are factored in by means of the hypothetical risk scenarios 'breaches of sanctions and embargoes' and 'incorrect execution of transactions and processes'.

11.2 Losses

Losses from operational risk do not follow a consistent pattern. The overall risk profile can be seen from the total losses incurred over the long term and is shaped by a small number of large losses. Over the course of time, regular fluctuations are evident in the pattern of losses as the frequency of relatively large losses in each individual case is very low. Presenting the change in losses meaningfully therefore requires a sufficiently long and unchanging time horizon for reporting purposes. The data is selected from the loss history for the past four quarters and on the basis of the date on which the expense is recognized in the income statement.

The past four quarters – that is, the period from July 1, 2022 to June 30, 2023 – represent the relevant reporting period for an analysis of net losses. Fig. VI.27 shows the internal net losses from loss events reported in this period, classified by operational risk subtype, and a comparison with their long-term mean.

In the past four quarters, internal losses were dominated by individual loss events from the 'Execution, delivery, and process management' event category of other operational risk. The slight rise in losses recorded in outsourcing risk relates to the creation of a provision for potential tax arrears payments. Based on the long-term mean, i.e. taking into account all loss events since loss data documentation was introduced, **compliance risk** and **legal risk** remain the dominant categories of operational risk.

FIG. VI.27 – BANK SECTOR: NET LOSSES[1] BY OPERATIONAL RISK SUBTYPE

Proportion of total net losses (percent)	Jul. 1, 2022– Jun. 30, 2023	Long-term mean[2]
Compliance risk	7.5	43.8
Legal risk	16.6	37.5
Information risk including ICT risk	6.2	5.2
Security risk	5.5	2.0
Outsourcing risk	12.1	0.6
Project risk	3.1	0.8
Other operational risk	49.1	10.1

1 Internal losses.
2 The long-term mean is derived from loss data recorded since 2006.

Losses did not reach a critical level relative to the expected loss from operational risk at any point in the reporting year.

11.3 Risk position

The **risk capital requirement** for operational risk was calculated at €968 million as at June 30, 2023 (December 31, 2022: €966 million) with a **limit** of €1,148 million (December 31, 2022: €1,112 million).

Fig. VI.28 shows the structure of the risk profile for operational risk in the Bank sector based on **risk subtypes**.

FIG. VI.28 – BANK SECTOR: DISTRIBUTION OF RISK CAPITAL REQUIREMENT FOR OPERATIONAL RISK, BY RISK SUBTYPE[1]

Percent	Jun. 30, 2023	Dec. 31, 2022
Compliance risk	31.8	31.7
Legal risk	19.4	19.2
Information risk including ICT risk	15.4	15.5
Security risk	5.4	5.5
Outsourcing risk	5.5	5.6
Project risk	6.5	6.6
Other operational risk	16.0	15.9

1 Proportion of the Bank sector's risk capital requirement attributable to each risk subtype.

The distribution of the risk capital requirement among the operational risk subtypes remained largely unchanged as at June 30, 2023 compared with the end of the previous year. In the first half of 2023, **compliance risk** and **legal risk** accounted for the most significant proportions of the risk capital requirement. A large proportion of the risk capital requirement for these two risk subtypes was determined by the recorded losses and by the hypothetical risk scenarios for changes to case law and for breaches of sanctions and embargoes.

Insurance sector

12 Actuarial risk

12.1 Impact of the war in Ukraine

In view of the developments in connection with the war in Ukraine, no risks are underwritten in respect of Russia and Belarus in new **direct non-life insurance business** as a rule. In in-force business, no policies are extended. Exceptions apply in respect of corporate customer business.

In relation to credit insurance policies assigned to inward **reinsurance business**, R+V has imposed extensive underwriting restrictions in respect of Russian, Ukrainian, and Belarusian counterparties. A small volume of claims were recorded for these counterparties during the reporting period. The war in Ukraine has not led to any significant increase in non-life actuarial risk, within which risk from credit insurance policies is included.

12.2 Risk position

As at June 30, 2023, the **overall solvency requirement** for **life actuarial risk** amounted to €808 million (December 31, 2022: €1,060 million) with a **limit** of €1,100 million (December 31, 2022: €1,200 million). The decrease in risk was due to lower lapse risk resulting from the fall in interest rates during the first half of 2023 and to increased risk mitigation from future surpluses.

As at the reporting date, the **overall solvency requirement** for **health actuarial risk** was €207 million (December 31, 2022: €167 million) with a **limit** of €235 million (December 31, 2022: €300 million). This increase in risk was attributable to the transfer of the risk capital requirement from the centralized risk capital buffer to health actuarial risk.

As at June 30, 2023, the **overall solvency requirement** for **non-life actuarial risk** amounted to €1,754 million (December 31, 2022: €1,878 million) with a **limit** of €2,000 million (December 31, 2022: €3,000 million). This reduction in risk resulted primarily from changes to the reinsurance structure.

13 Market risk

13.1 Change in lending volume

In accordance with the breakdown specified in Solvency II, the bulk of credit risk within market risk is assigned to spread risk. The other parts of credit risk are measured within counterparty default risk and other risk types.

As at June 30, 2023, the **total lending volume** of R+V had grown by 2 percent from €84.4 billion as at December 31, 2022 to €85.9 billion as at June 30, 2023. This increase was primarily the result of a rise in the fair values of fixed-income securities and equities.

As at June 30, 2023, the volume of lending in the **home finance** business was unchanged compared with December 31, 2022 at €13.7 billion. Of this amount, 87 percent was accounted for by loans for less than 60 percent of the value of the property, a situation that was also unchanged compared with December 31, 2022.

The volume of home finance was broken down by finance type as at the reporting date as follows (all figures unchanged compared with December 31, 2022):
– Consumer home finance: €12.3 billion
– Commercial home finance: €0.1 billion
– Commercial finance: €1.3 billion

In the case of home finance, the entire volume disbursed is backed by traditional loan collateral.

The financial sector and the public sector, which are the dominant **asset classes**, together accounted for 65 percent of the total lending volume as at June 30, 2023 (December 31, 2022: 64 percent).

The explanation of the asset class concept in the Bank sector (see chapter VI.6.2.1) applies analogously to the Insurance sector. Fig. VI.29 shows the breakdown of the lending volume by asset class.

Fig. VI.30 shows the **geographical distribution** of the credit portfolio by country group. Borrowers based in Germany are not included in this breakdown. The relevant country for the assignment to a country group is the one in which the economic risk arises. As at June 30, 2023, 75 percent of the total lending outside Germany was concentrated in Europe (December 31, 2022: 74 percent).

FIG. VI.29 – INSURANCE SECTOR: LENDING VOLUME, BY ASSET CLASS

€ billion	Jun. 30, 2023	Dec. 31, 2022
Financials	37.3	36.4
Corporates	12.0	12.2
Public sector	18.4	17.5
Real estate (commercial and retail customers)	16.7	16.8
ABSs and ABCPs[1]	1.6	1.6
Total	**85.9**	**84.4**

1 ABSs = asset-backed securities, ABCPs = asset-backed commercial paper.

FIG. VI.30 – INSURANCE SECTOR: LENDING VOLUME, BY COUNTRY GROUP

€ billion	Jun. 30, 2023	Dec. 31, 2022
Europe	41.7	40.2
of which: eurozone	33.1	31.6
North America	7.6	7.5
Central America	0.5	0.5
South America	0.9	0.8
Asia	3.2	3.0
Africa	0.2	0.3
Other	1.7	1.6
Total	**55.7**	**54.0**

Obligations in connection with the life insurance business require investments with longer maturities. This is also reflected in the breakdown of **residual maturities** shown in Fig. VI.31. As at June 30, 2023, 82 percent (December 31, 2022: 85 percent) of the total lending volume had a residual maturity of more than five years. The percentage of the total lending volume due to mature within one year was 3 percent as at June 30, 2023. This figure was unchanged compared with December 31, 2022.

FIG. VI.31 – INSURANCE SECTOR: LENDING VOLUME, BY RESIDUAL MATURITY

€ billion	Jun. 30, 2023	Dec. 31, 2022
≤ 1 year	2.3	2.1
> 1 year to ≤ 5 years	12.8	10.9
> 5 years	70.8	71.4
Total	**85.9**	**84.4**

For **credit ratings**, R+V generally uses ratings from rating agencies approved by the supervisory authorities. It also applies its own expert ratings in accordance with the provisions of Credit Rating Agency Regulation III to validate the external credit ratings. R+V has defined the external credit rating as the maximum, even in cases where its own rating is better. The ratings calculated in this way are matched to the DZ BANK credit rating master scale using the methodology shown in Fig. VII.20 of the 2022 risk report.

The **rating structure** of the lending volume in the Insurance sector is shown in Fig. VI.32. Of the total lending volume as at June 30, 2023, 76 percent was attributable to investment-grade borrowers (December 31, 2022: 75 percent). The lending volume that is not rated, which made up 23 percent of the total lending volume (December 31, 2022: 24 percent), essentially comprised consumer home finance for which external ratings were not available. The unrated lending volume is deemed to be low-risk because the lending is based on a selective approach and the mortgageable value of the assets is limited.

FIG. VI.32 – LENDING VOLUME, BY INTERNAL RATING CLASS

€ billion		Jun. 30, 2023	Dec. 31, 2022
Investment grade	1A	22.1	21.2
	1B	9.9	9.0
	1C	–	–
	1D	10.6	9.9
	1E	–	–
	2A	7.1	7.9
	2B	5.1	4.8
	2C	4.7	5.1
	2D	2.6	2.6
	2E	–	–
	3A	2.8	2.6
Non-investment grade	3B	0.3	0.3
	3C	0.3	0.3
	3D	–	–
	3E	0.2	0.2
	4A	0.1	0.1
	4B	0.2	0.3
	4C	0.1	0.1
	4D	–	–
	4E	–	–
Default		–	–
Not rated		19.7	20.1
Total		**85.9**	**84.4**

In the analysis of **individual concentrations**, the ten counterparties associated with the largest lending volumes accounted for 18 percent of R+V's total lending volume as at June 30, 2023 (December 31, 2022: 17 percent).

13.2 Credit portfolios particularly affected by negative conditions

The following sections describe credit portfolios in which the effects of acute global crises were more noticeable than in the rest of the credit portfolios. The figures presented below are included in the disclosures for the lending volume as a whole (see chapter VI13.1.).

Differences in economic policy in the eurozone are affecting investments of R+V in the **eurozone periphery countries** of Portugal, Italy, and Spain. As at June 30, 2023, investments in these countries amounted to €4,632 million (December 31, 2022: €4,404 million). Fig. VI.33 shows the country breakdown of the investments.

FIG. VI.33 – INSURANCE SECTOR: EXPOSURE IN EUROZONE PERIPHERY COUNTRIES

€ million	Jun. 30, 2023	Dec. 31, 2022
Portugal	39	37
Italy	2,216	2,082
Spain	2,377	2,285
Total	**4,632**	**4,404**

In light of the simmering dispute between **China and Taiwan**, lending by R+V to counterparties in Taiwan is being monitored very closely. As at June 30, 2023, there was no exposure to borrowers based in Taiwan, a situation that was unchanged compared with December 31, 2022. R+V's lending volume in China amounted to €165 million as at June 30, 2023 (December 31, 2022: €180 million).

13.3 Risk position

As at June 30, 2023, the **overall solvency requirement** for market risk amounted to €3,499 million (December 31, 2022: €3,415 million) with a **limit** of €3,850 million (December 31, 2022: €3,880 million). The change was largely driven by the increased risk capital buffer for interest-rate risk.

Fig. VI.34 shows the overall solvency requirement for the various types of market risk.

FIG. VI.34 – INSURANCE SECTOR: OVERALL SOLVENCY REQUIREMENT FOR MARKET RISK, BY RISK SUBTYPE

€ million	Jun. 30, 2023	Dec. 31, 2022
Interest-rate risk	2,351	2,179
Spread risk	694	776
Equity risk	1,345	1,328
Currency risk	352	323
Real-estate risk	432	446
Total (after diversification)	**3,499**	**3,415**

14 Counterparty default risk

Receivables arising from ceded reinsurance amounted to €99 million as at June 30, 2023 (December 31, 2022: €145 million). Of this volume, 86 percent (December 31, 2022: 100 percent) was owed by companies with an external rating of A or higher. The remaining 14 percent of receivables were collateralized receivables from reinsurance counterparties without a rating.

The **reinsurers' share of insurance liabilities** is a variable that impacts the default risk of reinsurance counterparties. Claims against reinsurers for insured events that have not yet occurred and for insured events from direct insurance operations and from inward reinsurance, presented by external rating class in accordance with the system of the rating agency Standard & Poor's, are shown in Fig. VI.35. Ratings from other rating agencies are included in 'Other ratings'.

FIG. VI.35 – INSURANCE SECTOR: VOLUME OF REINSURANCE CONTRACTS HELD, BY EXTERNAL RATING CLASS

€ million	Jun. 30, 2023	Dec. 31, 2022
AAA	1	1
AA+ to AA-	26	29
A+ to A-	82	109
B	–	–
Other ratings	17	13
Total	**126**	**152**

Overdue receivables from policyholders and insurance brokers more than 90 days past due as at the reporting date amounted to €38 million as at June 30, 2023 (December 31, 2022: €27 million). The figure as at December 31, 2022 that was published in the 2022 risk report was €158 million. This figure was calculated in accordance with IFRS 4 based on the carrying amounts recognized under the German Commercial Code (HGB), whereas the calculation now uses the carrying amounts recognized under IFRS. In order to ensure comparability with the figure as at June 30, 2023, which was calculated in accordance with the rules of IFRS 17 that came into effect on January 1, 2023, the figure as at December 31, 2022 was recalculated.

As at June 30, 2023, the **overall solvency requirement** for counterparty default risk amounted to €198 million (December 31, 2022: €224 million) with a **limit** of €270 million (December 31, 2022: €350 million). This decline was attributable to lower amounts past due.

15 Operational risk

As at June 30, 2023, the **overall solvency requirement** for operational risk amounted to €653 million (December 31, 2022: €598 million). The **limit** was €750 million as at the reporting date (December 31, 2022: €1,000 million). This increase in risk is due to higher insurance liabilities.

16 Risks from entities in other financial sectors

As at June 30, 2023, the **overall solvency requirement** for risks in connection with non-controlling interests in insurance companies and with entities in other financial sectors stood at €135 million and was thus the same as at December 31, 2022. The **limit** was €150 million (December 31, 2022: €180 million).

Interim consolidated financial statements

Notes

Income statement
for the period January 1 to June 30, 2023

€ million	(Note)	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Net interest income	(06)	1,863	1,475
Interest income		6,093	2,193
Interest income calculated using the effective interest method		6,015	2,151
Interest income not calculated using the effective interest method		79	42
Current income and expense		42	35
Interest expense		-4,273	-752
Net fee and commission income	(07)	1,314	1,364
Fee and commission income		2,599	2,732
Fee and commission expenses		-1,285	-1,368
Gains and losses on trading activities	(08)	293	359
Gains and losses on investments	(09)	-8	-53
Other gains and losses on valuation of financial instruments	(10)	63	105
Gains and losses from the derecognition of financial assets measured at amortized cost		5	11
Insurance service result	(11)	1,163	1,051
Gains and losses on investments held by insurance companies and other insurance company gains and losses	(12)	2,075	-3,602
of which interest income calculated using the effective interest method		797	742
Insurance finance income or expenses	(13)	-2,496	2,367
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business		3	6
Loss allowances	(14)	-52	-60
Administrative expenses	(15)	-2,320	-2,242
Other net operating income	(16)	51	156
Profit before taxes		1,954	938
Income taxes	(17)	-542	-362
Net profit		**1,412**	**577**
Attributable to:			
Shareholders of DZ BANK		1,365	629
Non-controlling interests		47	-53

Statement of comprehensive income for the period January 1 to June 30, 2023

€ million	(Note)	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Net profit		1,412	577
Other comprehensive income/loss		209	-2,752
Items that may be reclassified to the income statement		**-188**	**-2,386**
Gains and losses on debt instruments measured at fair value through other comprehensive income	(18)	935	-17,781
Exchange differences on currency translation of foreign operations	(18)	-1	35
Insurance finance income or expenses included in other comprehensive income	(18)	-1,107	14,190
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	(18)	-8	8
Income taxes	(19)	-7	1,163
Items that will not be reclassified to the income statement		**397**	**-367**
Gains and losses on equity instruments for which the fair value OCI option has been exercised		267	-940
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk		316	-15
Gains and losses arising from remeasurement of defined benefit plans		-34	452
Income taxes	(19)	-153	136
Total comprehensive income/loss		**1,621**	**-2,176**
Attributable to:			
Shareholders of DZ BANK		1,552	-1,787
Non-controlling interests		69	-389

Balance sheet as at June 30, 2023

ASSETS

€ million	(Note)	Jun. 30, 2023	Dec. 31, 2022
Cash and cash equivalents	(20)	113,351	93,717
Loans and advances to banks	(21)	130,065	123,444
Loans and advances to customers	(22)	205,407	203,646
Hedging instruments (positive fair values)	(23)	1,292	1,568
Financial assets held for trading	(24)	37,790	48,909
Investments	(25)	46,710	43,393
Investments held by insurance companies	(26)	111,206	105,548
Property, plant and equipment, investment property, and right-of-use assets	(27)	1,913	1,960
Income tax assets		5,846	5,777
Other assets	(28)	5,654	6,619
Loss allowances	(29)	-2,047	-2,029
Non-current assets and disposal groups classified as held for sale	(30)	77	19
Fair value changes of the hedged items in portfolio hedges of interest-rate risk		-3,891	-4,173
Total assets		**653,374**	**628,397**

EQUITY AND LIABILITIES

€ million	(Note)	Jun. 30, 2023	Dec. 31, 2022
Deposits from banks	(31)	181,505	186,787
Deposits from customers	(32)	164,391	159,429
Debt certificates issued including bonds	(33)	100,053	82,349
Hedging instruments (negative fair values)	(34)	651	442
Financial liabilities held for trading	(35)	52,807	52,478
Provisions	(36)	3,064	3,248
Insurance contract liabilities	(37)	102,239	97,649
Income tax liabilities		6,107	5,572
Other liabilities	(38)	8,426	8,960
Subordinated capital	(39)	4,389	4,521
Fair value changes of the hedged items in portfolio hedges of interest-rate risk		-1,136	-1,147
Equity	(40)	30,877	28,109
Shareholders' equity		28,961	26,257
Subscribed capital		4,926	4,926
Capital reserve		5,551	5,551
Retained earnings		16,301	14,756
Reserve from other comprehensive income		-1,110	-1,127
Additional equity components		3,293	2,150
Non-controlling interests		1,915	1,852
Total equity and liabilities		**653,374**	**628,397**

Statement of changes in equity

€ million	Subscribed capital	Capital reserve	Retained earnings	Reserve from other comprehensive income	Additional equity components	**Shareholders' equity**	Non-controlling interests	**Total equity**
Equity as at Jan. 1, 2022	4,926	5,551	12,581	1,651	2,150	26,860	1,801	28,661
Restatements according to IAS 8	-	-	976	168	-	1,143	366	1,510
Equity restated as at Jan. 1, 2022	4,926	5,551	13,557	1,818	2,150	28,003	2,167	30,171
Net profit/loss	-	-	629	-	-	629	-53	577
Other comprehensive income/loss	-	-	306	-2,722	-	-2,416	-336	-2,752
Total comprehensive income/loss	**-**	**-**	**935**	**-2,722**	**-**	**-1,787**	**-389**	**-2,176**
Changes in scope of consolidation	-	-	7	4	-	10	-	11
Acquisition/disposal of non-controlling interests	-	-	2	2	-	4	2	6
Reclassifications within equity	-	-	115	-115	-	-	-	-
Dividends paid	-	-	-358	-	-	-358	-62	-421
Equity as at Jun. 30, 2022	**4,926**	**5,551**	**14,258**	**-1,014**	**2,150**	**25,872**	**1,719**	**27,590**
Equity as at Jan. 1, 2023	4,926	5,551	14,756	-1,127	2,150	26,257	1,852	28,109
Net profit/loss	-	-	1,365	-	-	1,365	47	1,412
Other comprehensive income/loss	-	-	-20	207	-	187	22	209
Total comprehensive income/loss	**-**	**-**	**1,345**	**207**	**-**	**1,552**	**69**	**1,621**
Capital increase/capital repaid	-	-	-	-	1,143	1,143	1	1,144
Acquisition/disposal of non-controlling interests	-	-	9	-	-	9	13	23
Reclassifications within equity	-	-	191	-191	-	-	-	-
Dividends paid	-	-	-	-	-	-	-20	-20
Equity as at Jun. 30, 2023	**4,926**	**5,551**	**16,301**	**-1,110**	**3,293**	**28,961**	**1,915**	**30,877**

In the first half of 2023, no dividend was paid to the shareholders of DZ BANK AG for the 2022 financial year (first half of 2022: €0.20 per share).

Further information on equity is presented in note 40.

Statement of cash flows

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Net profit	1,412	577
Non-cash items included in net profit	2,477	-15,624
Subtotal	3,889	-15,047
Cash changes in assets and liabilities arising from operating activities		
Loans and advances to banks and customers	-8,480	-15,978
Other assets and liabilities from operating activities	-106	-4,811
Hedging instruments (positive and negative fair values)	246	5,213
Financial assets and financial liabilities held for trading	12,268	-4,755
Deposits from banks and customers	-724	31,857
Debt certificates issued including bonds	17,309	11,465
Interest payments, dividends, and operating lease payments received (net cash flow)	2,291	1,511
Income taxes paid	-197	-312
Cash flows from operating activities	**26,496**	**9,143**
Cash flows from investing activities	**-7,979**	**18,205**
Cash flows from financing activities	**1,117**	**-429**

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Cash and cash equivalents as at January 1	93,717	86,029
Cash flows from operating activities	26,496	9,143
Cash flows from investing activities	-7,979	18,205
Cash flows from financing activities	1,117	-429
Cash and cash equivalents as at June 30	**113,351**	**112,948**

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

Cash payments from lessees in repayment of lease liabilities, which are included in cash flows from financing activities, amounted to €56 million in the first half of 2023 (first half of 2022: €55 million).

No subsidiaries were consolidated for the first time in the first half of 2023, so there were no related cash inflows (first half of 2022: cash inflow of €2 million).

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 2023 financial year have been prepared in accordance with the provisions of the International Financial Reporting Standards (IFRS), as adopted by the European Union (EU). 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 2022 financial year, unless these policies are subject to the amendments described below.

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

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

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

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

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

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

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

For all non-life insurance business except for casualty insurance with premium refund, the measurement model developed for the liability for remaining coverage is used in the premium allocation approach. In the context of the transition, the premium allocation approach is generally applied fully retrospectively when determining the initial data. The risk part of the casualty insurance with premium refund business is measured using the general measurement model. For measurement at the transition date, adjustments are generally made fully retrospectively.

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

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

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

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

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

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

Retrospective initial application resulted in the following adjustments to the income statement, statement of comprehensive income, and balance sheet:

Income statement for the period January 1 to June 30, 2022

€ million	Jan. 1– Jun. 30, 2022 before restatement	Amount of restatement	Jan. 1– Jun. 30, 2022 after restatement
(…)			
Premiums earned	9,746	-9,746	-
Insurance service result	-	1,051	1,051
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-3,364	-238	-3,602
(…)			
Insurance benefit payments	-4,735	4,735	-
Insurance business operating expenses	-1,628	1,628	-
Insurance finance income or expenses	-	2,367	2,367
(…)			
Profit before taxes	1,141	-203	938
Income taxes	-360	-2	-362
Net profit	**781**	**-204**	**577**
Attributable to:			
Shareholders of DZ BANK	753	-124	629
Non-controlling interests	28	-81	-53

Statement of comprehensive income for the period January 1 to June 30, 2022

€ million	Jan. 1– Jun. 30, 2022 before restatement	Amount of restatement	Jan. 1– Jun. 30, 2022 after restatement
Net profit	781	-204	577
Other comprehensive income/loss	-4,731	1,979	-2,752
Items that may be reclassified to the income statement	**-4,699**	**2,313**	**-2,386**
Gains and losses on debt instruments measured at fair value through other comprehensive income	-6,918	-10,863	-17,781
Exchange differences on currency translation of foreign operations	6	29	35
Insurance finance income or expenses included in other comprehensive income	-	14,190	14,190
(…)			
Income taxes	2,206	-1,043	1,163
Items that will not be reclassified to the income statement	**-32**	**-335**	**-367**
Gains and losses on equity instruments for which the fair value OCI option has been exercised	-372	-568	-940
(…)			
Gains and losses arising from remeasurement of defined benefit plans	442	10	452
Income taxes	-87	223	136
Total comprehensive income/loss	**-3,950**	**1,774**	**-2,176**
Attributable to:			
Shareholders of DZ BANK	-3,461	1,674	-1,787
Non-controlling interests	-489	100	-389

Balance sheet as at January 1, 2022

ASSETS

€ million	Jan. 1, 2022 before restatement	Amount of restatement	Jan. 1, 2022 after restatement
(…)			
Investments held by insurance companies	129,119	-538	128,581
(…)			
Income tax assets	1,141	4,703	5,844
Other assets	6,501	-599	5,902
(…)			
Total assets	**627,273**	**3,565**	**630,838**

EQUITY AND LIABILITIES

€ million	Jan. 1, 2022 before restatement	Amount of restatement	Jan. 1, 2022 after restatement
(…)			
Insurance liabilities	118,863	-118,863	-
Insurance contract liabilities	-	117,461	117,461
Income tax liabilities	1,456	5,540	6,996
Other liabilities	10,797	-2,082	8,715
(…)			
Equity	28,661	1,510	30,171
Shareholders' equity	26,860	1,143	28,003
(…)			
Retained earnings	12,581	976	13,557
Reserve from other comprehensive income	1,651	168	1,818
(…)			
Non-controlling interests	1,801	366	2,167
Total equity and liabilities	**627,273**	**3,565**	**630,838**

Balance sheet as at December 31, 2022

ASSETS

€ million	Dec. 31, 2022 before restatement	Amount of restatement	Dec. 31, 2022 after restatement
(…)			
Investments held by insurance companies	105,955	-407	105,548
(…)			
Income tax assets	3,428	2,349	5,777
Other assets	7,204	-585	6,619
(…)			
Total assets	**627,041**	**1,356**	**628,397**

EQUITY AND LIABILITIES

€ million	Dec. 31, 2022 before restatement	Amount of restatement	Dec. 31, 2022 after restatement
(…)			
Insurance liabilities	103,795	-103,795	-
Insurance contract liabilities	-	97,649	97,649
Income tax liabilities	1,063	4,509	5,572
Other liabilities	10,999	-2,039	8,960
(…)			
Equity	23,076	5,033	28,109
Shareholders' equity	21,967	4,290	26,257
(…)			
Retained earnings	13,482	1,274	14,756
Reserve from other comprehensive income	-4,142	3,015	-1,127
(…)			
Non-controlling interests	1,109	743	1,852
Total equity and liabilities	**627,041**	**1,356**	**628,397**

Initial application of IFRS 17 has also resulted in adjustments to the statement of changes in equity and statement of cash flows as well as to the disclosures in the notes to the financial statements listed below. Where relevant, the new balance sheet and income statement structures have been used. The adjustments have been made in note 05 (segment information), note 11 (insurance service result), note 12 (gains and losses on investments held by insurance companies and other insurance company gains and losses), note 13 (insurance finance income or expenses), note 18 (items reclassified to the income statement), note 19 (income taxes relating to components of other comprehensive income), note 26 (investments held by insurance companies), note 28 (other assets), note 37 (insurance contract liabilities), note 38 (other liabilities), note 40 (equity), note 41 (classes, categories, and fair values of financial instruments), note 43 (assets and liabilities measured at fair value on the balance sheet), note 46 (nature and extent of risks arising from financial instruments), and all notes in chapter E 'Insurance business disclosures'.

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

The amendment to IAS 12 *Income Taxes* provides an exemption in certain circumstances that means that no deferred tax assets or liabilities are recognized at the time of acquisition of an asset or liability. This exemption cannot be applied to the recognition of deferred taxes in conjunction with leases or asset retirement/decommissioning obligations.

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

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 contract liabilities, other assets held by insurance companies, provisions for employee benefits, provisions for share-based payment transactions, provisions relating to building society operations, and other provisions as well as the recognition and measurement of income tax assets and income tax liabilities.

Insurance contract liabilities and other assets held by insurance companies

The measurement of insurance contract liabilities and other assets held by insurance companies involves the exercise of judgment, estimates, and assumptions, especially in relation to mortality, claims, rates of return on investment, lapse, and costs. Actuarial calculation methods, statistical estimates, blanket estimates, and measurements based on past experience are used. The basic approaches used in the measurement of insurance contract liabilities are described in the insurance business disclosures in note 03.

» 03 Insurance business

General information on the accounting treatment of insurance business

The insurance business comprises insurance contracts, investment contracts, and service contracts. It also includes financial guarantee contracts with policyholders.

Under an insurance contract, the issuer accepts significant insurance risk from a policyholder by agreeing to compensate the policyholder if an uncertain future event adversely affects the policyholder. Insurance contracts are recognized in accordance with the requirements of IFRS 17. Investment contracts are mainly pension fund contracts based on defined benefit plans or contracts to protect semi-retirement employment models. Investment contracts are classified as financial instruments within the scope of IFRS 9. Service contracts comprise, in particular, separable components of insurance contracts that contain services other than services pursuant to IFRS 17. Such service contracts are subject to the revenue recognition requirements specified in IFRS 15. Any financial guarantee contracts in connection with insurance business are recognized in accordance with the accounting requirements applicable to insurance contracts.

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

Financial assets and financial liabilities

Financial assets and financial liabilities held or acquired as part of insurance business are accounted for in accordance with the accounting policies for financial instruments described in note 05 of the consolidated financial statements for the year ended December 31, 2022. These financial assets and financial liabilities are reported under investments held by insurance companies, other assets held by insurance companies, and other liabilities of insurance companies. Any loss allowances related to financial assets reported under investments held by insurance companies or other assets held by insurance companies are recognized for the categories 'financial assets measured at amortized cost' and 'financial assets measured at fair value through other comprehensive income' and are applied as a deduction on the assets side of the balance sheet or in the reserve from other comprehensive income. Loss allowances are presented on a net basis within the two balance sheet items 'investments held by insurance companies' and 'other assets held by insurance companies'. However, in the notes on these balance sheet items, the loss allowances are presented on a gross basis.

Other liabilities of insurance companies include the performance obligations under investment contracts for which no material insurance risk is assumed when the policy is concluded. These are reported under liabilities from investment contracts within payables and residual other liabilities. The underlying financial instruments in these contracts are reported as part of assets related to unit-linked contracts under investments held by insurance companies.

Investment property

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

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

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

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

General measurement methods

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

General measurement model

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

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

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

Premium allocation approach

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

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

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

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

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

Variable fee approach

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

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

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

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

Insurance contract assets and liabilities

Liability for remaining coverage

Fulfillment cash flows

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

The following ratios are modeled:

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

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

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

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

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

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

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

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

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

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

Risk adjustment for non-financial risks

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

Discount rates

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

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

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

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

Investment component

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

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

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

Contractual service margin

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

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

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

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

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

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

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

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

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

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

Liability for incurred claims

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

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

Claims provision

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

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

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

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

Provision for accepted annuities

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

Risk adjustment

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

Recognition of onerous business on the balance sheet

If at any time during the coverage period, facts and circumstances indicate that a GIC is onerous, the loss is recognized in profit or loss and the liability for remaining coverage is increased by the amount by which the current estimates of the fulfillment cash flows relating to remaining coverage exceed the carrying amount of the liability for remaining coverage (loss component).

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

Option of recognition in other comprehensive income

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

» 04 Revenue in the insurance business

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

Insurance finance income or expenses generally comprises the changes in the carrying amount of the GIC arising from the effect of the time value of money, the effect of financial risk, and changes in these effects. Depending on the measurement approach, various accounting policy choices can be made, such as the option of recognition in other comprehensive income

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

» 05 Segment information

INFORMATION ON OPERATING SEGMENTS FOR THE PERIOD JANUARY 1 TO JUNE 30, 2023

€ million	BSH	R+V	TeamBank	UMH
Net interest income	244	-	268	17
Net fee and commission income	-6	-	-22	988
Gains and losses on trading activities	-	-	-	-
Gains and losses on investments	-	-	-	-2
Other gains and losses on valuation of financial instruments	3	-	-1	71
Gains and losses from the derecognition of financial assets measured at amortized cost	-	-	-	-
Insurance service result	-	1,152	-	-
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	2,104	-	-
Insurance finance income or expenses	-	-2,496	-	-
Gains and losses from the derecognition of financial assets measured at amortized cost in the insurance business	-	3	-	-
Loss allowances	-4	-	-51	-
Administrative expenses	-269	-	-143	-595
Other net operating income	18	-2	6	-37
Profit/loss before taxes	**-14**	**762**	**57**	**442**
Cost/income ratio (%)	>100.0	-	57.0	57.4
Regulatory RORAC (%)	-2.3	17.1	23.4	>100.0
Average own funds/solvency requirement	1,261	8,895	487	649
Total assets/total equity and liabilities as at Jun. 30, 2023	85,258	124,760	10,595	4,334

	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DZ BANK – holding function	Other/ Consolidation	**Total**
	658	346	70	60	-55	255	1,863
	203	5	109	-14	-	51	1,314
	584	-1	10	-	-	-300	293
	-1	-	-	-	-	-5	-8
	-91	27	3	-	-	51	63
	5	-	-	-	-	-	5
	-	-	-	-	-	11	1,163
	-	-	-	-	-	-29	2,075
	-	-	-	-	-	-	-2,496
	-	-	-	-	-	-	3
	36	-20	-	-12	-	-1	-52
	-732	-153	-144	-37	-139	-108	-2,320
	35	9	5	-3	-	20	51
	697	**212**	**53**	**-6**	**-194**	**-55**	**1,954**
	52.5	39.6	73.1	86.0	-	-	53.6
	25.7	31.4	33.0	-7.7	-	-	21.1
	5,421	1,354	320	160	-	-	18,548
	387,901	88,423	24,194	3,419	23,832	-99,342	653,374

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	-	-	-
Insurance service result	-	975	-	-
Gains and losses on investments held by insurance companies and other insurance company gains and losses	-	-3,576	-	-
Insurance finance income or expenses	-	2,367	-	-
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**	**-233**	**68**	**371**
Cost/income ratio (%)	59.6	-	53.8	60.4
Regulatory RORAC (%)	25.9	-5.0	22.9	>100.0
Average own funds/solvency requirement	1,299	9,326	593	542
Total assets/total equity and liabilities as at Dec. 31, 2022	85,599	119,300	10,611	4,818

	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	DZ BANK – holding function	Other/ Consolidation	**Total**
	474	387	34	58	-9	-135	1,475
	262	12	112	-15	-	-28	1,364
	347	-1	11	-	-	2	359
	-1	33	-	-	-	10	-53
	-6	73	-2	-	-	93	105
	5	-	-2	-	-	2	11
	-	-	-	-	-	76	1,051
	-	-	-	-	-	-26	-3,602
	-	-	-	-	-	-	2,367
	-	-	-	-	-	-	6
	-44	-14	-	-3	-	60	-60
	-679	-162	-137	-38	-133	-130	-2,242
	12	7	2	-	-	56	156
	369	**335**	**19**	**3**	**-143**	**-19**	**938**
	62.1	31.7	88.4	88.4	-	-	69.2
	12.6	48.8	11.1	3.5	-	-	9.6
	5,846	1,372	341	169	-	-	19,488
	367,462	89,181	25,447	3,367	21,557	-98,945	628,397

General information on operating segments

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

Definition of operating segments

Segmentation is fundamentally based on the integrated risk and capital management system, the function of which is to create transparency, notably in respect of the risk structure and risk-bearing capacity of the individual management units. The segment information presents separate disclosures for the management units DZ HYP AG, Hamburg/Münster, (DZ HYP), TeamBank AG Nürnberg, Nuremberg, (TeamBank), DZ PRIVATBANK, and the BSH, R+V, UMH, and VR Smart Finanz subgroups. DZ BANK is broken down into the central institution and corporate bank (DZ BANK – CICB) and the group management function (DZ BANK – holding function) in line with the internal financial reporting structure. The DZ BANK – CICB operating segment comprises the cooperative central institution function, which supports the operating activities of the local cooperative banks, and the corporate bank function. DZ BANK – holding function is mainly used to pool tasks carried out on behalf of the DZ BANK Group in relation to commercial law, tax, and prudential supervision. The total assets of DZ BANK – holding function include the equity, plus a number of other items such as a notional carrying amount for the long-term equity investment in DZ BANK – CICB, together with the carrying amounts of the long-term equity investments in the other management units. The notional long-term equity investment in DZ BANK – CICB is measured in an amount equating to 11 percent of the risk-weighted assets of DZ BANK – CICB. DZ BANK – holding function does not constitute an operating segment within the meaning of IFRS 8.5 but is presented separately in line with the internal reporting structure. All other companies in the DZ BANK Group, which are not required to provide regular quantitative reports to the chief operating decision-makers, and the consolidations are reported on an aggregated basis under Other/Consolidation. As part of the merger of the former DVB Bank SE, Frankfurt am Main, (DVB) into DZ BANK in the second half of 2022, changes were made to the internal reporting. DVB no longer constitutes a separate management unit and is therefore included under ‘Other/Consolidation’. The figures for the prior-year period have been restated accordingly.

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.

» 06 Net interest income

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
INTEREST INCOME AND CURRENT INCOME AND EXPENSE	**6,135**	**2,228**
Interest income from	**6,093**	**2,193**
Lending and money market business	5,101	2,362
Bonds and other fixed-income securities	404	210
Portfolio hedges of interest-rate risk	595	-204
Financial assets with a negative effective interest rate	-6	-176
Other assets	-1	-
Current income and expense from	**42**	**35**
Shares and other variable-yield securities	15	10
of which income from other shareholdings	9	9
Investments in subsidiaries	2	2
Entities accounted for using the equity method	25	23
of which relating to investments in joint ventures	19	25
of which relating to investments in associates	6	-2
INTEREST EXPENSE ON	**-4,273**	**-752**
Deposits from banks and customers	-3,294	-907
Debt certificates issued including bonds	-720	-243
Subordinated capital	-75	-30
Portfolio hedges of interest-rate risk	-187	44
Financial liabilities with a positive effective interest rate	12	387
Provisions and other liabilities	-8	-3
Total	**1,863**	**1,475**

The interest income from other assets included gains from non-credit-risk-related modifications of €2 million (first half of 2022: €0 million) and losses from non-credit-risk-related modifications of €3 million (first half of 2022: €0 million), such gains and losses resulting from financial assets. The interest expense on provisions and other liabilities included interest expense on lease liabilities of €4 million (first half of 2022: €2 million).

» 07 Net fee and commission income

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Fee and commission income	**2,599**	**2,732**
Securities business	1,989	2,156
Asset management	167	179
Payments processing including card processing	190	161
Lending business and trust activities	91	74
Financial guarantee contracts and loan commitments	44	35
International business	6	7
Building society operations	18	22
Other	94	98
Fee and commission expenses	**-1,285**	**-1,368**
Securities business	-929	-980
Asset management	-101	-114
Payments processing including card processing	-108	-84
Lending business	-40	-34
Financial guarantee contracts and loan commitments	-6	-6
Building society operations	-36	-28
Other	-65	-122
Total	**1,314**	**1,364**

In the reporting period, fee and commission income included revenue from contracts with customers pursuant to IFRS 15 in an amount of €2,592 million (first half of 2022: €2,723 million); see note 59.

» 08 Gains and losses on trading activities

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Gains and losses on non-derivative financial instruments and embedded derivatives	-937	3,628
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	-68	2,026
Gains and losses on derivatives	1,216	-3,387
Gains and losses on exchange differences	14	118
Total	**293**	**359**

Gains and losses on exchange differences included currency translation gains of €9 million on financial instruments not measured at fair value through profit or loss (first half of 2022: losses of €6 million).

» 09 Gains and losses on investments

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Gains and losses on the disposal of bonds and other fixed-income securities	**-1**	-14
Gains and losses on the disposal of shares and other variable-yield securities	**-2**	-49
Gains and losses on investments in associates	**-5**	11
Disposals	-	11
Impairment losses	-8	-
Reversals of impairment losses	3	-
Total	**-8**	**-53**

» 10 Other gains and losses on valuation of financial instruments

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Gains and losses from fair value hedge accounting	**-27**	6
Gains and losses on derivatives used for purposes other than trading	**68**	66
Gains and losses on financial instruments designated as at fair value through profit or loss	**-21**	82
Gains and losses on non-derivative financial instruments and embedded derivatives that are not related to derivatives held for trading purposes	-79	240
Gains and losses on derivatives	58	-158
Gains and losses on financial assets mandatorily measured at fair value through profit or loss	**43**	-50
Total	**63**	**105**

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.

» 11 Insurance service result

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Insurance revenue	**6,209**	6,380
Insurance service expenses	**-4,957**	-5,266
Net income/expenses from reinsurance contracts held	**-89**	-63
Reinsurance revenue	-130	-158
Reinsurance service expenses	41	95
Total	**1,163**	1,051

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

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Income from investments held by insurance companies	**3,369**	2,980
Interest income and current income	1,247	1,230
Income from reversals of impairment losses and reversals of loss allowances, and unrealized gains	119	781
Gains on valuation through profit or loss of investments held by insurance companies	1,791	623
Gains on disposals	212	347
Expenses in connection with investments held by insurance companies	**-1,098**	-6,631
Administrative expenses	-96	-102
Depreciation/amortization expense, additions to loss allowances, and impairment losses and unrealized losses	-236	-159
Losses on valuation through profit or loss of investments held by insurance companies	-452	-5,354
Losses on disposals	-315	-1,016
Other non-insurance gains and losses	**-196**	49
Total	**2,075**	-3,602

Income from and expenses in connection with investments held by insurance companies included additions to loss allowances of €11 million (first half of 2022: €41 million) and reversals of loss allowances of €32 million (first half of 2022: €25 million).

» 13 Insurance finance income or expenses

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Insurance finance income or expenses	-2,496	2,367
Insurance finance income or expenses of reinsurance companies	1	-
Total	**-2,496**	2,367

» 14 Loss allowances

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Loss allowances for loans and advances to banks	**9**	-13
Additions	-19	-32
Reversals	27	18
Recoveries on loans and advances to banks previously impaired	1	1
Loss allowances for loans and advances to customers	**-81**	-42
Additions	-1,122	-1,077
Reversals	985	995
Directly recognized impairment losses	-23	-12
Recoveries on loans and advances to customers previously impaired	60	39
Other	18	12
Loss allowances for investments	**6**	3
Additions	-6	-7
Reversals	12	10
Loss allowances for other assets	**-1**	-
Reversals	1	-
Directly recognized impairment losses	-2	-
Other loss allowances for loans and advances	**14**	-7
Additions to and reversals of provisions for loan commitments	18	-5
Additions to and reversals of provisions for financial guarantee contracts	-4	-
Additions to and reversals of other provisions for loans and advances	-1	-2
Total	**-52**	**-60**

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, 2023	Jan. 1– Jun. 30, 2022
Staff expenses	-1,044	-1,001
General and administrative expenses	-1,135	-1,100
Depreciation and amortization	-141	-140
Total	**-2,320**	**-2,242**

» 16 Other net operating income

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Income from the reversal of provisions and accruals	74	72
Impairment losses on other intangible assets	-50	-
Gains on the disposal of other assets	11	23
Expenses for other taxes	-11	-10
Gains and losses on non-current assets and disposal groups classified as held for sale	3	27
Residual other net operating income	25	43
Total	**51**	**156**

» 17 Income taxes

IAS 34 states that income taxes in interim consolidated 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, 2023	Jan. 1– Jun. 30, 2022
Gains and losses on debt instruments measured at fair value through other comprehensive income	**935**	**-17,781**
Gains (+)/losses (-) arising during the reporting period	845	-17,907
Gains (-)/losses (+) reclassified to the income statement during the reporting period	90	126
Exchange differences on currency translation of foreign operations	**-1**	**35**
Gains (+)/losses (-) arising during the reporting period	-1	34
Gains (-)/losses (+) reclassified to the income statement during the reporting period	-	1
Insurance finance income or expenses included in other comprehensive income	**-1,107**	**14,190**
Gains (+)/losses (-) arising during the reporting period	-1,107	14,190
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	**-8**	**8**
Gains (+)/losses (-) arising during the reporting period	-8	8

» 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:

	Jan. 1–Jun. 30, 2023			Jan. 1–Jun. 30, 2022		
€ million	Amount before taxes	Income taxes	Amount after taxes	Amount before taxes	Income taxes	Amount after taxes
Items that may be reclassified to the income statement	**-180**	**-7**	**-188**	**-3,549**	**1,163**	**-2,386**
Gains and losses on debt instruments measured at fair value through other comprehensive income	935	-239	696	-17,781	5,570	-12,211
Exchange differences on currency translation of foreign operations	-1	2	1	35	-3	32
Insurance finance income or expenses included in other comprehensive income	-1,107	230	-877	14,190	-4,403	9,786
Share of other comprehensive income/loss of joint ventures and associates accounted for using the equity method	-8	-	-8	8	-	8
Items that will not be reclassified to the income statement	**549**	**-153**	**397**	**-503**	**136**	**-367**
Gains and losses on equity instruments for which the fair value OCI option has been exercised	267	-67	201	-940	262	-678
Gains and losses in relation to financial liabilities for which the fair value option has been exercised, attributable to changes in own credit risk	316	-99	217	-15	6	-9
Gains and losses arising from remeasurement of defined benefit plans	-34	13	-21	452	-133	319
Total	**369**	**-160**	**209**	**-4,052**	**1,299**	**-2,752**

C Balance sheet disclosures

» 20 Cash and cash equivalents

€ million	Jun. 30, 2023	Dec. 31, 2022
Cash on hand	272	312
Balances with central banks	113,079	93,405
Total	**113,351**	**93,717**

» 21 Loans and advances to banks

€ million	Repayable on demand		Other loans and advances		Total	
	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022
Domestic banks	**7,306**	6,666	**115,751**	107,350	**123,057**	114,015
Affiliated banks	3,815	4,033	112,511	103,471	116,326	107,505
Other banks	3,491	2,632	3,240	3,878	6,731	6,510
Foreign banks	**2,377**	2,636	**4,632**	6,793	**7,008**	9,429
Total	**9,682**	9,301	**120,383**	114,142	**130,065**	123,444

» 22 Loans and advances to customers

€ million	Jun. 30, 2023	Dec. 31, 2022
Loans and advances to domestic customers	177,997	176,145
Loans and advances to foreign customers	27,410	27,501
Total	**205,407**	**203,646**

» 23 Hedging instruments (positive fair values)

Hedging instruments (positive fair values) amounted to €1,292 million (December 31, 2022: €1,568 million) and resulted solely from derivatives used as fair value hedges.

» 24 Financial assets held for trading

€ million	Jun. 30, 2023	Dec. 31, 2022
DERIVATIVES (POSITIVE FAIR VALUES)	**18,850**	**21,474**
Interest-linked contracts	16,017	17,779
Currency-linked contracts	1,854	2,956
Share-/index-linked contracts	771	547
Other contracts	10	6
Credit derivatives	198	187
BONDS AND OTHER FIXED-INCOME SECURITIES	**9,661**	**7,729**
Money market instruments	1,040	212
Bonds	8,620	7,517
SHARES AND OTHER VARIABLE-YIELD SECURITIES	**1,386**	**1,388**
Shares	1,382	1,381
Investment fund units	4	7
RECEIVABLES	**7,893**	**18,318**
of which from affiliated banks	274	76
of which from other banks	7,038	16,915
Money market placements	**6,868**	**17,058**
with banks	6,758	16,322
with customers	110	737
Promissory notes and registered bonds	**1,025**	**1,259**
from banks	553	669
from customers	471	590
Total	**37,790**	**48,909**

» 25 Investments

€ million	Jun. 30, 2023	Dec. 31, 2022
Bonds and other fixed-income securities	**43,325**	**40,731**
Money market instruments	1,488	1,070
Bonds	41,837	39,661
Shares and other variable-yield securities	**2,691**	**1,962**
Shares and other shareholdings	441	470
Investment fund units	2,250	1,491
Other variable-yield securities	-	1
Investments in subsidiaries	**232**	**236**
Investments in joint ventures	**329**	**320**
Investments in associates	**133**	**144**
Total	**46,710**	**43,393**

The carrying amount of investments in joint ventures accounted for using the equity method totaled €326 million (December 31, 2022: €317 million). €128 million of the investments in associates has been accounted for using the equity method (December 31, 2022: €131 million).

» 26 Investments held by insurance companies

€ million	Jun. 30, 2023	Dec. 31, 2022
Investment property	3,974	4,028
Investments in subsidiaries	819	840
Investments in joint ventures	71	69
Investments in associates	1	1
Mortgage loans	11,365	10,960
Promissory notes and loans	5,903	5,946
Registered bonds	5,370	5,430
Other loans	1,039	834
Variable-yield securities	12,563	13,023
Fixed-income securities	50,671	47,652
Derivatives (positive fair values)	90	278
Deposits with ceding insurers and other investments	73	56
Assets related to unit-linked contracts	19,268	16,429
Total	**111,206**	**105,548**

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

€ million	Jun. 30, 2023	Dec. 31, 2022
Land and buildings	861	867
Office furniture and equipment	174	179
Investment property	289	293
Right-of-use assets	589	622
Total	**1,913**	**1,960**

» 28 Other assets

€ million	Jun. 30, 2023	Dec. 31, 2022
Other assets held by insurance companies	3,373	3,799
Goodwill	155	155
Other intangible assets	446	508
of which software	405	415
of which acquired customer relationships	10	60
Other loans and advances	521	464
Residual other assets	1,160	1,693
Total	**5,654**	**6,619**

Residual other assets included initial margins from client clearing of €660 million (December 31, 2022: €1,129 million).

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

€ million	Jun. 30, 2023	Dec. 31, 2022
Intangible assets	**136**	145
Reinsurance contract assets	**391**	560
Liability for remaining coverage	40	36
Liability for incurred claims	351	524
Insurance contract assets	**-**	2
Liability for remaining coverage	3	3
Liability for incurred claims	-3	-1
Receivables	**901**	1,033
Credit balances with banks, checks and cash on hand	**297**	703
Property, plant and equipment	**420**	410
Residual other assets	**1,229**	947
Loss allowances	**-1**	-1
Total	3,373	3,799

Property, plant and equipment included right-of-use assets amounting to €70 million (December 31, 2022: €64 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, 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**
Balance as at Jan. 1, 2023	17	5	32	244	535	1,157	18
Additions	15	1	3	120	434	553	14
Utilizations	-	-	-	-	-1	-96	-2
Reversals	-17	-3	-8	-218	-293	-461	-13
Other changes	-	-	1	108	-163	54	-5
Balance as at Jun. 30, 2023	**16**	**3**	**27**	**255**	**512**	**1,208**	**11**

	Investments			Other assets	Total
€ million	Stage 1	Stage 2	Stage 3	Stage 1	
Balance as at Jan. 1, 2022	4	13	5	2	1,956
Additions	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**
Balance as at Jan. 1, 2023	4	11	4	2	2,029
Additions	1	1	1	-	1,143
Utilizations	-	-	-	-	-100
Reversals	-4	-2	-1	-1	-1,021
Other changes	3	-3	-	-	-5
Balance as at Jun. 30, 2023	**3**	**6**	**4**	**1**	**2,047**

» 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.

The disposal groups not qualifying as discontinued operations include units in various investment funds. The non-current assets individually classified as held for sale comprise real estate, investments in associates, and other shareholdings. The sale of these non-current assets individually classified as held for sale is expected to take place in the second half of 2023.

The sale of non-current assets individually classified as held for sale gave rise to income of €3 million in the first half of 2023, which was recognized under other net operating income.

» 31 Deposits from banks

	Repayable on demand		With agreed maturity or notice period		Total	
€ million	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022
Domestic banks	**36,684**	46,067	**120,935**	124,645	**157,619**	170,712
Affiliated banks	31,646	41,487	30,842	33,705	62,488	75,192
Other banks	5,038	4,580	90,093	90,940	95,132	95,520
Foreign banks	**12,100**	7,093	**11,786**	8,983	**23,886**	16,075
Total	**48,784**	53,160	**132,721**	133,628	**181,505**	186,787

» 32 Deposits from customers

	Repayable on demand		With agreed maturity or notice period		Total	
€ million	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022
Domestic customers	35,315	30,418	100,681	99,261	135,996	129,679
Foreign customers	21,545	17,265	6,850	12,485	28,395	29,750
Total	**56,860**	47,682	**107,531**	111,747	**164,391**	159,429

» 33 Debt certificates issued including bonds

€ million	Jun. 30, 2023	Dec. 31, 2022
Bonds issued	**80,062**	68,271
Mortgage Pfandbriefe	30,058	28,968
Public-sector Pfandbriefe	1,626	1,232
Other bonds	48,378	38,071
Other debt certificates issued	**19,991**	14,077
Total	**100,053**	82,349

As was also the case as at December 31, 2022, all other debt certificates issued are commercial paper.

» 34 Hedging instruments (negative fair values)

Hedging instruments (negative fair values) amounted to €651 million (December 31, 2022: €442 million) and resulted solely from derivatives used as fair value hedges.

» 35 Financial liabilities held for trading

€ million	Jun. 30, 2023	Dec. 31, 2022
DERIVATIVES (NEGATIVE FAIR VALUES)	**21,858**	**26,641**
Interest-linked contracts	18,140	21,217
Currency-linked contracts	1,904	3,148
Share-/index-linked contracts	1,523	1,899
Other contracts	206	270
Credit derivatives	84	107
SHORT POSITIONS	**2,094**	**1,017**
BONDS ISSUED	**21,582**	**20,014**
DEPOSITS	**7,274**	**4,806**
of which from affiliated banks	3,570	3,705
of which from other banks	3,553	954
Money market deposits	**7,122**	**4,652**
from banks	7,056	4,592
from customers	67	60
Promissory notes and registered bonds issued	**151**	**155**
to banks	68	68
to customers	83	87
Total	**52,807**	**52,478**

As was also the case as at December 31, 2022, bonds issued mainly comprise share certificates and index-linked certificates.

» 36 Provisions

€ million	Jun. 30, 2023	Dec. 31, 2022
Provisions for employee benefits	**1,331**	**1,356**
Provisions for defined benefit plans	950	922
Provisions for other long-term employee benefits	185	200
of which for semi-retirement schemes	69	72
Provisions for termination benefits	180	206
of which for early retirement schemes	25	26
of which for restructuring	114	135
Provisions for short-term employee benefits	16	28
Provisions for share-based payment transactions	**41**	**51**
Other provisions	**1,692**	**1,841**
Provisions for onerous contracts	23	30
Provisions for restructuring	8	16
Provisions for loan commitments	129	147
Provisions for financial guarantee contracts	93	89
Other provisions for loans and advances	53	51
Provisions relating to building society operations	977	1,053
Residual provisions	410	455
Total	**3,064**	**3,248**

The underlying discount rate used to measure the defined benefit obligations fell from 3.70 percent as at December 31, 2022 to 3.60 percent as at June 30, 2023. The assumptions about salary and annuity trends were unchanged compared with December 31, 2022.

» 37 Insurance contract liabilities

€ million	Jun. 30, 2023	Dec. 31, 2022
Insurance contract liabilities	**102,238**	**97,648**
Liability for remaining coverage	90,805	85,989
Liability for incurred claims	11,433	11,659
Reinsurance contract liabilities	**1**	**-**
Liability for remaining coverage	2	1
Liability for incurred claims	-1	-
Total	**102,239**	**97,649**

» 38 Other liabilities

€ million	Jun. 30, 2023	Dec. 31, 2022
Other liabilities of insurance companies	5,565	5,534
Accruals	987	1,485
Other payables	220	221
Lease liabilities	610	637
Residual other liabilities	1,045	1,083
Total	**8,426**	**8,960**

Residual other liabilities included initial margins from client clearing of €637 million (December 31, 2022: €764 million).

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

€ million	Jun. 30, 2023	Dec. 31, 2022
Other provisions	352	354
Payables and residual other liabilities	5,213	5,180
Total	**5,565**	**5,534**

Other provisions included provisions for defined benefit plans of €122 million (December 31, 2022: €119 million). The underlying discount rate used to measure the defined benefit obligations fell from 3.70 percent as at December 31, 2022 to 3.60 percent as at June 30, 2023. The assumptions about salary and annuity trends were unchanged compared with December 31, 2022.

Payables and residual other liabilities included lease liabilities of €81 million (December 31, 2022: €80 million).

» 39 Subordinated capital

€ million	Jun. 30, 2023	Dec. 31, 2022
Subordinated liabilities	4,377	4,510
Share capital repayable on demand	12	12
Total	**4,389**	**4,521**

» 40 Equity

Reserve from other comprehensive income

As a result of the introduction of IFRS 17, the breakdown of the reserve from other comprehensive income, which was described in the consolidated financial statements for the year ended December 31, 2022, has been expanded to include a reserve for insurance contracts measured at fair value through other comprehensive income. This reserve contains the cumulative insurance finance income or expenses that were recognized in other comprehensive income taking deferred taxes into account.

Additional equity components

Additional Tier 1 notes

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

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

In previous years, DZ BANK had issued tranches of AT1 bonds in 2 placements with a total volume of €2,150 million. In both placements, the AT1 bonds are split into 4 types depending on their interest-rate arrangements (types A to D). All interest is payable annually; the date for the payment of interest has been specified as August 1 each year in both placements.

Under the terms and conditions of the bonds, interest payments are at the discretion of the issuer. They may be canceled, either wholly or in part, depending on the items eligible for distribution. In addition, the competent supervisory authority can prohibit the interest payments, either wholly or in part. Interest payments are not cumulative; canceled or reduced payments will not be made up in subsequent periods.

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

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

Breakdown of changes in equity by component of other comprehensive income

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 compre-hensive income	Currency translation reserve	Reserve for insurance contracts measured at fair value through other compre-hensive income
Equity as at Jan. 1, 2022	621	-54	1,025	58	-
Restatements according to IAS 8	572	-	2,355	3	-2,762
Equity restated as at Jan. 1, 2022	1,193	-54	3,380	61	-2,762
Other comprehensive income/loss	-609	-9	-10,941	41	8,795
Total comprehensive income/loss	**-609**	**-9**	**-10,941**	**41**	**8,795**
Changes in scope of consolidation	4	-	-	-	-
Acquisition/disposal of non-controlling interests	-	-	2	-	-
Reclassifications within equity	-110	-5	-	-	-
Equity as at Jun. 30, 2022	**478**	**-67**	**-7,559**	**102**	**6,033**
Equity as at Jan. 1, 2023	690	59	-10,786	80	8,829
Other comprehensive income/loss	179	217	603	-12	-780
Total comprehensive income/loss	**179**	**217**	**603**	**-12**	**-780**
Acquisition/disposal of non-controlling interests	-	-	16	-	-16
Reclassifications within equity	-190	-1	-	-	-
Equity as at Jun. 30, 2023	**679**	**275**	**-10,166**	**68**	**8,034**

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

	Investments		Investments held by insurance companies			Total
€ million	Stage 1	Stage 3	Stage 1	Stage 2	Stage 3	
Balance as at Jan. 1, 2022	7	24	19	2	1	53
Restatements according to IAS 8	-	-	22	6	-	27
Balance restated as at Jan. 1, 2022	7	24	40	8	1	81
Additions	4	-	22	16	2	45
Utilizations	-	-	-	-	-2	-2
Reversals	-3	-	-16	-9	-	-29
Other changes	-	-	-5	-2	-	-7
Balance as at Jun. 30, 2022	**8**	**24**	**42**	**14**	**1**	**89**
Balance as at Jan. 1, 2023	7	24	34	17	1	83
Additions	3	-	4	1	6	15
Utilizations	-	-	-	-	-6	-6
Reversals	-4	-	-27	-5	-	-37
Other changes	-	-	17	-8	-	9
Balance as at Jun. 30, 2023	**6**	**24**	**27**	**5**	**1**	**63**

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 'Risk report', section 5 '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, 2023 Carrying amount	Jun. 30, 2023 Fair value	Dec. 31, 2022 Carrying amount	Dec. 31, 2022 Fair value
FINANCIAL ASSETS MEASURED AT FAIR VALUE	**185,123**	**185,144**	**187,855**	**187,870**
Financial assets measured at fair value through profit or loss	**77,245**	**77,266**	**85,556**	**85,571**
Financial assets mandatorily measured at fair value through profit or loss	***72,124***	***72,145***	***80,128***	***80,142***
Loans and advances to customers	205	205	192	192
Hedging instruments (positive fair values)	1,292	1,292	1,568	1,568
Financial assets held for trading	37,790	37,811	48,909	48,923
Investments	3,206	3,206	2,489	2,489
Investments held by insurance companies	29,630	29,630	26,970	26,970
Financial assets designated as at fair value through profit or loss	***5,121***	***5,121***	***5,428***	***5,428***
Loans and advances to banks	1,248	1,248	1,340	1,340
Loans and advances to customers	595	595	753	753
Investments	3,278	3,278	3,336	3,336
Financial assets measured at fair value through other comprehensive income	**107,822**	**107,822**	**102,280**	**102,280**
Financial assets mandatorily measured at fair value through other comprehensive income	***102,046***	***102,046***	***95,861***	***95,861***
Loans and advances to banks	55	55	55	55
Loans and advances to customers	2,063	2,063	2,070	2,070
Investments	27,799	27,799	25,244	25,244
Investments held by insurance companies	72,130	72,130	68,492	68,492
Financial assets designated as at fair value through other comprehensive income	***5,776***	***5,776***	***6,419***	***6,419***
Investments	467	467	504	504
Investments held by insurance companies	5,310	5,310	5,916	5,916
Non-current assets and disposal groups classified as held for sale	**56**	**56**	**19**	**19**
FINANCIAL ASSETS MEASURED AT AMORTIZED COST	**451,132**	**429,854**	**422,802**	**401,048**
Cash and cash equivalents	113,079	113,078	93,405	93,400
Loans and advances to banks	128,715	119,049	121,994	111,969
Loans and advances to customers	200,049	184,757	198,125	182,465
Investments	11,492	11,273	11,354	11,129
Investments held by insurance companies	90	99	85	73
Other assets	1,599	1,599	2,011	2,011
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	-3,891		-4,173	
FINANCE LEASES	**510**	**506**	**552**	**555**
Loans and advances to customers	509	505	552	555

€ million	Jun. 30, 2023 Carrying amount	Jun. 30, 2023 Fair value	Dec. 31, 2022 Carrying amount	Dec. 31, 2022 Fair value
FINANCIAL LIABILITIES MEASURED AT FAIR VALUE	**79,116**	**79,053**	**78,755**	**78,668**
Financial liabilities mandatorily measured at fair value through profit or loss	**53,545**	**53,488**	**53,142**	**53,068**
Hedging instruments (negative fair values)	651	651	442	442
Financial liabilities held for trading	52,807	52,750	52,478	52,404
Other liabilities	87	87	223	223
Financial liabilities designated as at fair value through profit or loss	**25,571**	**25,564**	**25,612**	**25,600**
Deposits from banks	3,734	3,734	3,888	3,887
Deposits from customers	6,220	6,213	6,089	6,081
Debt certificates issued including bonds	15,618	15,618	15,565	15,562
Subordinated capital	-	-	69	69
FINANCIAL LIABILITIES MEASURED AT AMORTIZED COST	**425,708**	**411,232**	**408,306**	**392,653**
Deposits from banks	177,772	169,792	182,899	173,934
Deposits from customers	158,171	156,292	153,339	151,400
Debt certificates issued including bonds	84,435	79,163	66,783	61,413
Other liabilities	2,077	2,077	1,979	1,979
Subordinated capital	4,389	3,907	4,452	3,928
Fair value changes of the hedged items in portfolio hedges of interest-rate risk	-1,136		-1,147	
LEASES	**690**	**690**	**717**	**717**
Other liabilities	690	690	717	717
FINANCIAL GUARANTEE CONTRACTS AND LOAN COMMITMENTS	**222**	**614**	**236**	**780**
Financial guarantee contracts	**93**	**93**	**89**	**89**
Provisions	93	93	89	89
Loan commitments	**129**	**522**	**147**	**691**
Provisions	129	522	147	691

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

Building society simulation models are used to calculate risk-bearing capacity and for regulatory purposes. These models have been updated in line with the increased requirements imposed by the banking supervisor in recent years. Statistical parameters, empirical values, and current market assessments are used in the models. The present value of the expected future cash flows from the collective contracts in force, less cost components and risk margins, is compared with the balance of the carrying amounts from building society operations below. The balance of the carrying amounts from building society operations amounted to minus €62,536 million (excess of liabilities; December 31, 2022: minus €64,430 million), whereas the collective present value came to minus €53,329 million (December 31, 2022: minus €54,469 million).

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

» 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 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, plus deferral of the day-one profit or loss. The unrecognized difference is amortized to profit or loss over the term.

The following table shows the deferred, previously unrecognized differences.

	Measured at fair value	
€ million	Financial assets	Financial liabilities
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**
Balance as at Jan. 1, 2023	14	87
Additions as a result of transactions	9	19
Differences amortized to profit or loss	-2	-42
Balance as at Jun. 30, 2023	**21**	**64**

» 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:

	Level 1		**Level 2**		**Level 3**	
€ million	**Jun. 30, 2023**	Dec. 31, 2022	**Jun. 30, 2023**	Dec. 31, 2022	**Jun. 30, 2023**	Dec. 31, 2022
Assets	**86,364**	69,475	**72,398**	94,824	**26,383**	23,570
Loans and advances to banks	-	-	1,303	1,395	-	-
Loans and advances to customers	-	-	2,230	2,419	632	596
Hedging instruments (positive fair values)	-	-	1,285	1,568	7	-
Financial assets held for trading	7,806	1,394	28,467	46,906	1,538	623
Investments	20,246	13,020	11,613	16,567	2,891	1,985
Investments held by insurance companies	58,312	55,061	27,443	25,951	21,314	20,366
Non-current assets and disposal groups classified as held for sale	-	-	56	19	-	-
Liabilities	**2,004**	3,059	**78,030**	77,080	**1,137**	572
Deposits from banks	-	-	3,734	3,887	-	-
Deposits from customers	-	-	6,086	6,081	127	-
Debt certificates issued including bonds	-	2,987	15,180	12,170	438	404
Hedging instruments (negative fair values)	-	-	648	442	3	-
Financial liabilities held for trading	1,994	51	50,188	52,255	568	98
Insurance contract liabilities	-	-	2,118	2,043	-	-
Other liabilities	9	21	77	201	-	-
Subordinated capital	-	-	-	-	-	69

The investments held by insurance companies measured at fair value include assets related to unit-linked contracts. These are offset within insurance contract liabilities by financial liabilities that arise from unit-linked insurance products and are measured using the variable fee approach under IFRS 17, and by liabilities measured at fair value from investment contracts that are allocated to unit-linked life insurance.

Transfers

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

€ million	Transfers from Level 1 to Level 2		Transfers from Level 2 to Level 1	
	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Financial assets measured at fair value	**2,038**	791	**15,103**	468
Financial assets held for trading	46	-	6,394	-
Investments	1,552	5	8,060	35
Investments held by insurance companies	440	786	649	433
Financial liabilities measured at fair value	**2,534**	-	**1,665**	-
Debt certificates issued including bonds	2,520	-	-	-
Financial liabilities held for trading	13	-	1,665	-

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

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

Fair value measurements within Levels 2 and 3

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

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

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

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

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

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

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

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

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

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

The method for assessing the observability of inputs was refined as at June 30, 2023. In respect of financial instruments with unrecognized differences at the time of initial recognition, the resulting change of estimate led to the amortization to profit or loss of the day-one profit or loss previously deferred of €41 million.

Risk categories

ABS spreads

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

Adjustment spreads

Adjustment spreads help to calibrate model prices to transaction prices. They are particularly factored into the measurement of bonds and registered securities. Financial instruments for which adjustment spreads are available are all assigned to Level 3 as these generally have their own specific unobservable spreads with a significant effect on fair value. The presentation of the sensitivities to adjustment spreads relates to a shift of plus 1 basis point.

Probability of default

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

Bond spreads

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

Commodity prices

This category includes not only commodity prices but also prices for commodity indices. These are frequently factored into the measurement of futures, options, swaps, and structured issues. The presentation of the sensitivities to commodity prices relates to a shift of plus 1 percent in relation to fair value.

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

Discount rate for investments in companies
The discount rate for investments in companies largely comprises the risk-free basic interest rate, the premium for market risk, and the company-specific beta factor. The presentation of the sensitivities to the discount rate for investments in companies relates to a shift of plus 1 percentage point.

Dividends
This category covers estimated future dividend yields as well as repo yields and convenience yields. The presentation of the sensitivities to dividends relates to a shift of plus 1 percentage point.

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

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

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

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

Funding and treasury spreads
Funding spreads and treasury spreads are internal measurement spreads for determining the fair values of own issues. The presentation of the sensitivities to funding and treasury spreads relates to a shift of plus 1 basis point.

FX rates
Foreign exchange rates belong to this category. They are factored into the measurement of all products traded in a foreign currency or in which at least one of the underlying instruments being measured is denominated in a foreign currency. The presentation of the sensitivities to FX rates relates to a change in the absolute amount in relation to the euro exchange rate.

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

Correlations
These include, for example, correlations between equities, commodities, and currencies that are used in the measurement of derivatives and investment certificates. The presentation of the sensitivities to correlations relates to a shift of plus 1 percentage point.

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

Subordinated spreads
Subordinated spreads include mark-ups for the measurement of tier bonds, depending on the capital's subordination level. They are particularly factored into the measurement of bonds and registered securities. Financial instruments for which subordinated spreads are available are all assigned to Level 3 of the fair value hierarchy as these generally have their own specific unobservable spreads with a significant influence on fair value. The presentation of the sensitivities to subordinated spreads relates to a shift of plus 1 basis point.

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

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

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

Aggregate sensitivity

For each product type whose fair value is based on unobservable inputs and are therefore assigned to Level 3, the inputs used in the measurement of the assets and liabilities are used to determine and present an aggregate sensitivity. The aggregate sensitivity, presented in euros, provides information about the sensitivity of assets and liabilities in each class to a change in the unobservable inputs used in the measurement of this class, such inputs belonging to the risk category identified for this class. The aggregate sensitivity relates to a standardized change in the inputs in the risk category, for example relating to a change of plus 1 basis point. For example, an aggregate sensitivity of €1 million for the 'yield curves' risk category means that a change of plus 10 basis points would result in an increase in fair value of €10 million for the line item.

Measurements of fair value at Level 3 as at June 30, 2023

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

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Risk category	Sensitivity reference value	Valuation technique	Aggregate sensitivity (€ million)
Loans and advances to customers	Loans	12	Impairment	Absolute amount (impairment)	Present value for which loss allowances have been recognized	-
	Receivables arising from silent partnerships	52	Impairment	Absolute amount (impairment)	Mark-to-model (DCF)	-1
	Profit-participation certificates and promissory notes	427	Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (DCF)	3
	Profit-participation certificates and promissory notes	26	Impairment	Absolute amount (impairment)	Mark-to-model (DCF)	-
	Shareholders' loans	101	Impairment	Absolute amount (impairment)	Mark-to-model (DCF)	-2
	Initial fund loans	14	Probability of default	Shift of +1 basis point	Mark-to-model (DCF)	-
Derivatives used for hedging (positive fair values)	Derivatives	7	Yield curves	Shift of +1 basis point	Mark-to-model (other)	-
Financial assets held for trading	Equity/commodity basket products	4	Equity prices	Shift of +1% in relation to fair value	Mark-to-market	-
			Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (other)	91
			Volatilities (log-normal)	Shift of +1 percentage point	Mark-to-model (other)	-107
	Derivatives	956	Volatilities (normal)	Shift of +1 basis point	Mark-to-model (other)	12
	Derivatives	3	Mean reversion	Shift of +1 basis point	Mark-to-model (other)	-
	Profit-participation certificates and promissory notes	270	Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (DCF)	-
	Bonds	304	Illiquid market prices	Shift of +1% in relation to fair value	Mark-to-model (DCF)	145
	Purchase option on investments in companies	1	Discount rate for investments in companies	Shift of +1 percentage point	Mark-to-model (other)	-

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Risk category	Sensitivity reference value	Valuation technique	Aggregate sensitivity (€ million)
Investments	ABSs	2	ABS spreads	Shift of +1 basis point	Mark-to-model (DCF)	-
	ABSs	218	Duration	Shift of +1 year	Mark-to-model (other)	-14
	Investments in joint ventures	6	Discount rate for investments in companies	Shift of +1 percentage point	Income capitalization approach	-
	Investments in subsidiaries	1	Dividend estimate	Shift of +1 percentage point	Mark-to-model (DCF)	-
	Investments in subsidiaries	55	Yield curves	Shift of +1 basis point	Mark-to-model (DCF)	-
	Investments in subsidiaries	9	Yield curves	Shift of +1 basis point	Net asset value	-
	Investments in subsidiaries	167	Discount rate for investments in companies	Shift of +1 percentage point	Income capitalization approach	-4
	Investments in subsidiaries	1	Equity prices	Shift of +1% in relation to fair value	Net asset value	-
	Bearer securities	869	Illiquid market prices	Shift of +1% in relation to fair value	Mark-to-market	8
	Investment fund units	9	Yield curves	Shift of +1 basis point	Net asset value	-
			Illiquid market prices	Shift of +1% in relation to fair value	Mark-to-model (other)	-
	Investment fund units	17	Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (other)	7
			Illiquid market prices	Shift of +1% in relation to fair value	Mark-to-model (DCF)	670
	Bonds	1,090	Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (DCF)	1
	Bonds	6	Impairment	Absolute amount (impairment)	Present value for which loss allowances have been recognized	-
	Other shareholdings	210	Discount rate for investments in companies	Shift of +1 percentage point	Income capitalization approach	-2
	Other shareholdings	200	Dividend estimate	Shift of +1 percentage point	Mark-to-model (DCF)	2
	Other shareholdings	23	Yield curves	Shift of +1 basis point	Mark-to-model (DCF)	-
	Other shareholdings	8	Equity prices	Shift of +1% in relation to fair value	Net asset value	-

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Risk category	Sensitivity reference value	Valuation technique	Aggregate sensitivity (€ million)
Investments held by insurance companies	ABSs	1,538			Third-party pricing information	-
	Investments in subsidiaries, associates, and joint ventures, and other shareholdings	5,370	Equity prices	Shift of +1% in relation to fair value	Net asset value	-
	Investments in subsidiaries, associates, and joint ventures, and other shareholdings	286	Dividend estimate	Shift of +1 percentage point	Income capitalization approach	-
	Investments in subsidiaries, associates, and joint ventures, and other shareholdings	12			Third-party pricing information	-
			Bond spreads	Shift of +1 basis point	Mark-to-model (DCF)	-1
	Loans	1,751	Yield curves	Shift of +1 basis point	Mark-to-model (DCF)	-1
	Fixed-income securities, convertible bonds, shares, investment fund units, and shares in cooperatives	643			Third-party pricing information	-
	Profit-participation certificates and promissory notes	269	Bond spreads	Shift of +1 basis point	Mark-to-model (DCF)	-
	Initial fund loans	84	Probability of default	Shift of +1 basis point	Mark-to-model (DCF)	-
			Bond spreads	Shift of +1 basis point	Mark-to-model (DCF)	-10
	Mortgage loans	11,361	Yield curves	Shift of +1 basis point	Mark-to-model (DCF)	-11
Deposits from customers (FVO)	Profit-participation certificates and promissory notes	127	Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (DCF)	5
Debt certificates issued including bonds			Illiquid market prices	Shift of +1% in relation to fair value	Mark-to-model (DCF)	-394
			Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (DCF)	2
	Bonds	438	Volatilities (log-normal)	Shift of +1 percentage point	Mark-to-model (DCF)	-1
Derivatives used for hedging (negative fair values)	Derivatives	3	Yield curves	Shift of +1 basis point	Mark-to-model (other)	-
Financial liabilities held for trading			Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (other)	36
			Volatilities (log-normal)	Shift of +1 percentage point	Mark-to-model (other)	76
	Derivatives	474	Volatilities (normal)	Shift of +1 basis point	Mark-to-model (other)	-6
	Derivatives	7	Mean reversion	Shift of +1 basis point	Mark-to-model (other)	-
	Bonds	87	Fair value adjustments	Absolute amount (fair value adjustment)	Mark-to-model (DCF)	2

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

The following table shows the valuation techniques, the unobservable inputs, and their spreads used for the fair value measurements at Level 3 of the fair value hierarchy. Due to the change in the method used to determine observability for each individual input used in the calculation of fair value, the disclosures as at December 31, 2022 are not comparable with those as at June 30, 2023.

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Loans and advances to customers	Loans	404	DCF method	BVAL price adjustment	-4.0 to 5.3
	Profit-participation certificates	25	DCF method	Credit spread	7.4 to 8.2
	Shareholders' loans	91	DCF method	Credit spread	3.6 to 12.1
	Initial fund loans	16	DCF method	Probability of default	0.4
	Receivables arising from silent partnerships	54	DCF method	Credit spread	6.1 to 12.2
	Loans and advances to issuers in default	6	DCF method	Recovery rate	-
Financial assets held for trading	ABSs	2	DCF method	Credit spread	7.9
	Loans and advances to issuers in default	17	DCF method	Recovery rate	-
	Collateralized loan obligations	133	Gaussian copula model	Liquidity spread	2.0 to 6.5
	Bearer securities	127	DCF method	BVAL price adjustment	-0.3 to 1.5
	Registered securities	343	DCF method	BVAL price adjustment	-4.0 to 5.3
	Option in connection with acquisition of long-term equity investments	1	Black-Scholes model	Earnings indicators	-
Investments	ABSs	61	DCF method	Credit spread	0.6 to 13.1
	Investments in associates	4	Income capitalization approach	Future income	-
	Investments in joint ventures	2	Income capitalization approach	Future income	-
		57	DCF method	Credit spread	0 to 11.5
		172	Income capitalization approach, net asset value method	Future income	-
	Investments in subsidiaries	7	Net asset value	-	-
	Collateralized loan obligations	1	Gaussian copula model	Liquidity spread	1.8 to 2.6
	Loans and advances to issuers in default	6	DCF method	Recovery rate	-
	Bearer securities	567	DCF method	BVAL price adjustment	-0.3 to 107.5
	Investment fund units	23	Net asset value	-	-
		195	DCF method	Duration	-
	Mortgage-backed securities	15	DCF method	Recovery rate	0.0 to 71.4
		245	DCF method	Capitalization rate, growth factor	1.0 to 11.0
		22	DCF method	Credit spread	0.0
	Other shareholdings	203	Income capitalization approach, net asset value method	Future income	-
	VR Circle	405	DCF method	Multiple-year default probabilities	0.0 to 100.0

Class according to IFRS 13	Assets/liabilities	Fair value (€ million)	Valuation technique	Unobservable inputs	Spread of unobservable inputs (%)
Investments held by insurance companies	ABSs	1,547	Third-party pricing information	-	-
	Investments in subsidiaries, associates, and joint ventures, real estate funds, profit-participation certificates, and other long-term equity investments	5,038	Net asset value	-	-
	Investments in subsidiaries, associates, and joint ventures, other long-term equity investments, and shares in cooperatives	287	Income capitalization approach	Future income	7.0 to 9.0
	Fixed-income securities, convertible bonds, shares, investment fund units, and shares in cooperatives	754	Third-party pricing information	-	-
	Profit-participation certificates, mortgage loans, and promissory notes	12,674	DCF method	Credit spread	0.6 to 10.0
	Initial fund loans	56	DCF method	Probability of default	0.4
	Other shareholdings	10	Approximation	-	-
Debt certificates issued including bonds	VR Circle	404	DCF method	Multiple-year default probabilities	0.0 to 100.0
Financial liabilities held for trading	Equity/commodity basket products	95	Local volatility model	Correlation of the risk factors considered	10.1 to 80.7
	Products with commodity volatility derived from comparable instruments	3	Local volatility model	Volatility	12.2 to 86.8
Subordinated capital	Loans	69	DCF method	Credit spread	0.5

Fair value measurements within Level 3 of the fair value hierarchy

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

€ million	Loans and advances to customers	Derivatives used for hedging (positive fair values)	Financial assets held for trading	Investments	Investments held by insurance companies	Non-current assets and disposal groups classified as held for sale
Balance as at Jan. 1, 2022	679	-	645	1,900	21,365	163
Additions (purchases)	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**
Balance as at Jan. 1, 2023	596	-	623	1,985	20,366	-
Additions (purchases)	4	-	828	240	1,714	-
Transfers	44	-	1,041	1,376	28	-
from Level 3 to Levels 1 and 2	-2	-	-173	-725	-2	-
from Levels 1 and 2 to Level 3	46	-	1,214	2,101	30	-
Disposals (sales)	-14	-	-964	-676	-777	-
Changes resulting from measurement at fair value	-1	-	21	-36	-1	-
through profit or loss	-2	-	27	20	-93	-
through other comprehensive income	1	-	-6	-56	92	-
Other changes	3	7	-9	2	-17	-
Balance as at Jun. 30, 2023	**632**	**7**	**1,538**	**2,891**	**21,314**	**-**

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

€ million	Deposits from customers	Debt certificates issued including bonds	Derivatives used for hedging (negative fair values)	Financial liabilities held for trading	Subordinated capital
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**
Balance as at Jan. 1, 2023	-	404	-	98	69
Additions (issues)	-	93	-	403	-
Transfers	128	3	-	224	-
from Level 3 to Level 2	-	-	-	-1,874	-
from Level 2 to Level 3	128	3	-	2,099	-
Disposals (settlements)	-	-62	-	-193	-68
Changes resulting from measurement at fair value	-	-1	-	46	-
through profit or loss	2	-1	-	69	1
through other comprehensive income	-2	-	-	-23	-1
Other changes	-	1	3	-11	-1
Balance as at Jun. 30, 2023	**127**	**438**	**3**	**568**	**-**

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

For each input used in the calculation of fair value, a liquidity score is determined on an ongoing basis that provides information on whether the underlying market is active and the input is observable. Various parameters are used to determine the liquidity score, irrespective of the market data group. In respect of equity prices, for example, a check is carried out of whether the equity was traded in a specified period and whether the trading volume has exceeded a certain threshold. For bonds, the bid-ask spread and the number of price contributors are taken into account. The rules on determining the liquidity score are set centrally by DZ BANK AG and apply to all group entities. On the basis of the liquidity scores determined, the fair value measurements are assigned to the levels of the fair value hierarchy, provided that the group entities use the centralized market database. In the DZ BANK Group, transfers between the levels generally take place as soon as there is a change in the inputs that is relevant to categorization in the fair value hierarchy.

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

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

The amount of gains or losses recognized in profit or loss resulting from the recurring fair value measurements within Level 3 of assets and liabilities held at the balance sheet date constituted a net loss of €142 million during the reporting period (first half of 2022: net gain of €174 million). The gains or losses are predominantly included in the line items gains and losses on trading activities, other gains and losses on valuation of financial instruments, and gains and losses on investments held by insurance companies and other insurance company gains and losses.

Exercise of option pursuant to IFRS 13.48

The option offered by IFRS 13.48 of measuring a net risk position for financial assets and financial liabilities is used for portfolios whose components are recognized under the balance sheet items loans and advances to banks, loans and advances to customers, financial assets held for trading, investments, and financial liabilities held for trading. If allocation of the portfolio-based valuation adjustments to the assets and liabilities is required, it is generally carried out in proportion to the nominal amounts of the financial instruments in question.

Sensitivity analysis

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

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

Changes in fair values, using alternative assumptions for unobservable inputs

€ million	Jun. 30, 2023 Alternative assumptions at the lower end of the uncertainty spread	Alternative assumptions at the upper end of the uncertainty spread
Loans and advances to customers	**5**	**-5**
Receivables arising from silent partnerships	2	-2
Profit-participation certificates and promissory notes	1	-1
Shareholders' loans	2	-2
Financial assets held for trading	**-44**	**51**
Profit-participation certificates and promissory notes	1	-1
Bonds	-46	51
Purchase option on investments in companies	1	-
Investments	**-74**	**86**
ABSs	14	-14
Investments in subsidiaries	12	-9
Bearer securities	-40	40
Investment fund units	-2	1
Bonds	-69	71
Other shareholdings	12	-4
Investments held by insurance companies	**72**	**-43**
Loans	48	-19
Profit-participation certificates and promissory notes	1	-1
Initial fund loans	1	-2
Mortgage loans	22	-22
Financial liabilities held for trading	**1**	**-1**
Derivatives	1	-1
Total	**-40**	**88**

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

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

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

The fair values of bonds without liquid markets that are reported within financial assets held for trading, investments, and loans and advances to customers were given an individual adjustment spread or were measured using Bloomberg Valuation Service prices, which are observable in the market. All other things being equal, an increase in the pertinent measurement assumptions of 1 percent would have led to the recognition of a €14 million loss in the income statement and a loss of €3 million under other comprehensive income/loss.

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

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

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

» 44 Reclassification

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

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

Financial assets of €3,139 million categorized as ‘financial assets measured at fair value through profit or loss’ had been reclassified as ‘financial assets measured at fair value through other comprehensive income’ in 2021. At the time of reclassification, the reclassified assets had an average effective interest rate of 2.25 percent. During the reporting period, these assets generated interest income of €31 million (first half of 2022: €42 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, 2023**	Jan. 1– Jun. 30, 2022
Gains and losses on fair value hedges	**-**	8
Gains and losses on hedging instruments	-24	232
Gains and losses on hedged items	24	-224
Gains and losses on portfolio fair value hedges	**-27**	-1
Gains and losses on hedging instruments	24	4,061
Gains and losses on hedged items	-51	-4,063
Total	**-27**	6

» 46 Nature and extent of risks arising from financial instruments

Disclosures pursuant to IFRS 7.35F(a)-36(b) can be found in this note in the notes to the interim consolidated financial statements. With the exception of the qualitative and quantitative disclosures pursuant to IFRS 7.35F(a)-36(b), further disclosures on the nature and extent of risks arising from financial instruments

(IFRS 7.31-42) are included in the interim group management report in chapter VI 'Risk report', sections 4 'Liquidity adequacy' and 6 'Credit risk' and for the Bank sector in section 8 'Market risk'.

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

Credit risk management practices

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

– financial assets measured at amortized cost; and
– financial assets mandatorily measured at fair value through other comprehensive income.

The impairment rules are also applied to:

– financial guarantee contracts and loan commitments that fall within the scope of IFRS 9 and are not recognized at fair value through profit or loss;
– lease receivables; and
– trade receivables and contract assets pursuant to IFRS 15.

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

– Stage 1: For financial assets whose credit risk has not increased significantly since initial recognition that were not credit-impaired upon initial recognition, the 12-month credit loss is recognized. Interest is recognized on the basis of the gross carrying amount.
– Stage 2: For financial assets whose credit risk has increased significantly since initial recognition but are not considered credit-impaired, the loss allowances are determined in the amount of the assets' lifetime expected credit losses. Interest is recognized on the basis of the gross carrying amount.
– Stage 3: Financial assets are classified as credit-impaired and thus assigned to stage 3 if they are deemed to be in default pursuant to article 178 CRR as operationalized in the DZ BANK Group's definition of default. Because the indicators and events deemed to be stage 3 criteria under IFRS 9 cover the same scope and, at the same time, lead to default pursuant to article 178 CRR, there is a correlation between these two classifications. Therefore, if the financial assets are in default, they are also classified as credit-impaired and assigned to stage 3. Here too, loss allowances are recognized in the amount of the lifetime expected credit losses. Interest income on credit-impaired financial assets is calculated on the amortized cost after loss allowances using the effective interest method.
– POCI assets: Financial assets that are already deemed credit-impaired upon initial recognition are not assigned to the 3-stage model and are reported separately. Credit-impaired financial assets are initially recognized at fair value rather than at their gross carrying amount. Consequently, interest is recognized for these assets using a risk-adjusted effective interest rate.

The review of whether the credit risk of financial assets, financial guarantee contracts, and loan commitments has increased significantly since initial recognition is carried out on an ongoing basis. The assessment is conducted both for individual financial assets and for portfolios of assets using quantitative and qualitative analysis. As a rule, quantitative analysis looks at the expected credit risk over the entire residual life of the financial instruments in question. Macroeconomic information is also taken into account in the form of shift factors. The model-driven default probability profiles used in economic and regulatory risk management are adjusted on the basis of these shift factors (see the section 'Impact of macroeconomic conditions'). For the quantitative transfer criterion, the credit risk as at the balance sheet date for the residual life is compared with the assets' credit risk over the same maturity period estimated at the time of initial recognition. The thresholds that indicate a significant increase in credit risk are determined for each portfolio separately as the ratio of the latest changes in the lifetime probability of default (lifetime PD) to the portfolio's past lifetime PD. Internal risk measurement systems, external credit ratings, and risk forecasts are also used to assess the credit risk of financial assets. The maximum value for these transfer thresholds is 200 percent.

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

Assets with low credit risk and/or an investment-grade credit rating are also monitored for increases in credit risk and for credit rating changes. If the quantitative transfer threshold is exceeded, however, the low credit risk exemption means that these assets are transferred to stage 2 only if a qualitative transfer criterion applies or if a non-investment-grade credit rating is awarded. The low credit risk exemption applies to securities, 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 outstanding payments. In the case of transactions assigned to stage 1 of the impairment model, the analysis period is the next 12 months. For stage 2 transactions, the residual life is used. The expected losses are discounted with the original effective interest rate for the transaction and variable-rate assets with the current interest rate. The calculation uses the regulatory model (probability of default, loss given default, and expected loan amount at the time of default), with adjustments to satisfy the requirements of IFRS 9. The estimated parameters incorporate 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 expected cash flows and probability-weighted scenarios at individual transaction level.

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

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

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 retail consumer finance business, post-model adjustments are therefore carried out. The post-model adjustments as at December 31, 2022 amounted to a total of €67 million. The latest evaluation for the first half of 2023 shows that the impact of insolvency law reforms were overestimated, which meant that the post-model adjustments made in this context need to be reduced. The previously assumed increase in the rate of insolvencies no longer appears appropriate based on the trend in the first half of 2023. The contribution for the Austria portfolio has also been reduced as a new sales scorecard has been used for new business in this portfolio since March 2023 and provides a better picture of credit risk. It is also evident that the effects of group contagion in the definition of default have an only immaterial impact on credit risk. The associated contribution to the post-model adjustment has therefore been fully reversed. Overall, the updating of the post-model adjustments resulted in a reduction in loss allowances of €33 million recognized in profit or loss and thus, taking account of portfolio growth and an increase in risk totaling €5 million, led to a post-model adjustment of €39 million as at June 30, 2023.

Impact of macroeconomic conditions

The established models and processes for calculating expected losses on specific exposures or at portfolio level in line with IFRS 9 have generally been retained. The impact of 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 on the basis of shift factors.

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

The shift factors used as at June 30, 2023 are based on 2 macroeconomic scenarios developed by the Economic Roundtable of the DZ BANK Group in April 2023 (baseline scenario 80 percent and risk scenario 20 percent). The shift factors are then derived from macroeconomic inputs for various levels of default probability using stress test models that already existed or that were developed for IFRS 9.

The risk parameters adjusted on the basis of the macroeconomic scenarios are then factored into the calculation of loss allowances.

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

The main macroeconomic forecasts for 2023 to 2027 used to calculate the expected loss as at June 30, 2023 were as follows:

		2023		**2024**		**2025**		**2026**		**2027**	
		Baseline	Risk	Baseline	Risk	Baseline	Risk	Baseline	Risk	Baseline	Risk
DAX 30, Germany	Index	15,500	12,550	16,600	11,300	17,600	14,125	18,700	14,980	19,800	15,880
EURO STOXX 50, EU	Index	4,300	3,420	4,500	3,080	4,750	3,850	5,000	4,080	5,250	4,330
Unemployment rate, Germany	%	3.10	3.40	3.10	3.40	3.10	3.20	3.00	3.10	3.00	3.00
Harmonized unemployment rates, EU	%	6.10	6.20	6.10	6.20	5.90	6.00	5.90	5.90	5.80	5.80
Real GDP growth, Germany (seasonally and calendar-adjusted)	Compared with prior year (%)	0.25	-0.75	1.25	-1.00	1.25	1.25	1.00	1.25	0.75	0.75
Real GDP growth, EU (seasonally and calendar-adjusted)	Compared with prior year (%)	0.80	-0.20	1.80	-0.50	1.80	1.80	1.50	1.80	1.30	1.30
Consumer price index, Germany	Compared with prior year (%)	6.25	6.50	3.50	6.00	2.50	5.00	2.25	3.50	2.25	2.25
Oil price (Brent), US$/bbl	At year-end	100.00	120.00	90.00	105.00	90.00	100.00	80.00	95.00	80.00	90.00
Natural gas price, US$/MMBtu	At year-end	5.40	8.50	5.00	8.00	5.00	7.50	4.50	6.50	4.50	6.50
Commercial real estate price index, Germany	Compared with prior year (%)	-9.00	-12.00	-4.00	-6.00	-2.00	-1.00	0.00	0.00	0.00	0.00
3m Euribor, European Monetary Union	%	4.00	4.30	3.65	4.50	2.65	4.05	2.55	3.30	2.55	2.50
10-year government bonds, Germany	%	3.00	3.50	3.00	3.50	2.75	3.25	2.75	3.25	2.75	2.75

On the basis of consultation with relevant experts, the shift factors determined using statistical methods were overridden again as at June 30, 2023 in order to better represent the currently critical market situation. This ensures that the shift factors used are in line both with experts' expectations and with the forecast changes in macroeconomic factors for the calculation of expected losses. The methodology for the process of overriding the model shift factors at group level was unchanged compared with December 31, 2022. This aspect includes all identifiable material increases in risk resulting from current developments and factors influencing the economy that have yet to be included in the credit rating. These factors specifically include the war in Ukraine, commodity shortages, supply chain difficulties, high inflation coupled with soaring energy prices, the problems resulting from higher interest rates, and the consideration of climate-related and environmental risks. The recent turmoil in the banking sector creates the risk that economic growth will continue to slow, particularly in the United States. Overall, additional loss allowances of €197 million were recognized as at June 30, 2023 due to the expert-led override of the shift factors determined using statistical methods (December 31, 2022: €188 million).

The shifted lifetime PDs are then factored into the decision on stage assignment. An increase in the lifetime PDs resulting from the shift factors being overriden does not necessarily lead to a transfer to stage 2. Consequently, a second override was carried out in 2022 for portfolios that were particularly affected. In contrast to the first override component, this second override component resulted in a general stage 2 classification for all unimpaired exposures in the following sectors: automotive suppliers, hotels, department stores, shopping malls, inner-city commercial properties, building contractors, project developers, and office real estate. This decision reflected macroeconomic developments in 2022, such as supply chain disruptions, high inflation, unavailability of materials, the shortage of skilled workers, the rise in interest rates, the gloomy economic outlook, persistently high energy prices, a changed competitor structure, and uncertainty about the spread of COVID-19, particularly during the winter months. The fixed staging was reviewed again at the end of the first half of 2023 and, given the continued high level of uncertainty, was retained.

Since 2022, climate and environmental parameters have been included in the Economic Roundtable's scenario analysis. In the first instance, the focus is on carbon pricing, which is a factor in assessing macroeconomic variables. The scenarios devised by the Network for Greening the Financial System (NGFS), which show how climate change and action can affect key economic variables, are used in this context. In terms of the impact on macroeconomic variables, the Economic Roundtable's forecast table is based on the legal situation in Germany and the technical assumptions of the European Central Bank (ECB). The impact on macroeconomic variables has been minimal to date. The introduction of a carbon price should only have a minor to moderate increasing effect on the annual average rate of inflation in Germany and the eurozone. This price effect is already 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 immaterial over the forecast period. The climate and environmental parameters currently have an only immaterial impact on loss allowances. The effects on loss allowances will be examined more closely in the context of planned sustainability initiatives.

Loss allowances and gross carrying amounts

In the DZ BANK Group, loss allowances are recognized for the classes 'financial assets measured at fair value', 'financial assets measured at amortized cost', 'finance leases', and 'financial guarantee contracts and loan commitments' in the amount of the expected credit losses. Trade receivables and contract assets that fall within the scope of IFRS 15 are assigned to the 'financial assets measured at amortized cost' class.

Financial assets measured at fair value

€ million	Stage 1		Stage 2		Stage 3	
	Loss allowances	Fair value	Loss allowances	Fair value	Loss allowances	Fair value
Balance as at Jan. 1, 2022	26	121,359	3	674	25	34
Restatements according to IAS 8	22	-	6	-	-	-
Balance restated as at Jan. 1, 2022	48	121,359	9	674	25	34
Addition/increase in loan drawdowns	7	12,117	1	54	-	-
Change to financial assets due to transfer between stages	-4	-947	4	942	-	5
Transfer from stage 1	-5	-1,179	5	1,177	-	2
Transfer from stage 2	2	232	-2	-235	-	3
Use of loss allowances/directly recognized impairment losses	-	-	-	-	-2	-2
Derecognitions and repayments	-15	-12,430	-9	-108	-	-5
Changes to models/risk parameters	15	-	15	-	2	-
Additions	19	-	16	-	2	-
Reversals	-5	-	-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
Deferred taxes	-1	-	-5	-	-	-
Balance as at Jun. 30, 2022	**50**	**101,237**	**14**	**1,419**	**25**	**32**
Balance as at Jan. 1, 2023	41	95,034	17	795	25	32
Addition/increase in loan drawdowns	6	11,952	-	20	-	-
Change to financial assets due to transfer between stages	14	309	-14	-331	-	22
Transfer from stage 1	-	-64	-	62	-	3
Transfer from stage 2	14	374	-14	-393	-	19
Use of loss allowances/directly recognized impairment losses	-	-	-	-	-6	-6
Derecognitions and repayments	-6	-6,584	-1	-91	-	-3
Changes to models/risk parameters	-24	-	-4	-	6	-
Additions	2	-	1	-	6	-
Reversals	-26	-	-5	-	-	-
Modifications	-	-1	-	-1	-	-
Modification losses	-	-1	-	-1	-	-
Amortization, fair value changes, and other changes in measurement	-	933	-	9	-	-
Exchange differences and other changes	-	-44	-	2	-	1
Deferred taxes	3	-	6	-	-	-
Balance as at Jun. 30, 2023	**34**	**101,597**	**5**	**403**	**24**	**46**

Financial assets measured at amortized cost

€ million	Stage 1 Loss allowances	Stage 1 Gross carrying amount	Stage 2 Loss allowances	Stage 2 Gross carrying amount	Stage 3 Loss allowances	Stage 3 Gross carrying amount	POCI assets Loss allowances	POCI assets Gross carrying amount
Balance as at Jan. 1, 2022	282	376,209	374	17,187	1,267	2,870	13	90
Addition/increase in loan drawdowns	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**
Balance as at Jan. 1, 2023	266	388,040	548	38,094	1,185	2,716	18	142
Addition/increase in loan drawdowns	85	13,426,861	67	19,226	356	1,254	1	96
Change to financial assets due to transfer between stages	110	-1,741	-165	1,267	55	475	-	-
Transfer from stage 1	-25	-4,217	23	4,134	1	83	-	-
Transfer from stage 2	132	2,456	-205	-3,002	73	546	-	-
Transfer from stage 3	3	19	17	135	-19	-154	-	-
Use of loss allowances/directly recognized impairment losses	-	-2	-1	-	-96	-19	-2	-4
Derecognitions and repayments	-71	-13,397,077	-76	-20,433	-345	-1,682	-6	-157
Changes to models/risk parameters	-118	-	148	-	78	-	6	-
Additions	50	-	368	-	199	-	13	-
Reversals	-169	-	-220	-	-122	-	-7	-
Modifications	-	-	-	-	1	1	-	-
Modification gains	-	2	-	-	1	1	-	-
Modification losses	-	-2	-	-1	-	-	-	-
Amortization, fair value changes, and other changes in measurement	-	-97	-	-1	-	-4	-	-
Positive change in fair value of POCI assets	-	-	-	-	-	-	-	17
Exchange differences and other changes	1	63	-	8	-1	15	-5	2
Balance as at Jun. 30, 2023	**273**	**416,047**	**521**	**38,161**	**1,233**	**2,756**	**11**	**97**

The undiscounted expected credit losses on purchased or originated credit-impaired assets that were recognized for the first time during the reporting period totaled €150 million (first half of 2022: €134 million).

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, 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**
Balance as at Jan. 1, 2023	1	435	3	111	9	19
Addition/increase in loan drawdowns	1	93	2	3	1	-
Change to finance leases due to transfer between stages	-	23	-	-25	-	2
Transfer from stage 1	-	-41	-	41	-	-
Transfer from stage 2	-	65	-1	-68	-	3
Transfer from stage 3	-	-	-	2	-	-2
Derecognitions and repayments	-1	-111	-3	-27	-4	-4
Balance as at Jun. 30, 2023	**2**	**441**	**2**	**62**	**7**	**17**

Financial guarantee contracts and loan commitments

	Stage 1		Stage 2		Stage 3		POCI assets	
€ million	Loss allowances	Nominal amount	Loss allowances	Nominal amount	Loss allowances	Nominal amount	Loss allowances	Nominal amount
Balance as at Jan. 1, 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**
Balance as at Jan. 1, 2023	53	80,472	95	7,903	89	242	-	2
Addition/increase in loan drawdowns	33	47,158	27	2,459	34	109	1	6
Change to financial guarantee contracts and loan commitments due to transfer between stages	14	-303	-28	178	13	124	-	-
Transfer from stage 1	-3	-856	3	845	-	10	-	-
Transfer from stage 2	17	552	-31	-668	13	116	-	-
Transfer from stage 3	-	1	-	1	-	-2	-	-
Derecognitions and repayments	-41	-43,344	-30	-3,571	-29	-142	-	-2
Changes to models/risk parameters	-3	-	-4	-	-3	-	-	-
Additions	12	-	23	-	21	-	-	-
Reversals	-14	-	-27	-	-23	-	-	-
Amortization, fair value changes, and other changes in measurement	-	-20	-	-1	-	-1	-	-
Exchange differences and other changes	-	13	-	4	1	-	-	-
Balance as at Jun. 30, 2023	**57**	**83,976**	**60**	**6,973**	**104**	**332**	**1**	**5**

» 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, 2023 New issues	Jan. 1–Jun. 30, 2023 Repur-chases	Jan. 1–Jun. 30, 2023 Repayments	Jan. 1–Jun. 30, 2022 New issues	Jan. 1–Jun. 30, 2022 Repur-chases	Jan. 1–Jun. 30, 2022 Repayments
DEBT CERTIFICATES ISSUED INCLUDING BONDS	**62,685**	**-822**	**-44,204**	35,817	-544	-23,553
Bonds issued	**17,564**	**-813**	**-5,009**	5,838	-531	-3,540
Mortgage Pfandbriefe	2,241	-19	-1,210	2,527	-46	-879
Public-sector Pfandbriefe	492	-	-100	-	-	-411
Other bonds	14,832	-794	-3,699	3,311	-485	-2,250
Other debt certificates issued	**45,120**	**-10**	**-39,195**	29,979	-13	-20,013
FINANCIAL LIABILITIES HELD FOR TRADING	**5,877**	**-498**	**-4,413**	3,302	-304	-3,773
SUBORDINATED CAPITAL	**-**	**-5**	**-114**	51	-2	-25
Total	**68,562**	**-1,325**	**-48,731**	39,170	-850	-27,351

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

E Insurance business disclosures

» 48 Insurance revenue

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
INSURANCE REVENUE NOT UNDER THE PREMIUM ALLOCATION APPROACH	**2,216**	**2,551**
Changes to the liability for remaining coverage that are recognized in profit or loss	**2,036**	**2,386**
Reversal of expected incurred claims and other insurance service expenses through profit or loss	1,111	1,155
Release of the risk adjustment through profit or loss	54	31
Recognition of the CSM in profit or loss based on provision of service	239	221
Difference between premiums collected and release of present value of premiums (experience adjustment)	632	980
Amortization of insurance acquisition cash flows	**181**	**165**
INSURANCE REVENUE UNDER THE PREMIUM ALLOCATION APPROACH	**3,993**	**3,829**
Total	**6,209**	**6,380**

» 49 Presentation of income and expense in the insurance business

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

€ million	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Insurance finance income or expenses from insurance contracts	**-3,611**	**16,551**
Changes in the fair value of underlying items relating to insurance contracts with direct participation features	-2,589	15,485
Interest accretion effects	-1,021	190
Effects of changes in the discount rate	12	916
Net foreign exchange loss	-13	-40
Insurance finance income or expenses from reinsurance contracts held	**9**	**5**
Interest accretion effects	9	5
Other	-	1
Total	**-3,602**	**16,557**
of which recognized in profit or loss	-2,496	2,367
of which recognized in other comprehensive income	-1,107	14,190

For insurance contracts with direct participation features, for which the option of recognition in other comprehensive income pursuant to IFRS 17.89(b) is exercised, volatilities recognized in profit or loss are minimized by reclassifying the pro rata insurance finance income or expenses to the reserve from other comprehensive income. This is in line with the classification of investments held by insurance companies in accordance with IFRS 9, which are predominantly assigned to the category ‘financial assets measured at fair value through other comprehensive income’. Subsequent measurement of the underlying items provides the basis of calculation for the reclassification from the reserve from other comprehensive income to the income statement. With gains and losses on investments held by insurance companies amounting to a net gain of €2,302 million (first half of 2022: net loss of €3,628 million), the amount reclassified in accordance with IFRS 17.89(b) came to an expense of €1,873 million in the period under review (first half of 2022: income of €3,281 million).

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

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

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

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

€ million	**2023**	2022
Balance as at Jan. 1	475	12,729
Net change in fair value recognized in other comprehensive income	3,127	-14,142
Reclassified to the income statement in the reporting period	-540	1,208
Deferred taxes for the reporting period	-913	4,079
Balance as at Jun. 30	**2,148**	**3,874**

» 50 Change in the carrying amounts of insurance contract liabilities

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

	Liability for remaining coverage		Liability for incurred claims			Total
€ million	Excluding the loss component	Loss component	No premium allocation approach	Premium allocation approach: present value of expected cash flows	Premium allocation approach: risk adjustment	
Carrying amount of insurance contract assets as at Jan. 1, 2023	-3	-	2	-	-	-2
Carrying amount of insurance contract liabilities as at Jan. 1, 2023	85,563	426	3,878	7,691	90	97,648
Balance as at Jan. 1, 2023	85,560	426	3,880	7,690	90	97,646
OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME	**-2,523**	**20**	**1,517**	**3,322**	**2**	**2,337**
Insurance service result	**-5,719**	**20**	**1,279**	**3,178**	**-**	**-1,242**
Insurance revenue	***-6,209***	**-**	**-**	**-**	**-**	***-6,209***
Measured using the modified retrospective approach	-2,451	-	-	-	-	-2,451
Measured using the fair value approach	-54	-	-	-	-	-54
Other	-3,705	-	-	-	-	-3,705
Insurance service expenses	***490***	***20***	***1,279***	***3,178***	**-**	***4,968***
Incurred claims and other insurance service expenses	-12	-	1,190	3,148	1	4,328
Amortization of insurance acquisition cash flows	502	-	-	-	-	502
Changes in the fulfillment cash flows relating to the liability for incurred claims	-	-	89	30	-1	118
Changes that relate to future service under onerous contracts	-	20	-	-	-	20
Expenses for/income from investment components	**-7**	**-**	**213**	**37**	**-**	**243**
Insurance finance income or expenses	**3,200**	**-**	**-10**	**132**	**2**	**3,324**
Other	**2**	**-**	**36**	**-25**	**-**	**13**
CHANGES RESULTING FROM CASH FLOWS	**7,320**	**-**	**-1,657**	**-3,409**	**-**	**2,254**
Premium income	10,301	-	-	-	-	10,301
Insurance acquisition cash flows	-709	-	-	-	-	-709
Incurred claims paid and other insurance service expenses paid	-2,273	-	-1,657	-3,409	-	-7,338
Balance as at Jun. 30, 2023	**90,356**	**446**	**3,740**	**7,604**	**92**	**102,238**
Carrying amount of insurance contract assets as at Jun. 30, 2023	-3	-	3	-	-	-
Carrying amount of insurance contract liabilities as at Jun. 30, 2023	90,359	446	3,737	7,604	92	102,238

€ million	Liability for remaining coverage		Liability for incurred claims			Total
	Excluding the loss component	Loss component	No premium allocation approach	Premium allocation approach: present value of expected cash flows	Premium allocation approach: risk adjustment	
Carrying amount of insurance contract assets as at Jan. 1, 2022	-2	-	2	-	-	-
Carrying amount of insurance contract liabilities as at Jan. 1, 2022	104,565	436	4,219	8,138	97	117,455
Balance as at Jan. 1, 2022	104,564	436	4,220	8,138	97	117,455
OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME	**-21,975**	**83**	**1,377**	**3,050**	**-1**	**-17,466**
Insurance service result	**-5,963**	**81**	**1,448**	**3,391**	**5**	**-1,038**
Insurance revenue	***-6,380***	-	-	-	-	***-6,380***
Measured using the modified retrospective approach	-5,300	-	-	-	-	-5,300
Measured using the fair value approach	-110	-	-	-	-	-110
Other	-971	-	-	-	-	-971
Insurance service expenses	***417***	***81***	***1,448***	***3,391***	***5***	***5,342***
Incurred claims and other insurance service expenses	-52	-	1,335	3,283	5	4,571
Amortization of insurance acquisition cash flows	469	-	-	-	-	469
Changes in the fulfillment cash flows relating to the liability for incurred claims	-	-	114	108	-	221
Changes that relate to future service under onerous contracts	-	81	-	-	-	81
Expenses for/income from investment components	**-264**	-	**213**	**64**	-	**13**
Insurance finance income or expenses	**-15,736**	-	**-286**	**-452**	**-7**	**-16,481**
Other	**-12**	**2**	**2**	**48**	**1**	**40**
CHANGES RESULTING FROM CASH FLOWS	**7,701**	-	**-1,575**	**-3,194**	-	**2,932**
Premium income	10,185	-	-	-	-	10,185
Insurance acquisition cash flows	-753	-	-	-	-	-753
Incurred claims paid and other insurance service expenses paid	-1,731	-	-1,575	-3,194	-	-6,500
Balance as at Jun. 30, 2022	**90,289**	**519**	**4,022**	**7,994**	**95**	**102,920**
Carrying amount of insurance contract assets as at Jun. 30, 2022	-40	-	1	8	-	-31
Carrying amount of insurance contract liabilities as at Jun. 30, 2022	90,330	519	4,022	7,986	95	102,952

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

€ million	Liability for remaining coverage: Excluding the loss component	Liability for remaining coverage: Loss component	Liability for incurred claims: No premium allocation approach	Liability for incurred claims: Premium allocation approach: present value of expected cash flows	Liability for incurred claims: Premium allocation approach: risk adjustment	Total
Carrying amount of reinsurance contract assets as at Jan. 1, 2023	36	-	3	507	15	560
Carrying amount of reinsurance contract liabilities as at Jan. 1, 2023	-1	-	-	-	-	-
Balance as at Jan. 1, 2023	35	-	3	507	15	559
Overall change recognized in profit or loss and in other comprehensive income	**-130**	**-**	**4**	**51**	**-5**	**-80**
Net income/expenses from reinsurance contracts held	-130	-	4	42	-5	-89
Insurance finance income or expenses from reinsurance contracts held	-	-	-	9	-	9
Changes resulting from cash flows	**133**	**-**	**-4**	**-218**	**-**	**-89**
Premiums paid for reinsurance contracts held	133	-	-	-	-	133
Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held	-	-	-4	-218	-	-222
Balance as at Jun. 30, 2023	**38**	**-**	**2**	**339**	**10**	**390**
Carrying amount of reinsurance contract assets as at Jun. 30, 2023	40	-	2	338	10	391
Carrying amount of reinsurance contract liabilities as at Jun. 30, 2023	-2	-	-	1	-	-1

€ million	Liability for remaining coverage: Excluding the loss component	Liability for remaining coverage: Loss component	Liability for incurred claims: No premium allocation approach	Liability for incurred claims: Premium allocation approach: present value of expected cash flows	Liability for incurred claims: Premium allocation approach: risk adjustment	Total
Carrying amount of reinsurance contract assets as at Jan. 1, 2022	30	-	1	791	16	838
Carrying amount of reinsurance contract liabilities as at Jan. 1, 2022	-6	-	-	-	-	-6
Balance as at Jan. 1, 2022	23	-	1	791	16	832
Overall change recognized in profit or loss and in other comprehensive income	**-138**	**-**	**2**	**52**	**26**	**-57**
Net income/expenses from reinsurance contracts held	-154	-	2	63	27	-63
Insurance finance income or expenses from reinsurance contracts held	16	-	-	-10	-1	5
Other	-	-	-	-	-	1
Changes resulting from cash flows	**139**	**-**	**-2**	**-149**	**-**	**-12**
Premiums paid for reinsurance contracts held	139	-	-	-	-	139
Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held	-	-	-2	-149	-	-151
Balance as at Jun. 30, 2022	**25**	**-**	**2**	**694**	**42**	**763**
Carrying amount of reinsurance contract assets as at Jun. 30, 2022	28	-	4	693	42	767
Carrying amount of reinsurance contract liabilities as at Jun. 30, 2022	-3	-	-2	1	-	-4

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

€ million	Present value of expected cash flows	Risk adjustment	CSM			Total
			Modified retrospective approach	Fair value approach	Other	
Carrying amount of insurance contract assets as at Jan. 1, 2023	-1	-	-	-	1	-
Carrying amount of insurance contract liabilities as at Jan. 1, 2023	83,653	955	1,116	240	3,553	89,516
Balance as at Jan. 1, 2023	83,652	955	1,116	240	3,553	89,516
OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME	**2,077**	**135**	**293**	**-35**	**187**	**2,657**
Insurance service result	**794**	**116**	**-1,495**	**-54**	**-170**	**-809**
Changes that relate to current service	***-1,068***	***-54***	***-105***	***-11***	***-123***	***-1,361***
Amortization of the CSM in profit or loss based on provision of service	-	-	-105	-11	-123	-239
Release of the risk adjustment through profit or loss	-	-54	-	-	-	-54
Deviation from budgeted claims/costs	-393	-	-	-	-	-393
Deviation from budgeted premiums	-632	-	-	-	-	-632
Deviation from budgeted insurance acquisition cash flows	-43	-	-	-	-	-43
Changes that relate to future service	***1,291***	***183***	***-1,391***	***-43***	***-48***	***-7***
New business	-425	71	113	-	267	25
Changes in estimates that adjust the CSM	1,748	112	-1,503	-43	-314	-
Changes in estimates that result in losses on onerous contracts or reversals of such losses	-32	-	-	-	-	-32
Changes that relate to past service	***571***	***-13***	-	-	-	***559***
Premium changes after the end of the coverage period	-8	-	-	-	-	-8
Change in the liability for incurred claims	579	-13	-	-	-	567
Insurance finance income or expenses	**1,250**	**18**	**1,788**	**19**	**357**	**3,432**
Other	**33**	**1**	-	-	-	**34**
CHANGES RESULTING FROM CASH FLOWS	**892**	-	-	-	-	**892**
Premium income	5,106	-	-	-	-	5,106
Insurance acquisition cash flows	-285	-	-	-	-	-285
Incurred claims paid and other insurance service expenses paid	-3,930	-	-	-	-	-3,930
Balance as at Jun. 30, 2023	**86,621**	**1,090**	**1,409**	**205**	**3,740**	**93,065**
Carrying amount of insurance contract liabilities as at Jun. 30, 2023	86,622	1,090	1,409	205	3,740	93,065

€ million	Present value of expected cash flows	Risk adjustment	CSM			Total
			Modified retrospective approach	Fair value approach	Other	
Carrying amount of insurance contract assets as at Jan. 1, 2022	-1	-	-	-	-	-
Carrying amount of insurance contract liabilities as at Jan. 1, 2022	102,935	674	4,722	257	175	108,763
Balance as at Jan. 1, 2022	102,935	674	4,722	257	176	108,763
OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME	**-17,114**	**74**	**-3,081**	**3**	**3,418**	**-16,700**
Insurance service result	**-15,706**	**85**	**10,304**	**58**	**4,358**	**-901**
Changes that relate to current service	***-1,414***	***-31***	***-123***	***-13***	***-84***	***-1,666***
Amortization of the CSM in profit or loss based on provision of service	-	-	-123	-13	-84	-221
Release of the risk adjustment through profit or loss	-	-31	-	-	-	-31
Deviation from budgeted claims/costs	-382	-	-	-	-	-382
Deviation from budgeted premiums	-980	-	-	-	-	-980
Deviation from budgeted insurance acquisition cash flows	-52	-	-	-	-	-52
Changes that relate to future service	***-15,007***	***115***	***10,427***	***71***	***4,442***	***49***
New business	-530	67	310	40	149	36
Changes in estimates that adjust the CSM	-14,490	48	10,117	31	4,293	-
Changes in estimates that result in losses on onerous contracts or reversals of such losses	13	-	-	-	-	13
Changes that relate to past service	***715***	***1***	***-***	***-***	***-***	***717***
Premium changes after the end of the coverage period	-5	-	-	-	-	-5
Change in the liability for incurred claims	720	1	-	-	-	721
Insurance finance income or expenses	**-1,398**	**-12**	**-13,385**	**-55**	**-945**	**-15,795**
Other	**-10**	**1**	**-**	**-**	**5**	**-4**
CHANGES RESULTING FROM CASH FLOWS	**1,328**	**-**	**-**	**-**	**-**	**1,328**
Premium income	4,902	-	-	-	-	4,902
Insurance acquisition cash flows	-352	-	-	-	-	-352
Incurred claims paid and other insurance service expenses paid	-3,222	-	-	-	-	-3,222
Balance as at Jun. 30, 2022	**87,149**	**748**	**1,641**	**259**	**3,594**	**93,391**
Carrying amount of insurance contract liabilities as at Jun. 30, 2022	87,149	748	1,641	259	3,593	93,391

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

€ million	Present value of expected cash flows	Risk adjustment	CSM			Total
			Modified retrospective approach	Fair value approach	Other	
Carrying amount of reinsurance contract assets as at Jan. 1, 2023	-41	4	52	7	6	29
Balance as at Jan. 1, 2023	-41	4	52	7	6	29
OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME	**-1**	**-**	**-**	**1**	**1**	**2**
Insurance service result	1	-	-1	1	1	2
Changes that relate to current service	*1*	-	*-1*	*3*	*1*	*2*
CSM recognized in profit or loss	-	-	-1	3	1	2
Deviation from budgeted claims/costs	-3	-	-	-	-	-3
Deviation from budgeted premiums	3	-	-	-	-	3
Changes that relate to future service	-	-	-	*-2*	-	-
Changes in estimates that adjust the CSM	2	-	-	-2	-1	-
New business	-2	-	-	-	2	-
Insurance finance income or expenses	-1	-	1	-	-	-
CHANGES RESULTING FROM CASH FLOWS	**3**	**-**	**-**	**-**	**-**	**3**
Premiums paid for reinsurance contracts held	8	-	-	-	-	8
Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held	-4	-	-	-	-	-4
Balance as at Jun. 30, 2023	-38	5	53	8	8	35
Carrying amount of reinsurance contract assets as at Jun. 30, 2023	-38	5	53	8	8	35

€ million	Present value of expected cash flows	Risk adjustment	CSM			Total
			Modified retrospective approach	Fair value approach	Other	
Carrying amount of reinsurance contract assets as at Jan. 1, 2022	-4	6	-2	12	-	13
Carrying amount of reinsurance contract liabilities as at Jan. 1, 2022	-59	-	55	-	-	-5
Balance as at Jan. 1, 2022	-64	6	53	12	-	8
OVERALL CHANGE RECOGNIZED IN PROFIT OR LOSS AND IN OTHER COMPREHENSIVE INCOME	**11**	**-1**	**5**	**-1**	**2**	**17**
Insurance service result	-	-1	-	-1	2	1
Changes that relate to current service	*3*	-	*-1*	*-1*	*1*	*1*
CSM recognized in profit or loss	-	-	-1	-1	1	-2
Deviation from budgeted claims/costs	-5	-	-	-	-	-5
Deviation from budgeted premiums	7	-	-	-	-	7
Changes that relate to future service	*-3*	-	*1*	*1*	*1*	-
Changes in estimates that adjust the CSM	-1	-1	1	1	-	-
New business	-2	-	-	-	2	-
Changes that relate to past service	*1*	-	-	-	-	*1*
Change in the liability for incurred claims	1	-	-	-	-	1
Insurance finance income or expenses	11	-	5	-	-	16
CHANGES RESULTING FROM CASH FLOWS	**1**	**-**	**-**	**-**	**-**	**1**
Premiums paid for reinsurance contracts held	2	-	-	-	-	2
Incurred claims recovered and other insurance service expenses recovered under reinsurance contracts held	-2	-	-	-	-	-2
Balance as at Jun. 30, 2022	-52	6	58	12	2	25
Carrying amount of reinsurance contract assets as at Jun. 30, 2022	-50	6	58	12	2	28
Carrying amount of reinsurance contract liabilities as at Jun. 30, 2022	-2	-	-	-	-	-2

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

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

€ million	Jun. 30, 2023			Dec. 31, 2022		
	Direct participation features	Other	**Total**	Direct participation features	Other	**Total**
Investments	**85,828**	**855**	**86,683**	**82,002**	**784**	**82,786**
Investment property	3,210	-	3,210	3,245	-	3,245
Investments in subsidiaries	406	-	407	413	-	413
Investments in joint ventures	60	-	60	59	-	59
Mortgage loans	9,714	-	9,714	9,401	-	9,401
Promissory notes and loans	4,499	-	4,499	4,570	-	4,570
Registered bonds	4,525	-	4,525	4,318	-	4,318
Other loans	168	21	189	176	6	182
Variable-yield securities	10,194	410	10,604	10,466	398	10,864
Fixed-income securities	36,182	423	36,605	33,955	379	34,334
Derivatives (positive fair values)	85	-	85	216	-	216
Other investments	56	-	56	50	-	50
Assets related to unit-linked contracts	16,729	-	16,729	15,135	-	15,135
Other	**1,654**	**3**	**1,657**	**673**	**4**	**677**

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

The 'Other' column shows investments for which there are no underlying contracts with direct participation features.

» 52 Effects of initial measurement

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

€ million	Jan. 1– Jun. 30, 2023 Non-onerous contracts	Jan. 1– Jun. 30, 2023 Onerous contracts	Jan. 1– Jun. 30, 2022 Non-onerous contracts	Jan. 1– Jun. 30, 2022 Onerous contracts
LOSSES RECOGNIZED AT INITIAL MEASUREMENT OF INSURANCE CONTRACTS	**-**	**25**	-	36
Present value of claims/costs/insurance acquisition cash flows	**3,637**	**677**	4,512	1,867
Insurance acquisition cash flows	220	71	301	129
Incurred claims and other insurance service expenses	3,417	606	4,210	1,737
Present value of premiums	**-4,071**	**-668**	-5,064	-1,845
Risk adjustment	**54**	**17**	53	14
CSM	**379**	**-**	499	-
LOSSES RECOGNIZED AT INITIAL MEASUREMENT OF REINSURANCE CONTRACTS	**-**	**-**	-	-
Present value of claims/costs/insurance acquisition cash flows	-3	-	-4	-
Present value of premiums	5	-	6	-
CSM	-2	-	-2	-

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

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

€ million	Jun. 30, 2023 Remaining CSM – insurance contracts	Jun. 30, 2023 Remaining CSM – reinsurance contracts	Dec. 31, 2022 Remaining CSM – insurance contracts	Dec. 31, 2022 Remaining CSM – reinsurance contracts
≤ 1 year	295	-9	298	-3
> 1 year – 2 years	262	-4	250	-3
> 2 years – 3 years	250	-4	237	-3
> 3 years – 4 years	240	-4	225	-2
> 4 years – 5 years	229	-4	215	-2
> 5 years – 10 years	999	-12	931	-13
> 10 years – 20 years	1,405	-19	1,294	-20
> 20 years – 30 years	832	-7	750	-11
> 30 years – 40 years	442	-3	390	-5
> 40 years – 50 years	223	-2	193	-2
> 50 years	177	-1	127	-1

» 54 Yield curves

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

	1 year		5 years		10 years		15 years		20 years	
Percent	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022	Jun. 30, 2023	Dec. 31, 2022
EUR	4.73	4.12	4.10	4.02	3.82	3.94	3.76	3.87	3.59	3.61
GBP	6.71	5.28	5.90	4.87	5.10	4.46	4.87	4.37	4.73	4.28
JPY	0.63	0.93	1.09	1.36	1.41	1.64	1.64	1.86	1.82	2.03
USD	6.00	5.96	4.73	4.78	4.35	4.54	4.29	4.52	4.21	4.43
ZAR	9.27	8.54	9.61	9.11	10.76	10.23	11.40	10.50	11.20	10.36

» 55 Risk and capital management

Disclosures pursuant to IFRS 17.132(b) and IFRS 17.132(c) can be found in this note in the notes to the interim consolidated financial statements. With the exception of the disclosures on maturity analysis pursuant to IFRS 17.132(b) and IFRS 17.132(c), further disclosures on the nature and extent of risks arising from insurance contracts (IFRS 17.121-132) are included in the interim group management report in chapter VI 'Risk report', sections 4 'Liquidity adequacy' and 6 'Credit risk' and for the Insurance sector in sections 12 'Actuarial risk' and 13 'Market risk'.

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

Maturity analysis

The following table contains a maturity analysis for insurance contracts that reflects the estimated timing of the cash flows. Liabilities for remaining coverage measured under the premium allocation approach were excluded from this analysis.

€ million	Jun. 30, 2023	Dec. 31, 2022
≤ 1 year	4,958	5,936
> 1 year – 2 years	4,509	3,485
> 2 years – 3 years	3,279	2,836
> 3 years – 4 years	3,466	2,991
> 4 years – 5 years	3,137	2,622
> 5 years – 10 years	20,513	17,648
> 10 years – 20 years	36,524	32,473
> 20 years – 30 years	42,331	35,845
> 30 years – 40 years	34,230	27,789
> 40 years – 50 years	24,609	19,327
> 50 years	37,383	16,932

The insurance contract liabilities repayable on demand amounted to €56,772 million (December 31, 2022: €56,083 million).

Sensitivity analysis

For internal and external reporting purposes, sensitivity analyses are carried out in accordance with IFRS 17.125 in conjunction with IFRS 17.128 in order to quantify the impact on equity and on profit or loss.

This sensitivity analysis contains an interest-rate scenario that simulates the potential impact on insurance assets and liabilities measured in accordance with IFRS 17. Expert appraisals from the Economic Roundtable are used as the basis for determining the ranges to be examined. The information from the Economic Roundtable is analyzed on an ongoing basis to ascertain whether any adjustments are needed for future reporting-date-related sensitivity analyses.

For 10-year government bonds of the Federal Republic of Germany, an interest rate of 3.00 percent is expected in the main scenario and an interest rate of 3.50 percent in the risk scenario in 2023. Based on the analyses and findings of the Economic Roundtable, sensitivity analyses with a shift in interest rates of plus or minus 50 basis points are calculated.

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

	Jun. 30, 2023		Dec. 31, 2022	
€ million	Change in profit or loss	Change in equity	Change in profit or loss	Change in equity
Increase in interest-rate risk of 50 basis points	29	334	45	184
Decrease in interest-rate risk of 50 basis points	-35	-359	-46	-248

F Other disclosures

» 56 Contingent liabilities

€ million	Jun. 30, 2023	Dec. 31, 2022
Contingent liabilities arising from contributions to the resolution fund for CRR credit institutions	165	137
Contingent liabilities in respect of litigation risk	7	4
Total	**172**	**141**

The contingent liabilities arising from contributions to the resolution fund for CRR credit institutions consist of irrevocable payment commitments (IPCs) that the Single Resolution Board (SRB) approved in response to applications that were made to furnish collateral in partial settlement of the contribution to the European bank levy.

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.

» 57 Financial guarantee contracts and loan commitments

€ million	Jun. 30, 2023	Dec. 31, 2022
Financial guarantee contracts	**11,437**	**10,606**
Loan guarantees	4,993	5,076
Letters of credit	1,127	781
Other guarantees and warranties	5,318	4,749
Loan commitments	**79,849**	**78,012**
Credit facilities to banks	28,515	27,579
Credit facilities to customers	38,753	38,481
Guarantee credits	1,462	1,144
Letters of credit	268	288
Global limits	10,851	10,520
Total	**91,286**	**88,618**

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

» 58 Trust activities

Trust assets and trust liabilities amounted to €2,082 million as at June 30, 2023 (December 31, 2022: €2,171 million).

» 59 Disclosures on revenue from contracts with customers

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

JANUARY 1 TO JUNE 30, 2023

€ 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	18	-	-	
Other fee and commission income	33	-	13	
Fee and commission income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	33	-	
Other income in gains and losses on investments held by insurance companies and other insurance company gains and losses	-	41	-	
Other operating income	25	-	4	
Total	**75**	**74**	**19**	
Main geographical markets				
Germany	70	71	19	
Rest of Europe	5	3	-	
Rest of World	-	-	-	
Total	**75**	**74**	**19**	
Type of revenue recognition				
At a point in time	62	5	19	
Over a period of time	12	69	-	
Total	**75**	**74**	**19**	

	UMH	DZ BANK – CICB	DZ HYP	DZ PRIVAT-BANK	VR Smart Finanz	Other/ Consolidation	**Total**
	1,677	254	-	104	-	-46	1,989
	12	-	-	156	-	-2	167
	-	154	-	1	-	35	190
	-	59	3	-	-	26	91
	-	43	3	-	-	-1	44
	-	6	-	-	-	-	6
	-	-	-	-	-	-	18
	-	33	-	2	3	4	87
	-	-	-	-	-	-1	32
	-	-	-	-	-	-	41
	6	-	-	-	-	5	39
	1,695	**549**	**7**	**263**	**3**	**18**	**2,704**
	1,275	549	7	100	3	12	2,106
	420	-	-	163	-	6	597
	-	-	-	1	-	-	1
	1,695	**549**	**7**	**263**	**3**	**18**	**2,704**
	198	198	5	101	3	14	606
	1,497	351	2	163	-	4	2,098
	1,695	**549**	**7**	**263**	**3**	**18**	**2,704**

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	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	35
	-	7	-	-	-	-	7
	-	-	-	-	-	-	22
	-	26	11	1	2	-77	89
	-	-	-	-	-	-1	35
	-	-	-	-	-	-	36
	5	-	-	-	-	23	41
	1,812	**543**	**16**	**290**	**2**	**-64**	**2,835**
	1,354	543	16	121	2	-73	2,187
	458	-	-	168	-	9	646
	-	-	-	1	-	-	1
	1,812	**543**	**16**	**290**	**2**	**-64**	**2,835**
	279	196	14	51	2	-67	634
	1,533	348	2	239	-	3	2,200
	1,812	**543**	**16**	**290**	**2**	**-64**	**2,835**

» 60 Government grants

The ECB made additional liquidity available under the TLTRO III program in order to support lending to households and companies during the COVID-19 pandemic. The DZ BANK Group participates in the program as part of a bidder group comprising DZ BANK, TeamBank, and DZ HYP. The bidder group's total volume of €9,500 million (December 31, 2022: €11,000 million) was recognized under deposits from banks on the balance sheet.

The basic interest rate in the period January 1, 2022 to June 23, 2022 was minus 0.5 percent. For the period from after June 23, 2022 to November 22, 2022, the interest rate to be applied was the average deposit facility rate for the period from the start of the relevant TLTRO III tranche to November 22, 2022. From November 23, 2022 until maturity or early repayment of the relevant outstanding TLTRO III tranche, the basic interest rate is pegged to the average deposit facility rate for this period. The basic interest rate was recognized in net interest income in an amount of €160 million (first half of 2022: €81 million).

In accordance with the rules of the TLTRO III program, the interest on the liquidity provided depends on the net lending volume in the specified comparative periods. The net lending volume of the bidder group was higher than the required reference volume in the period October 1, 2020 to December 31, 2021, so a 0.5 percentage point lower interest rate applied in the period June 24, 2021 to June 23, 2022. As an additional interest-rate advantage was therefore granted by the ECB, which is a government agency within the meaning of IAS 20.3, this additional interest-rate advantage achieved was accounted for as a government grant in accordance with IAS 20 in 2022. As a result, additional income of €78 million was recognized in net interest income in the first half of 2022. No further interest-rate advantage was granted in the reporting period.

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

» 61 Employees

Average number of employees by employee group:

	Jan. 1– Jun. 30, 2023	Jan. 1– Jun. 30, 2022
Female employees	**15,490**	15,030
Full-time employees	9,408	9,249
Part-time employees	6,082	5,781
Male employees	**18,034**	17,818
Full-time employees	16,685	16,565
Part-time employees	1,349	1,253
Total	**33,524**	32,848

» 62 Board of Managing Directors

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

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

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

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

Dr. Christian Brauckmann
Responsibilities: IT; Services & Organisation

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

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

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

» 63 Supervisory Board

Henning Deneke-Jöhrens
(Chairman of the Supervisory Board)
Chief Executive Officer
Volksbank eG Hildesheim-Lehrte-Pattensen

Ulrich Birkenstock
(Deputy Chairman of the Supervisory Board)
Employee
R+V Allgemeine Versicherung AG

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

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

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

Pia Erning
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank

Timm Häberle
Chief Executive Officer
VR-Bank Ludwigsburg eG

Dr. Peter Hanker
Spokesman of the Board of Managing Directors
Volksbank Mittelhessen eG

Andrea Hartmann
Employee
Bausparkasse Schwäbisch Hall AG

Pilar Herrero Lerma
Employee
DZ BANK AG
Deutsche Zentral-Genossenschaftsbank

Dr. Dierk Hirschel
Head of the Economic Policy Division
ver.di Bundesverwaltung

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

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

Sascha Monschauer
Chief Executive Officer
Volksbank RheinAhrEifel eG

Wolfgang Nett
Sales Director
Union Investment Privatfonds GmbH

Rolf Dieter Pogacar
Employee
R+V Allgemeine Versicherung AG

Stephan Schack
Chief Executive Officer
Volksbank Raiffeisenbank eG, Itzehoe

Sigrid Stenzel
Labor union secretary
Social security group
ver.di Niedersachsen-Bremen

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

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

Responsibility statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the interim consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the group in accordance with German principles of proper accounting, and the interim group management report includes a fair review of the development and performance of the business and the position of the group, together with a description of the material opportunities and risks associated with the expected development of the group.

Frankfurt am Main, August 22, 2023

DZ BANK AG
Deutsche Zentral-Genossenschaftsbank

The Board of Managing Directors

Fröhlich	Dr. Riese	Benkredda	Berghaus
Dr. Brauckmann	Brouzi	Speth	Ullrich

Review Report[i]

To DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main

We have reviewed the condensed consolidated interim financial statements – comprising the income statement, the statement of comprehensive income, the balance sheet, the statement of changes in equity, the condensed statement of cash flows and selected explanatory notes – and the interim group management report of DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am Main, for the period from 1 January to 30 June 2023 which are part of the half-year financial report pursuant to § (Article) 115 WpHG ("Wertpapierhandelsgesetz": German Securities Trading Act). The preparation of the condensed consolidated interim financial statements in accordance with the IFRS applicable to interim financial reporting as adopted by the EU and of the interim group management report in accordance with the provisions of the German Securities Trading Act applicable to interim group management reports is the responsibility of the parent Company's management. Our responsibility is to issue a review report on the condensed consolidated interim financial statements and on the interim group management report based on our review.

We conducted our review of the condensed consolidated interim financial statements and the interim group management report in accordance with German generally accepted standards for the review of financial statements promulgated by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany) (IDW). Those standards require that we plan and perform the review so that we can preclude through critical evaluation, with moderate assurance, that the condensed consolidated interim financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU and that the interim group management report has not been prepared, in all material respects, in accordance with the provisions of the German Securities Trading Act applicable to interim group management reports. A review is limited primarily to inquiries of company personnel and analytical procedures and therefore does not provide the assurance attainable in a financial statement audit. Since, in accordance with our engagement, we have not performed a financial statement audit, we cannot express an audit opinion.

Based on our review, no matters have come to our attention that cause us to presume that the condensed consolidated interim financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU nor that the interim group management report has not been prepared, in all material respects, in accordance with the provisions of the German Securities Trading Act applicable to interim group management reports.

Frankfurt am Main, 22nd August 2023

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

sgd. Schmitz	sgd. Voeller
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

[i] Translation of the auditor's report issued in German language on the condensed consolidated interim financial statements prepared in German language by the management of DZ BANK AG Deutsche Zentral-Genossenschaftsbank. The German review report is authoritative.

Editorial information

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