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.

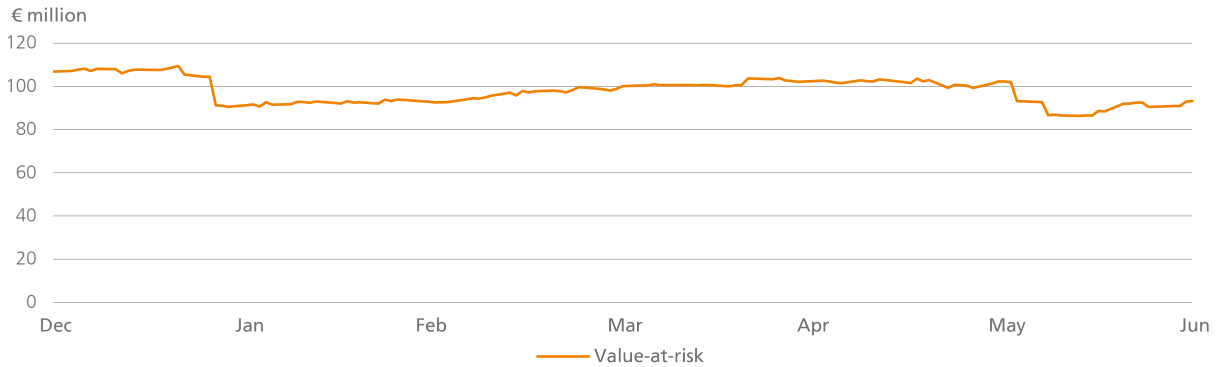
In the Bank sector, the value-at-risk fell to €93 million as at June 30, 2023 (December 31, 2022: €107 million). This was mainly because certain market data scenarios were no longer included in the rolling observation period for the historical simulation.

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).