2023 Half-Yearly Financial Report

as at 30 June 2023

Empowering
Communities to Progress.

Disclaimer
This edition of our half-yearly financial report is prepared for the convenience of our English-speaking readers. It is based on the German original, which takes precedence in all legal respects.

Contents

Financial Highlights

Key performance indicators

	1/1-30/6/2023	1/1-30/6/2022
Net operating profit	€1,398m	€943m
Cost-income ratio (based on operating income)	46.8%	59.3%
Profit before tax	€1,340m	€939m
Consolidated profit	€1,021m	€751m

Balance sheet figures/Key capital ratios

	30/6/2023	31/12/2022
Total assets	€308,163m	€318,006m
Shareholders' equity	€19,528m	€19,739m
Common Equity Tier 1 capital[1]	€16,010m	€16,060m
Core capital (Tier 1 capital)[1]	€17,710m	€17,760m
Risk-weighted assets (including equivalents for market risk and operational risk)	€75,096m	€82,077m
Common Equity Tier 1 capital ratio[1,2]	21.3%	19.6%
Core capital ratio (Tier 1 ratio)[1,2]	23.6%	21.6%
Leverage ratio[1,3]	5.4%	5.4%

1 31 December 2022: in accordance with approved financial statements.
2 Calculated on the basis of risk-weighted assets, including equivalents for market risk and operational risk.
3 Ratio of core capital to the sum total of the exposure values of all assets and off-balance-sheets items.

Other information

	30/6/2023	31/12/2022
Employees (in FTEs)	10,361	10,866
Branch offices	408	430

Financial Review

Corporate structure

Legal corporate structure and organisation of management and control
In the first half of 2023, the legal corporate structure and the organisation of management and control remained unchanged compared with year-end 2022. Information on this can be found in the "Corporate structure" section of the 2022 Combined Management Report. Only the number of members on the Management Board was reduced from eight to seven as of 1 May 2023.

Supervisory Board
There were no changes in the members of the Supervisory Board in the first half of 2023.

Mr Gianpaolo Alessandro will resign from the Supervisory Board as a shareholder representative with effect from the end of 31 August 2023. Dr Michael Diederich was appointed to succeed him as a member of the Supervisory Board with effect from 1 September 2023 at HVB's Extraordinary Shareholders' Meeting on 21 December 2022.

Management Board
Dr Michael Diederich resigned from the Management Board with effect from the end of 28 February 2023. Ms Marion Höllinger (previously the Management Board member responsible for the Private Clients Bank) succeeded him as CEO and Spokeswoman of the Management Board from 1 March 2023.

Ms Monika Rast was appointed as a member of the Management Board (Private Clients Bank) by the Supervisory Board with effect from 1 March 2023.

Mr Boris Scukanec Hopinski resigned from the Management Board with effect from the end of 30 April 2023. His area of responsibility was taken over by Mr Artur Gruca.

The members of the Supervisory Board and Management Board of HVB are listed in the notes to the consolidated financial statements of this Half-yearly Financial Report in the notes "Members of the Supervisory Board" and "Members of the Management Board".

UniCredit Unlocked
In the 2023 financial year, we are continuing to follow the guidelines of our UniCredit Unlocked strategic plan. This multi-year plan is embedded in the UniCredit Unlocked group-wide strategic plan with the cornerstones: simplifying the operating model with comprehensive process optimisation and digitalisation, growth in selected business areas and increasing capital efficiency.

Corporate acquisitions and sales, and other major changes in the group of companies included in consolidation
No significant corporate acquisitions or disposals were made in the reporting period.

Detailed information on changes in the group of companies included in consolidation can be found in the Note "Companies included in consolidation" in the notes to the consolidated financial statements.

Financial Review (Continued)

Economic report

Underlying economic conditions

Economic growth[1]	First half 2023[2]	Full year 2022	Main drivers of development in the first half of 2023[3]
Global economy	2.8%[4]	3.5%	Significantly higher energy costs and inflation rates have weighed on businesses and private households. In addition, the interest rate hikes of many central banks have exacerbated the economic slowdown. By contrast, supply bottlenecks have eased and allowed businesses to work off a part of their order backlogs.
Eurozone countries	0.9%	3.4%	The eurozone saw a noticeable contraction in the economy as businesses and private households restrained capital and consumer spending. Inflation is likely to have passed its peak but by historical comparison is still very high.
including: Germany	(0.2)%	1.8%	In Germany, economic activity even declined somewhat with the export-dependent industry in particular suffering from a rather weak global economy. The labour market, however, remained robust.
USA	2.2%	2.1%	Compared with the ECU, the US economy held up better, not least due to a still comparatively strong labour market.

1 Change in real GDP (in % compared with the previous year).
2 Sources: national authorities, UniCredit research forecasts.
3 Assessment of the development in the first half of 2023 on the basis of estimated figures.
4 Source: full year value expected by UniCredit Research (figures for first half of 2023 are not available).

Sector-specific developments

The decline in inflation continued in the first half of 2023. In the eurozone, the inflation rate fell from 9.2 percent at the end of 2022 to 5.5 percent in June 2023 (*Eurostat*). The prolonged inflation led to further significant monetary tightening by the ECB in the first half of 2023. On the one hand, this resulted in increases in key interest rates totalling 1.5 percentage points in the first half of 2023 and on the other hand, a reduction in the bond portfolio by the ECB. After the ECB ended its net asset purchases under the asset purchase programme (APP) in 2022, the ECB started to reduce its APP portfolio by €15 billion per month from March 2023. From July 2023 onwards, maturities will no longer be reinvested under the APP portfolio, which will further accelerate the reduction of the portfolio. As at June 2023, the ECB still held bonds totalling €3.2 trillion in its APP portfolio. The ECB also ended net purchases under its second purchase programme, the pandemic emergency purchase programme (PEPP), on 1 July 2022. However, the ECB will be reinvesting all PEPP maturities until at least the end of 2024. The ECB also announced that it would be reinvesting PEPP maturities flexibly by asset class and region. The PEPP is a programme comprising public sector and private assets currently totalling €1.7 trillion. Due to the increase in credit spreads for the government bonds of peripheral countries, the ECB decided to establish a new transmission protection instrument (TPI) in July 2022. The ECB Governing Council considers it necessary to establish the TPI to support the effective transmission of monetary policy. The TPI supplements the ECB Governing Council’s raft of instruments and government bond purchases can be activated to counter unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the eurozone. However, there has been a significant decline in credit spreads for the government bonds of peripheral countries since the introduction of the TPI.

The temporary easing of the criteria for collateral relating to the refinancing of commercial banks with the ECB was extended from September 2021 to 2022. In March 2022, however, the ECB decided to phase out the easing measures by 2024. This package of measures serves to cushion the stricter financing conditions in the eurozone, leading to a temporary increase in risk tolerance within the euro system to support lending to the economy. Specifically, the following collateral was relaxed for ECB refinancing: loan receivables may be used as collateral, valuation discounts for collateral were reduced and the effects of credit rating downgrades on the availability of collateral were temporarily mitigated. The gradual phase-out of the easing measures is also aligned with the maturities under the TLTRO III programme in 2023 and 2024.

On the regulatory side, a provisional agreement was reached in June 2023 on the implementation of the finalised Basel III reforms (also known as Basel IV) in Europe. As part of this provisional agreement, negotiators agreed on how the output floor (lower limit of capital requirements), which limits the variability of banks' capital requirements calculated on the basis of internal models, can be implemented. Consensus was reached on appropriate transitional arrangements in order to give market participants sufficient time to make adjustments. As special regulations, the agreement envisages long transitional periods for risk positions vis-à-vis companies without an external credit rating and housing loans collateralised by real estate. The introduction of the finalised Basel III standard in Europe is planned for the beginning of 2025, which means that risk weightings and the risk-weighted assets for banks will gradually increase from 2025 onwards.

As regards macroprudential regulation, the German Federal Financial Supervisory Authority (BaFin) increased the countercyclical capital buffer from 0.0 percent to 0.75 percent of risk-weighted assets on domestic risk positions on 1 February 2023. In addition, BaFin also introduced a sectoral systemic risk buffer of 2.0 percent of risk-weighted assets on loans secured by residential property, which banks must comply with from 1 February 2023. Both measures have led to a further increase in capital requirements for banks.

In April 2023, the European Commission proposed a comprehensive legislative package for reforming bank resolution and deposit guarantee schemes. In this context, the Commission proposes adjustments to the bank crisis management framework and deposit insurance to safeguard financial stability and manage bank failures in an orderly and economically efficient manner. With this project, the Commission intends to further harmonise deposit guarantee schemes in the EU that have been structured differently up until now.

A little over a year after the 6th amendment to the Minimum Requirements for Risk Management (MaRisk), BaFin published the draft of the 7th MaRisk amendment in September 2022. Banks then had until November 2022 to provide feedback and the final circular was published in June 2023. In terms of content, the amendment includes guidelines of the European Banking Authority (EBA) on lending and credit monitoring as well as dealing with sustainability risk.

European banks successfully met the interim targets for the minimum requirements for own funds and eligible liabilities (MREL) on 1 January 2022 and the final MREL targets must be met from the beginning of 2024. Overall, the banks are well on track and had already met the MREL targets to a large extent as at 30 June 2023.

Financial Review (Continued)

Risk premiums in the European credit market moved sideways for the most part in the first half of 2023. The credit spreads of companies with good credit ratings fell by 4 basis points to a level of 62 basis points in the first half of 2023. By contrast, risk premiums for senior bank bonds widened slightly by 5 basis points to 93 basis points, although the spreads for bank bonds narrowed again in July. The spread between risk premiums for ten-year Italian sovereign bonds and ten-year German sovereign bonds narrowed significantly from 214 basis points to 168 basis points in the first half of 2023. The ECB's announcement that it was preparing an instrument to combat fragmentation coupled with the flexibility in reinvesting maturities in the PEPP supported investor confidence after which the spread margin fell significantly below the 200 basis point mark again. In particular, retail investors and foreign investors increasingly emerged as buyers of sovereign bonds.

In the first half of 2023, the yield curve remained distinctly inverted. The three-month Euribor increased significantly from 2.13 percent at the end of 2022 to 3.58 percent as at 30 June 2023 while the EUR swap rate with 10-year maturity remained at a level of around 3 percent. The higher level of interest rates is positive for the net interest income of banks. Furthermore, the market currently expects further ECB rate hikes due to the persistently higher inflation and sees an increase in the ECB deposit rate from 3.5 percent at present to 4 percent in the second half of 2023.

Lending was down in the first half of the year. New business with real estate loans remained under pressure from the significant increase in interest rates and the sharp rise in construction costs. In Germany, the volume of new business with housing loans extended to private households in the first five months of 2023 was more than 50 percent lower than the level of 2022. In terms of lending to the business sector, the last ECB survey on lending in April 2023 showed another decline in demand for corporate loans. The higher general level of interest rates and the reluctance of businesses to invest in fixed assets curbed the demand for credit, especially for long-term loans. At the same time, loan terms in the corporate banking business became more restrictive. The lower volume of loans will have a negative impact on the net interest income of banks in the medium term.

The stock markets developed favourably overall in the first half of 2023, although the economic environment continued to deteriorate. The main driver of positive share prices was less concern over Europe's energy supply coupled with lower inflation rates, which had a positive effect on the risk appetite. The EURO STOXX 50 rose by 14 percent in the first six months of 2023. By the end of February 2023, bank shares initially performed better than the overall market. However, the EURO STOXX Banks (Price) Index fell disproportionately to the overall market in March following the crisis involving some US regional banks but was able to catch up in part with the overall market again by the end of the half year. The rapid and comprehensive support measures put in place by the Federal Reserve and the US Federal Deposit Insurance Association FDIC in the wake of the failure of some US regional banks bolstered investor confidence and prevented this having a contagious effect on other regional banks. At the same time, more consolidation was seen in the US banking market.

In March, there was also a merger in Switzerland between the former Credit Suisse and UBS following the intervention of the Swiss Federal Department of Finance, the Swiss National Bank and the Swiss Financial Market Supervisory Authority (FINMA). Previously, Credit Suisse had come under pressure due to an outflow of customer deposits. The merger was supported by a guarantee from the Swiss government and additional liquidity assistance from the Swiss National Bank (SNB). A subject of controversial debate in the market was the complete write-off of Credit Suisse's AT-1 bonds totalling CHF16 billion, although Credit Suisse shareholders were partially compensated by exchanging Credit Suisse shares for UBS shares. However, the European regulators subsequently made it clear in a statement that within the European Union equity investors are the first to bear losses and only after that investors in AT-1 bonds.

In the USA, the yield on ten-year US treasury bonds fluctuated between 3.4 percent and 4.0 percent and, as a whole, remained unchanged as at 30 June 2023 compared with year-end 2022 at around 3.8 percent. The yield on ten-year bonds of the Federal Republic of Germany also remained unchanged at a level of 2.5 percent in the first half of 2023. The euro appreciated slightly by 2 percent against the US dollar in the first half of 2023. This appreciation continued to accelerate in July, with low US inflation data being one of the main drivers of the recent strong appreciation.

The topic of sustainability continues to be of major importance in the banking sector. On the one hand, the share of ESG-compliant issues in the banking sector remained at a high level with more than 20 percent of the senior bonds issued in the banking sector in first half of 2023 being placed in line with ESG standards. On the other hand, banks worked on further sustainability goals and data, in particular regarding the CO2 intensity of the credit book.

Financial Review (Continued)

Operating performance of HVB Group

All the statements regarding the operating performance of HVB Group in this Interim Management Report refer to the structure of our income statement.

			CHANGE	
INCOME/EXPENSE (€ millions)	**1/1-30/6/2023**	**1/1-30/6/2022**	**€ millions**	**in %**
Net interest	1,405	1,291	114	8.8
Dividends and other income from equity investments	24	23	1	4.3
Net fees and commissions	647	607	40	6.6
Net trading income	749	340	409	>+ 100.0
Net gains/(losses) on financial assets and liabilities at fair value	49	141	(92)	(65.2)
Net gains/(losses) on derecognition of financial instruments measured at cost	(2)	6	(8)	
Net other expenses/income	(148)	(164)	16	(9.8)
of which net valuation/disposal of investment properties	7	2	5	>+ 100.0
OPERATING INCOME	**2,724**	**2,244**	**480**	**21.4**
Payroll costs	(665)	(694)	29	(4.2)
Other administrative expenses	(532)	(590)	58	(9.8)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(79)	(46)	(33)	71.7
Operating costs	**(1,276)**	**(1,330)**	**54**	**(4.1)**
OPERATING PROFIT/(LOSS)	**1,448**	**914**	**534**	**58.4**
Net write-downs of loans and provisions for guarantees and commitments	(50)	29	(79)	
NET OPERATING PROFIT/(LOSS)	**1,398**	**943**	**455**	**48.3**
Provisions for risks and charges	(13)	9	(22)	
Restructuring costs	(45)	(9)	(36)	>+ 100.0
Net gains/(losses) on remeasurement of consolidated companies	—	(4)	4	(100.0)
PROFIT/(LOSS) BEFORE TAX	**1,340**	**939**	**401**	**42.7**
Income tax for the period	(319)	(188)	(131)	69.7
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**1,021**	**751**	**270**	**36.0**
attributable to the shareholder of UniCredit Bank AG	1,021	751	270	36.0
attributable to minorities	—	—	—	—

Net interest
In the reporting period, net interest comes to €1,405 million compared with €1,291 million in the previous-year period and is thus a significant €114 million (8.8%) higher than the previous-year figure. The rise in net interest is largely due to wider margins in the deposit-taking business as a result of the higher interest rate environment. This rise more than compensated for the discontinuation of the positive effects from the TLTRO III programme in the previous-year period. Furthermore, this item includes interest income of €20 million from the reversal of a provision for interest on tax payments. In the previous-year period, a similar effect in connection with the reduction from 6% to 1.8% in statutory interest on tax refunds and payments of tax arrears amounted to €42 million.

Due to the substantial increase in interest rates, the Retail and Corporates operating segments benefited from an increase in margins in the deposit-taking business in particular. In addition, the rise in funding expenses for the held-for-trading portfolio had a negative impact in the Corporates operating segment. This was offset by an increase in net trading income on account of higher market interest rates.

Net fees and commissions
In the reporting period, net fees and commissions comes to €647 million and is thus a marked €40 million (6.6%) higher than in the previous-year period. This is largely due to an increase in net fees and commissions in the lending business and in securities services for customers.

Net trading income
In the reporting period, net trading income was up a sharp €409 million (>100%) to €749 million, driven in particular by the substantial increase in income in the areas of fixed income and currencies & commodities. A key factor in this connection was a significant increase in customer demand for hedging transactions. In addition, income from the held-for-trading portfolio rose on the back of the increase in the level of market interest rates.

Net trading income includes valuation discounts in the context of the fair value measurement of derivatives, particularly credit value adjustments and funding value adjustments. The reduction in valuation discounts in connection with the fair value measurement had a positive impact and resulted in income of €43 million (previous-year period: €53 million).

In the previous-year period, losses totalling €94 million in connection with the closing out of derivatives transactions with Russian banks as a result of the sanctions against Russia had a negative impact.

Net gains/losses on financial assets and liabilities at fair value
A net gain of €49 million is reported for financial assets and liabilities at fair value in the reporting period, which is a sharp €92 million (65.2%) lower than the net gain of €141 million reported in the previous-year period.

There was a significant decline of €52 million in hedge accounting effects (previous-year period: €244 million). In the reporting period, a net loss of €9 million was generated in financial liabilities designated at FVTPL compared with a net loss of €75 million in the previous-year period. The loss of €43 million in financial assets mandatorily at FVTPL in the previous-year period was considerably reduced to a loss of €11 million in the reporting period. This item also includes the fair value measurement of equity instruments at a positive amount of €17 million (previous-year period: negative amount of €1 million).

Financial Review (Continued)

Net other expenses/income
The item "Net other expenses/income" shows a net expense of €148 million for the reporting period, representing a significant decline of €16 million (9.8%) below the net expense of €164 million in the previous-year period. The change is due in particular to the lower bank levy, which fell by €62 million to €179 million. In addition, other factors accounted for under other expenses rose by €34 million from €17 million in the previous-year period to €51 million in the reporting period.

At €179 million in the reporting period (previous-year period: €241 million), the bank levy is the largest single item contained in net other expenses/income. The lower bank levy is partly due to the expected general decline in covered deposits (basis of assessment for the bank levy) in 2023 and to the reduction of the liabilities relevant for calculating the contribution at HVB as a further factor influencing the amount set for the bank levy.

Operating costs
Operating costs total €1,276 million in the reporting period and are thus a marked €54 million (4.1%) lower than the previous-year's figure of €1,330 million. This shows that HVB Group has succeeded in reducing costs in line with the UniCredit Unlocked strategic plan and in combating the effects of inflation at the same time.

Payroll costs declined noticeably by €29 million (4.2%) to €665 million in the reporting period compared with €694 million in the previous-year period, especially against the backdrop of lower staffing levels. Other administrative expenses total €532 million in the reporting period, which is a significant decrease of €58 million (9.8%) compared with the previous-year period. This decrease is offset by amortisation, depreciation and impairment losses on property, plant and equipment, software and right-of-use assets that post a sharp increase of €33 million (71.7%) to €79 million in the reporting period compared with €46 million in the previous-year period. This is mainly attributable to unscheduled write-downs on properties as a result of a decline in market values.

Operating profit (before net write-downs of loans and provisions for guarantees and commitments)
Operating profit (before net write-downs of loans and provisions for guarantees and commitments) amounts to €1,448 million in the reporting period, which represents a sharp rise of €534 million (58.4%) over the previous-year figure of €914 million.

The cost-income ratio (ratio of operating costs to operating income) therefore improved a sharp 46.8% in the reporting period after 59.3% in the previous-year period and thus exceeded the forecast of a marked decline.

Net write-downs of loans and provisions for guarantees and commitments
In the reporting period, net additions to net write-downs of loans and provisions for guarantees and commitments total €50 million after net income of €29 million was generated on the reversal of net write-downs of loans and provisions for guarantees and commitments in the previous-year period. This represents a sharp increase of €79 million. The individual effects that offset each other are described below.

In the reporting period, a net amount of €31 million in portfolio allowances (GLLP) was reversed following a net addition of net €31 million in the previous-year period. The main factor in this connection was the reversal of a general loan loss provision for a bank headquartered in Russia that was classified with an impaired credit rating. The general loan loss provision will therefore be reversed and a specific loan loss provision added.

The positive development of general loan loss provisions in the portfolio due to better credit ratings of individual borrowers was largely offset by post-model adjustments. Updated forward-looking macroeconomic scenarios (marginally higher growth rates in the gross domestic product for 2023 with slightly lower growth rates for 2024 and 2025) have not, on balance, had any significant effect.

In the reporting period, net additions to specific loan loss provisions total €81 million after a net reversal of €60 million in the previous-year period. Additions to specific loan loss provisions on account of defaults were partly compensated for by reversals of existing specific loan loss provisions. The need for specific loan loss provisions for direct Russia exposure in connection with the Russia-Ukraine conflict remained at a relatively low level in the reporting period.

Provisions for risks and charges
In the reporting period, a net expense of €13 million was generated from the addition to provisions for risks and charges. This is offset by net income of €9 million from the reversal of provisions for risks and charges reported in the previous-year period. No individual items of significance occurred in the reporting period or in the previous-year period.

Restructuring costs
HVB Group uses the UniCredit groupwide service offering of IT activities and certain other administrative activities of UniCredit S.p.A. As a general rule, these services are charged to HVB Group at cost. In the course of the reorientation of the UniCredit corporate group, further restructuring measures involving the IT activities concerned/other service areas are planned for 2023 and 2024. HVB Group is assuming the pro rata costs of €50 million for the areas of UniCredit S.p.A. to be restructured as these provide their services almost exclusively for HVB Group. This one-time payment is offset by a significant reduction in costs in the future as UniCredit S.p.A. can provide equivalent services more cost effectively in the future. HVB Group will not suffer any disadvantage as a result. In the previous-year period, there were no items of significance that would need to be explained.

Financial Review (Continued)

Profit before tax, income tax for the period and consolidated profit/loss
In the reporting period, HVB Group generated profit before tax of €1,340 million, which is a sharp €401 million (42.7%) higher than the profit before tax of €939 million generated in the previous-year period.

The income tax expense amounts to €319 million in the reporting period and is therefore a substantial €131 million (69.7%) higher than the income tax expense of €188 million in the previous-year period. The sharp increase in profit before tax generally leads to a higher tax expense. However, this effect was offset by the reversal of a tax provision on account of a completed tax audit resulting in income of €88 million.

In the previous-year period, the prospective adjustment and extension of the estimated period for taking account of the period of time in which taxable income will be generated for the recognition of deferred taxes has resulted in tax income recognised in profit or loss of €131 million.

After deducting income tax for the period, HVB Group generated a consolidated profit of €1,021 million in the reporting period, which represents a significant increase of €270 million (36.0%) compared with the consolidated profit of €751 million in the previous-year period.

The forecast made in the 2022 Annual Report of a sharp increase in profit before tax and also a significant increase in profit after tax for the 2023 financial year was confirmed in the first half of 2023.

Return on allocated capital
The profitability ratio return on allocated capital (RoAC) shows the annualised consolidated profit of HVB Group in relation to allocated capital. With RoAC, allocated capital is determined on the basis of the average risk-weighted assets (including equivalents for market risk and operational risk) whereby 13.00% equity is allocated to the average risk-weighted assets. In the reporting period, this ratio rose to 18.7% after 13.0% in the previous-year period.

The RoAC is thus considerably higher than that in the previous-year period and the figure forecast for the reporting period. Compared with the previous-year period, this is attributable to an improvement in consolidated profit. Compared with the forecast, the improvement is due in particular to higher net trading income.

Segment results by operating segment

The structure of the income statement used for internal management purposes is shown; any deviations to the presentation of the operating performance are described in detail in the "Segment reporting" section of the consolidated financial statements. When calculating totals, minor deviations might occur as a result of rounding.

OPERATING INCOME (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Retail	819	634
Corporates	1,933	1,707
Other	147	209
Total	**2,899**	**2,550**

NET OPERATING PROFIT/(LOSS) (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Retail	311	121
Corporates	1,232	1,026
Other	92	98
Total	**1,635**	**1,245**

PROFIT/(LOSS) BEFORE TAX (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Retail	268	110
Corporates	1,014	780
Other	54	95
Total	**1,336**	**986**

PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS)) (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Retail	198	86
Corporates	745	570
Other	73	79
Total	**1,017**	**736**

Financial Review (Continued)

Financial situation

Total assets

The total assets of HVB Group declined by €9.8 billion (3.1%) to €308.2 billion as at 30 June 2023 from €318.0 billion as at 31 December 2022.

On the assets side, cash and cash balances increased slightly, totalling €37.3 billion as at the reporting date compared with €36.8 billion as at year-end 2022. This rise is due to higher credit balances with central banks, which were up from €36.3 billion as at 31 December 2022 to €36.9 billion as at 30 June 2023, while cash on hand declined by €0.1 billion to €0.4 billion as at the reporting date.

By contrast, financial assets held for trading fell a marked €3.4 billion to €78.9 billion as at 30 June 2023 compared with €82.3 billion as at year-end 2022. This is the result of the decline in the positive fair values of derivative instruments (down €7.3 billion), which was partially compensated by the increase in other financial assets held for trading (up €3.7 billion) and fixed-income securities (up €0.3 billion).

The portfolio of financial assets at FVTPL, which consists mainly of securities, fell sharply by €1.6 billion to €3.3 billion as at the reporting date compared with year-end 2022. This decline is primarily due to securities reaching final maturity.

The volume of financial assets at FVTOCI, which consists exclusively of securities, increased notably by €0.5 billion to €10.3 billion compared with the previous year-end. The increase is primarily due to securities purchases.

Loans and receivables with banks declined significantly by €2.8 billion to €20.6 billion, which is attributable to the decreases in cash collateral and pledged credit balances (down €1.8 billion), other loans to banks (down €1.0 billion), current accounts (down €0.7 billion) and reverse repos (down €0.3 billion). This was offset by securities (up €1.0 billion).

Loans and receivables with customers were down slightly by €3.1 billion to €151.7 billion, mainly due to other loans and receivables (down €4.0 million), and cash collateral and pledged credit balances (down €0.4 billion). This was partially compensated by an increase in mortgage loans (up €0.8 billion) and current accounts (up €0.5 billion).

On the liabilities side, the item "Deposits from banks" declined significantly by €6.2 billion to €45.0 billion as at 30 June 2023. This decline compared to the previous year-end is the result of the development of deposits from central banks (down €10.8 billion). In contrast, there was an increase primarily in repos (up €2.5 billion) as well as cash collateral and pledged credit balances (up €1.8 billion). The decline in deposits from central banks reflects the repayment of TLTRO III funds totalling €14.9 billion.

There was a slight reduction of €2.8 billion to €144.4 billion in deposits from customers, including declines mainly in current accounts (down €13.3 billion), savings deposits (down €3.1 billion), and cash collateral and pledged credit balances (down €0.9 billion). These were offset by increases in term deposits (up €9.0 billion), repos (up €4.9 billion) and other liabilities (up €0.8 billion).

Compared with year-end 2022, there was a significant increase in debt securities in issue of €4.6 billion to €35.7 billion. These primarily serve to fund the medium- to long-term lending business. The increase is mainly due to a higher volume of Mortgage Pfandbriefe (up €2.3 billion) and Public-sector Pfandbriefe (up €+1.3 billion).

Financial liabilities held for trading fell sharply by €5.5 billion to €58.8 billion compared with year-end 2022. An amount of €8.5 billion of this decrease is attributable to the negative fair values of derivative financial instruments, whereas other financial liabilities held for trading were up by €3.0 billion.

Financial liabilities at FVTPL remained stable at €4.8 billion as at 30 June 2023 compared with 31 December 2023.

Shareholders' equity shown in the balance sheet was down slightly by €0.2 billion to €19.5 billion as at the reporting date. This is due to the UniCredit-internal dividend payment of €1.2 billion for 2022, which was compensated mainly by consolidated profit of €1.0 billion for the first half of 2023.

Further and more detailed information on the individual items of the balance sheet is contained in the "Notes to the Balance Sheet" and in "Other Information" in the notes to the consolidated financial statements.

Contingent liabilities and other commitments not recognised in the balance sheet amounted to €136.0 billion at the reporting date compared with €132.8 billion at year-end 2022. This figure includes contingent liabilities in the form of financial guarantees of €29.4 billion (year-end 2022: €29.6 billion) and other commitments of €106.6 billion (year-end 2022: €103.2 billion) related to irrevocable and revocable credit commitments. These contingent liabilities are offset by contingent assets of the same amount.

Risk-weighted assets, key capital ratios and leverage ratio of HVB Group

The total risk-weighted assets of HVB Group (including market risk and operational risk) determined in accordance with the Capital Requirements Regulation (Kapitaladäquanzverordnung – CRR II) amounted to €75.1 billion as at 30 June 2023 and were thus €7.0 billion lower than as at year-end 2022 (€82.1 billion), also as a result of measures to increase capital efficiency in line with the group-wide UniCredit Unlocked strategic plan. Overall, risk-weighted assets for credit risk (including counterparty default risk) fell by €4.3 billion to €61.4 billion. Furthermore, the risk-weighted asset equivalents for operational risk remained stable at €8.6 billion. The risk-weighted assets for market risk fell by €2.7 billion and came to €5.1 billion.

Financial Review (Continued)

As at 30 June 2023, Common Equity Tier 1 capital compliant with the CRR II excluding hybrid capital (CET1 capital) totalled €16.0 billion and Tier 1 capital €17.7 billion. Tier 1 capital decreased slightly compared with year-end 2022 (€17.8 billion in accordance with approved consolidated financial statements). The CET1 capital ratio (ratio of Common Equity Tier 1 capital to the total amount of credit risk-weighted assets and risk-weighted asset equivalents for market risk and operational risk) and the Tier 1 capital ratio under the CRR II (including market risk and operational risk) were 21.3% and 23.6% respectively as at 30 June 2023 (31 December 2022: 19.6% and 21.6% respectively). Own funds came to €19.1 billion as at 30 June 2023 (31 December 2022: €19.2 billion in accordance with approved consolidated financial statements). The own funds ratio was 25.4% as at 30 June 2023 (31 December 2022: 23.4%). The increase in the ratios is attributable to the decrease in risk-weighted assets.

The leverage ratio is determined by dividing the Tier 1 capital measure by the total exposure measure. The total exposure measure is the sum total of the exposure values of all assets and off-balance sheet items. The leverage ratio of HVB Group remained unchanged at 5.4% as at 30 June 2023 (31 December 2022 in accordance with approved consolidated financial statements: 5.4%).

Ratings
HVB's creditworthiness and credit rating are assessed by the credit rating agencies Moody's Investors Service Inc. (Moody's), Fitch Ratings Limited (Fitch) and Standard & Poor's Credit Market Services Europe Limited (S&P). The Moody's, Fitch and S&P credit rating agencies are registered and certified as credit rating agencies in line with Regulation (EC) No. 1060/2009 of the European Parliament and of the Council of 16 September 2009 ("CRA Regulation").

Moody's
Moody's affirmed HVB's issuer rating at 'A2' and deposit rating at 'A2'/'P-1' on 10 August 2022. The outlook was adjusted from 'stable' to 'negative' following the rating move that changed the rating outlook for Italy and UniCredit S.p.A. from 'stable' to 'negative'. The rating outlook reflects the possibility of HVB's stand-alone rating (Baseline Credit Assessment: BCA) deteriorating if the stand-alone rating of UniCredit S.p.A. were to be downgraded as a result of a deterioration in the operating environment in Italy. Moody's has limited the rating gap between HVB's stand-alone rating to a notch higher than that of its parent company which, from Moody's perspective, recognises the existing interdependencies due to the Bank's role as the global investment banking hub for the corporate group and Moody's assumptions regarding the resolution strategy.
HVB's stand-alone rating (BCA) was affirmed at 'baa2'. Moody's continues to emphasise the strong capital base, the good asset quality and solid liquidity position of HVB. HVB's ratings for preferred senior unsecured bonds and the counterparty risk rating (CRR) were not affected by the rating move and remain unchanged at 'A2' and 'A1'/'P-1' respectively.

Fitch Ratings
On 7 February 2023, Fitch adjusted the outlook from 'negative' to 'stable' and affirmed HVB's ratings. The stable outlook reflects Fitch's assessment that the capital base will remain at a level appropriate for the viability rating (stand-alone rating) of 'bbb+'. HVB's issuer default rating (IDR) stands at 'BBB+'/'F2', the derivative counterparty rating at 'A- (dcr)' and the rating for deposits as well as for preferred senior unsecured bonds remains at 'A-'/'F2'. HVB's long-term issuer default rating (IDR) continues to be determined by the Bank's viability rating (stand-alone rating) which is 'bbb+'. In its credit rating assessment, Fitch emphasises the very good capital base and the resulting high degree of flexibility of HVB to mitigate possible deteriorations in asset quality due to the weakening economic environment.

Standard & Poor's
S&P affirmed HVB's ratings during a routine credit review on 28 February 2023. The outlook for these ratings is 'stable'. HVB's issuer credit rating (ICR) stands at 'BBB+'/'A-2', the resolution counterparty rating is 'A-'/'A-2' and the rating for preferred senior unsecured debt instruments is 'BBB+'. The rating outlook reflects S&P's expectation that HVB's capital base will remain at a high level despite a deterioration expected in the economic environment and HVB's financial results will continue to remain stable. In addition, the outlook shows that HVB's financial and operating interdependencies will not increase in the context of implementing UniCredit's Single Point of Entry (SPE) resolution strategy. Although S&P rarely awards a rating to subsidiaries with an SPE resolution strategy higher than that of the parent company, HVB's rating is a notch higher than the rating of UniCredit S.p.A. In its credit rating assessment, S&P emphasises that HVB's ratings continue to be supported by a strong capital base, the Bank's solid market position in corporate banking, its diversified and stable funding base and other measures.

Report on subsequent events (events after the reporting period)

There were no significant events at HVB after 30 June 2023 to report.

Forecast report/Outlook

The following comments on the outlook are to be viewed in connection with those in the Financial Review and the Risk Report in the Combined Management Report of the 2022 Annual Report.

General economic outlook
After global GDP growth of 3.5 percent in 2022, there is likely to be a slowdown in the global economy in 2023 and 2024. HVB Group is assuming growth of 2.8 percent in 2023 followed by 2.7 percent in 2024 (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023). Although inflation rates are likely to have passed their peak worldwide in the first half of 2023, the still high rates of price increases will probably continue to curb private household consumption expenditure. In addition, interest rates are significantly higher as a result of the tightening carried out by many central banks such as the Fed and the ECB, which are contributing to the economic slowdown. Interest-rate-sensitive sectors in particular, such as the construction sector, have already slowed down significantly. Due to impact lags, the full effects of interest rate hikes on the economy are, however, yet to be seen, but the buffer of comparatively low household and corporate debt levels in many industrialised countries coupled with robust labour markets should prevent an even sharper slowdown in the economy. The continuing corporate order backlog is also expected to mitigate the economic slowdown, although this effect is likely to increasingly weaken. As a result of the noticeable easing in supply bottlenecks, companies have already been able to work off a part of their order backlog.

Financial Review (Continued)

HVB Group expects the US economy to grow moderately in 2023 (1.3 percent) but to stagnate in effect in 2024 due to growth of a mere 0.1 percent (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023). The combination of significantly higher key interest rates and a tightening of lending conditions for companies and private households will probably have a dampening effect on the US economy with a time lag. HVB Group expects that the key US interest rate will not be raised any further and has thus reached its peak at 5.5 percent. Further significant declines in interest rates as well as the economic slowdown should then lead to the Fed's first interest rate cut in the first quarter of 2024. HVB Group is expecting interest rate cuts totalling 150 basis points in 2024 (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023).

The development of the real estate market is expected to remain weak and the population will presumably decline further, most likely contributing to China's growth remaining rather bumpy and subdued by historical standards. HVB Group expects growth of 5.4 percent in 2023, followed by 4.3 percent in 2024 (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023).

For the eurozone, HVB Group anticipates slight growth of 0.5 percent for 2023 followed by a further moderate recovery with GDP growth of 1.0 percent in 2024 (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023). In this baseline scenario, it is assumed that there will be no supply shortages of natural gas and other energy sources. The inflation rate is expected to average 5.5 percent in 2023 and 2.4 percent in 2024, down from 8.4 percent in 2022. However, the still high annual average in 2023 masks a noticeable slowdown in inflation momentum later in the year, with an expected inflation rate of 3.2 percent in the fourth quarter of 2023. The ECB is likely to raise the key interest rate (deposit rate) in a final step by a further 25 basis points to 4.0 percent in the third quarter of 2023. From the second quarter of 2024, HVB Group then expects interest rate cuts totalling 75 basis points over the rest of the year (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023).

At country level in the eurozone, HVB Group expects a slight contraction of 0.3 percent in GDP in Germany in 2023 followed by a moderate recovery of 1.3 percent in 2024 (The UniCredit Economics Chartbook: Monetary transmission accelerates, published on 29 June 2023). By contrast, economic performance in the other larger countries of the eurozone should develop better in 2023. For France, HVB Group expects slight growth of 0.6 percent (2024: 1.1 percent) and for Italy, growth of 1.0 percent, followed by 0.9 percent in 2024.

In Germany, high energy costs are expected to continue to weigh on private consumption and investment expenditure for the time being, although government support measures should dampen the negative impact. The order backlog in the manufacturing sector has passed its peak but together with the generally robust labour market is still cushioning the economy for the time being. Construction companies also still have an order backlog, although the sharp decline in building permits indicates a strong slowdown in the construction industry. Government price caps on gas and electricity, together with the normalisation of commodity prices and the easing of bottlenecks in supply chains, are expected to further slow inflation rates to around 4 percent in the fourth quarter of 2023 and to 2.5 percent in the fourth quarter of 2024. This is expected to support private consumption expenditure. However, consumer prices are still expected to rise by a high 6.1 percent on average in 2023 and by 2.8 percent in 2024 (2022: 6.9 percent).

Banking sector development in 2023

The focus remained on the high level of inflation in the USA and Europe and the interest rate hikes by the central banks in the first half of the year: The uncertainties prevailing in 2022 regarding the supply of energy in Europe were reduced at the end of 2022. Gas prices in particular continued to decline significantly in the first half of 2023 while the growing weakness of the economic environment made itself evident. The fundamental indicators for the European banking sector are still very good. In particular, net interest income in the European banking sector has seen a clearly positive development, whereas credit risk costs were able to be maintained at a moderate level.

The trend on the income side in the banking sector remained extremely dynamic in the first half of 2023. The ECB deposit rate rose by 1.5 percentage points in the first half of 2023, whereas the interest rate on sight deposits by businesses rose by only 0.30 percentage points and on sight deposits by households by only 0.14 percentage points up to the end of May 2023. The significantly improved income side combined with cost control in the sector and only low risk costs led to a substantial increase in profitability. The return on equity of European banks stood at 10.4 percent in the first quarter of 2023 compared with 7.6 percent in 2022 and below 4 percent in the period from 2009-2022 (*European Banking Authority*).

On the structural side, the profitability of European banks continues to improve. Firstly, an acceleration in digital customer interaction was seen as a result of the COVID-19 pandemic, enabling a further structural adjustment of branch networks. Secondly, there were a number of national bank mergers primarily in Spain and Italy, which is likely to additionally boost profitability in the sector in the medium term. The consolidation in the banking sector continued in Germany too. The number of banks fell from 1,519 at year-end 2021 to 1,458 at year-end 2022 and the number of branches from 21,712 at year-end 2021 to 20,446 at year-end 2022 (*Deutsche Bundesbank*). It is to be assumed that the process of consolidation of European banks will continue, although still focusing on domestic consolidation instead of large cross-border mergers. Moreover, the trend towards streamlining and focusing banks' business models continues, with the concentration on core areas and markets in strong competitive positions generating correspondingly higher margins. On the costs side, most banks are also continuing to adapt their office space to the new hybrid working environment, enabling further optimisation of the cost structure.

The liquidity position of the banking sector remained very good despite the TLTRO III repayments. At the end of March 2023, the average liquidity coverage ratio (LCR) was 164 percent and the net stable funding ratio (NSFR) 126 percent, meaning that both liquidity ratios were considerably higher than the regulatory minimum requirements of 100 percent. The surplus liquidity of European banks declined further in the first half of 2023 and stood at €3.6 trillion as at 30 June 2023. In October 2022, the ECB decided to adjust the conditions for TLTRO III operations. As a result, banks prematurely repaid a large amount of the TLTRO III funds and a further €477 billion in TLTRO III operations were due at the end of June. As at 30 June 2023, only €592 billion in TLTRO III funds were still outstanding compared with the original €2.2 trillion that was drawn down. The large repayment of TLTRO III funds in the first half of 2023 totalling €693 billion went smoothly and the banking sector had a long time to prepare for the repayments, which also explains, among other things, the high issue volume of covered bonds in 2022 and 2023. As regards customer deposits, private customer deposits at banks in Europe were more or less constant in the first five months of the year, whereas deposits by the corporate sector declined by 4.2 percent from December 2022 to May 2023. However, there were considerable differences between different countries. While deposits in Spain, Italy and France declined significantly, deposits in Germany were more stable. A slight decline in deposits by corporates can be observed here as well though (*European Central Bank)*

Financial Review (Continued)

The risk costs of European banks amounted to 0.46 percent of the loans outstanding in the first quarter of 2023, well below the average of 0.66 percent over the past five years. The volume of non-performing loans remained constant at 1.8 percent of the loans outstanding loans at the end of the first quarter of 2023 compared with year-end 2022 but was reduced in a 15-month perspective. The proportion of loans showing a significant increase in credit risk and classified at Level 2 according to IFRS9 also decreased to 9.1 percent as at 31 March 2023 compared with 9.5 percent in 2022. The high proportion of Level 2 loans shows that the asset quality of European banks is expected to develop moderately negatively in 2023, but to a manageable extent due to the availability of risk provisions and the significant improvement in profitability in the banking sector (*European Banking Authority).*

Banks' capital base remains at a high level. At the end of March 2023, the average CET1 capital ratio of European banks stood at 15.7 percent (on a fully loaded basis, EBA data). This more than met the regulatory minimum requirements, which are only 9.4 percent for 2023 on average for banks supervised by the ECB. The average CET1 capital ratio in the banking sector increased in the first quarter of 2023 by 0.3 percentage points, despite a greater focus on dividends and share buybacks. The increase in capitalisation was due to the retention of earnings on the one hand and the reduction in risk-weighted assets on the other (*European Banking Authority).*

To summarise, the banking sector in Europe is in good shape and is well prepared for an economic slowdown and a possible increase in defaulting loans. Profitability will continue to be supported by higher interest rates in the medium term. However, banks will need to continue making further structural adjustments, such as the digitalisation of business processes, the adjustment of branch networks and also a further consolidation in the banking sector.

Development of HVB Group

We are continuing to follow the guidelines of our UniCredit Unlocked strategic plan embedded in the group-wide strategic plan. The following statements on future development are based on the corporate planning of HVB Group and thus on the rules governing the segmented income statement.

We expect HVB Group to generate significantly higher profit before tax for the 2023 financial year compared with 2022 despite the still challenging macroeconomic and geopolitical environment (including higher inflation, Russia-Ukraine conflict as well as an expected slight decline in GDP in Germany in 2023).

Operating income benefited in the first six months from a very strong start to the year. We are expecting the positive trend to level off in the second half of 2023, due in particular to a seasonal decline in trading operations. Despite the economic environment in Germany remaining uncertain, we continue to assume for the 2023 financial year that operating income will be substantially higher than operating income in the 2022 financial year.

Owing to the higher level of interest rates on average, we are expecting a notable increase in net interest compared with 2022, although income in the second half of the year is likely to be lower than in the first half. We also anticipate distinctly higher net fees and commissions for 2023 compared with the previous year, although a decline is expected in the second half of the year, also for seasonal reasons, after a strong first half. As for net trading income, we expect a very significant increase in the 2023 financial year. We are anticipating a decline here in the second half of the year after the seasonally strong first half.

Thanks to the consistent implementation of the UniCredit Unlocked strategic plan and efficient cost management, we are expecting a notable decline in operating costs for the 2023 financial year compared with 2022, with an unchanged trend in the second half of the year compared with the first half. For the cost-income ratio we anticipate a significant improvement for 2023 compared with 2022. Owing to lower operating income, the cost-income ratio should turn out to be considerably higher in the second half of the year than in the first half but remain below the level of 2022.

After the high one-off charges in the 2022 financial year, in particular for the addition relating to geopolitical post-model adjustments (overlays), we anticipate a sharp decline in net write-downs of loans and provisions for guarantees and commitments in the 2023 financial year. For the second half of 2023, we expect net write-downs of loans and provisions for guarantees and commitments to remain on a low level, but to increase compared with the first half of the year.

With regard to provisions for risks and charges, we expect a very substantial decline compared with the previous year, in particular due to a lower bank levy. A decline is expected here in the second half of the year due to the charging of the bank levy in the first half of the year. After restructuring costs of €59 million in the first half of 2023, we expect a further increase in these costs in the second half.

Profit before tax and profit after tax in the second half of the year will probably be sharply lower than in the first half of 2023, due mainly to the seasonal trend in operating profit. However, we are expecting a very significant increase in both profit before tax and profit after tax for full 2023 compared with the previous year.

For the RoAC, we anticipate a very significant improvement for 2023 compared with the previous year. In the second half of the year we expect a very substantial reduction compared with the first half due to lower net operating profit.

Financial Review (Continued)

In the Corporates operating segment, after a seasonally strong first half of the year, we anticipate a reduction in income in the second half. We expect an increase in costs as well as in net write-downs of loans and provisions for guarantees and commitments, although these will remain on a low level. Overall, this will result in a decline in net operating profit in the second half of the year. In full 2023, net operating profit will improve very substantially compared with 2022.

In the Retail business segment, we expect an increase in income for the second half of the year. The increase in costs we are expecting in the second half of the year will be more than compensated for by lower net write-downs of loans and provisions for guarantees and commitments. This will lead overall to an increase in net operating profit compared with the first half of the year. For full 2023, we are anticipating a very significant increase in net operating profit compared with the previous year.

For the Other business area, we are anticipating a sharp increase in net operating profit in the 2023 financial year. For the second half of the year, we expect this to decline due to reduced income, which will not be fully compensated by likewise lower costs and the lower addition to net write-downs of loans and provisions for guarantees and commitments.

For the 2023 financial year, we anticipate a solid capital base for HVB Group with a CET1 capital ratio that is notably higher than the figure in 2022.

The opportunities in terms of future business policy and corporate strategy, performance and other opportunities were described in detail in the 2022 Combined Management Report of HVB Group in the section entitled “Forecast report/Outlook”. The statements made in that report continue to apply in principle.

HVB Group as a risk-taking entity

By their very nature, the business activities of HVB Group are subject to risk. HVB Group defines risk as the danger of suffering losses on account of internal or external factors. In the course of our business activities, risks are identified, quantified, assessed, monitored and actively managed. We therefore regard it as one of our core duties to apply these considerations in order to integrate risk-management, risk-controlling and risk-monitoring processes in all operating segments and functions of our Group. These activities are the precondition for providing adequate capital backing and maintaining an adequate liquidity base.

The Risk Report deals exclusively with the risks at HVB Group. The opportunities are presented separately in the Combined Management Report of the 2022 Annual Report in the section entitled “Opportunities in terms of future business policy and corporate strategy, performance and other opportunities”. The statements made there continue to be valid in principle.

HVB Group is divided into the following operating segments:
– Retail
– Corporates
– Other

The income statements for each operating segment and comments on their economic performance are provided in the Note “Income statement, broken down by operating segment” in the notes to the consolidated financial statements. The contents and objectives of the individual operating segments are described in detail in the Note “Components of segment reporting by operating segment” and the Note “Method of segment reporting by operating segment”.

All HVB Group companies that are included in the consolidated financial statements of HVB Group prepared in accordance with International Financial Reporting Standards (IFRS) are incorporated in the risk management programme of HVB Group. As part of the Internal Capital Adequacy Assessment Process (ICAAP), these Group companies are classified into the categories “large”, “medium”, “small plus” and “small” by applying various criteria such as market position, scope of business activities and complexity of the risk profile or portfolio structure. With the exception of the Group companies classified as “small”, which are subject to a simplified approach to risk measurement, the economic capital is measured differently for the individual risk types. Within the framework of the ICAAP, the Bank differentiates between the two perspectives required by the regulatory authorities to ensure capital adequacy, the normative and the economic perspective. In the economic perspective, all risks that can lead to economic losses are covered by the internal capital, which is calculated on the basis of internal processes and methods. This is the basis for the risk-taking capacity as a measure used by HVB Group for economic capital adequacy. In the normative perspective, capital adequacy is additionally ensured by means of multi-year capital planning.

Risk types

Credit risk is defined as the potential losses arising in the value of a credit exposure due to an unexpected change in credit quality of a contracting party (borrower / financial investment / small legal entity, counterparty, issuer or country). This potential loss may be brought about either by a default by the borrower who is thus no longer in a position or willing to meet its contractual obligations, or its rating has been downgraded as a result of a deterioration in its credit quality.

Market risk is defined as the risk of incurring losses on positions held on and off the balance sheet in the trading or investment books as a result of unfavourable changes in the market value of securities or financial derivatives. The most relevant of these market prices are interest rates (used to determine and discount cash flows), share prices, credit spreads (including, but not limited to, changes in these spreads due to credit defaults or rating changes), spot exchange rates, commodity prices and derived prices such as volatilities and correlations between these parameters. Market risk also includes the behavioural model risk, which represents the statistical uncertainty involved in the model assumptions for sight and savings deposits as well as the early repayment of mortgage loans.

Liquidity risk is defined as the risk that HVB Group will not be able to meet its payment obligations as they fall due without incurring unacceptable losses.

In line with the Capital Requirements Regulation (CRR), HVB Group defines **operational risk** as the risk of losses resulting from inadequate or deficient internal processes or systems, human error or external events. This definition includes legal risk but excludes strategic and reputational risk. Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from measures taken by supervisory authorities, and private settlements.

These risk types are described in detail in the section entitled “Risk types in detail”. All other risk types of HVB Group are summarised in the section entitled “Other risks”, which is presented in an abridged form.

The following risk types are summarised as other risks:
– **Real estate risk** covers potential losses resulting from fluctuations in the market value of the Bank’s own real estate portfolio. This comprises the real estate owned by Group companies (owned or leased in accordance with IFRS 16), real estate holding companies and special purpose vehicles. No land or properties are included that are held as collateral. These are included under credit risk.
– **Business risk** is defined as a measure of the gap between unexpected disadvantageous changes in the Bank’s future earnings and expected changes over a one-year risk horizon. Business risk can result above all from a serious deterioration in the market environment, changes in the competitive situation or customer behaviour but also from changes in the cost structure.

- **Pension risk** can occur on both the assets side and the liabilities side (pension commitments). This may be caused by a decline in the fair value of plan assets on the assets side due to disadvantageous changes in market prices as well as an increase in the obligations on the liabilities side, due for instance to a reduction in the discount rate. Furthermore, there are actuarial risks such as longevity risk (changes to the mortality tables) on the obligation side. In this context, pension risk is the risk that the pension provider will have to provide additional capital to service the vested pension commitments.
- **Financial investment risk** covers potential losses arising from fluctuations in the measurement of HVB Group's equity interests. HVB Group's financial investment risk stems from the occurrence of losses in equity provided in connection with a financial investment in other companies that are not consolidated in HVB or included in market risk. Financial investment risk is accounted for in the risk analysis via credit risk and market risk.
- **Strategic risk** results from management either not recognising early enough or not correctly assessing significant developments or trends in the Bank's environment. As a result, fundamental management decisions could, in retrospect, prove to be disadvantageous in terms of the achievement of the Bank's long-term goals. In addition, some decisions may be difficult to reverse or not be able to be reversed directly. In the worst case, this can negatively impact the profitability and risk profile of HVB Group.
- **Reputational risk** is defined as the risk of negative effects on the income statement caused by adverse reactions by stakeholders due to a changed perception of the Bank. This changed perception may be triggered by a primary risk such as credit risk, market risk, operational risk, liquidity risk, business risk, strategic risk or independently of any triggering primary risk.

- **Model risk** is considered within the internal capital and is defined as the risk of model weaknesses due to data errors, incorrect assumptions or incorrect methodology within the scope of the ICAAP calculations. It thus refers to the possibility of the economic capital being estimated incorrectly. For this reason, a model risk charge is added to the aggregated economic capital for the established risk types.
- **Sustainability risk** defines risks with any financial impact arising from the current or future influence of sustainability factors on its counterparties (e.g. borrowers, customers or issuers) or invested assets (especially risks arising from the core activities of HVB Group). Sustainability factors are environmental, social or corporate governance issues that could have a negative impact on the balance sheet, earnings or liquidity position of HVB Group. Sustainability risk is not currently a standalone risk type, but is being successively integrated into relevant risk types.

Risk Report (Continued)

Integrated overall bank management

Risk management

HVB Group's risk management programme is built around the business strategy adopted by HVB's Management Board, the Bank's risk appetite and the corresponding risk strategy.

The risk-taking capacity upon achievement of the set targets is assessed on the basis of the risk strategy and the business and risk plans, using the available risk coverage potential. At the same time, limits are defined in the planning process to ensure that the risk-taking capacity is maintained.

Pursuant to the Minimum Requirements for Risk Management (Mindestanforderungen an das Risikomanagement - MaRisk), multi-year budgeting is performed in relation to the internal capital. This involves analysing the relevant risk types over a time horizon of at least three years and taking into account a deteriorating macroeconomic environment. Two scenarios with negative consequences are examined independently of each other to permit an assessment of the effect of a deteriorating macroeconomic business environment. In the planning process for 2023, these planning scenarios, referred to as adverse scenarios, have been derived against the backdrop of macroeconomic developments (scenario 1) and additional non-macroeconomically motivated drivers (scenario 2). Whereas the first scenario assumes a continued rise in inflation in 2023 and 2024 coupled with a recession and lower market interest rates in most euro countries, the second scenario takes account of further effects, such as a reduction in the new business margin in the lending business and a general deterioration in HVB's credit portfolio, in addition to the factors underlying scenario 1. Since the risk coverage potential is considered with the same scenarios, it is possible to make a statement about how the risk-taking capacity will evolve overall over three years, taking into account the macroeconomic scenarios.

Implementation of the risk strategy is a task for the Bank as a whole and is essentially carried out by the Chief Risk Officer (CRO) organisation. The CRO organisation is responsible for risk management and risk policy guidelines set by the Management Board. The CRO reports on a regular basis to the Management Board and the Risk Committee of the Supervisory Board on the Group's risk situation.

New releases and updates to instructions, policies and the risk strategy are communicated through the Bank's internal information system.

Separation of functions

In addition to Bank-wide risk management, integrated overall bank management is accompanied by comprehensive risk controlling and risk monitoring that are functionally and organisationally independent in accordance with the MaRisk rules.

Risk controlling
Risk controlling is defined as the operational implementation of the risk strategy. Since 1 June 2022, Credit Risk Operations (CRP), which was created by merging the Central Credit Management (CCM) and Recovery Management (SCS) units, has been responsible for the operational management of credit risk for the operating segments. The credit specialists take lending decisions in the defined "risk-relevant business". They thus make it possible for the operating segments to take on risk positions in a deliberate and controlled manner within the framework of the risk strategy and to evaluate whether it is profitable to do so from the overall perspective of the customer relationship and on the basis of risk-return considerations. In the "non-risk-relevant business", the operating segments are authorised to take their own lending decisions under conditions set by the CRO organisation. The Financial Risk (CMR) unit is responsible for monitoring the implementation of the market risk strategy and the ALM & Funding unit within the Chief Financial Officer (CFO) organisation for controlling liquidity risk. The Non Financial Risk unit is responsible for controlling operational risk and reputational risk with the support of the relevant operational risk managers.

Controlling the business risk consists mainly of the planning of earnings and costs by the individual operating segments, which the CFO organisation proactively coordinates. The relevant operating segments are responsible for controlling the financial investments. The real estate risk arising from the property portfolio within the Group is controlled centrally by the Operations division. Within HVB Group, this is performed by the Real Estate units (ORS1 and ORS6). HVB Group has undertaken to provide a range of different pension plans, which are largely financed by various investment vehicles, some of which are external. Under the capital investment process, there are separate rules covering the specific risk controlling of the different pension plans in each case. Some of these are subject to supervision by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht - BaFin), specifically by the Insurance and Pension Funds Supervision unit, and therefore need to comply with external rules and regulations. Controlling of strategic risk is the shared responsibility of HVB's Management Board.

Risk monitoring
The central risk monitoring function within the CRO organisation is responsible for identifying, measuring and evaluating the risks at HVB Group. It is structured according to risk types. The risk monitoring functions for the following risk types: market risk and liquidity risk (for the liquidity risk, however, exclusively the risk monitoring functions of stress tests, calculation and monitoring of early warning indicators, calculation of the short-term concentration risk, evaluation of the funding plan) are bundled in the Financial Risk unit, while operational risk and reputational risk are bundled in the Non Financial Risk unit. In addition, the Financial Risk unit also monitors the market risk component of pension risk at regular intervals using a separately developed model (aggregated view of the plan assets and liabilities) as well as the behavioural model risk. As part of the asset management of the plan assets, the options for risk positioning are limited by both external and internal regulations. Ongoing monitoring of the respective rules is performed in accordance with the specific policies of the various pension plans. With regard to the monitoring of liquidity risk, some tasks are performed by the Financial Risk unit while further risk monitoring functions for this risk type are the responsibility of the ALM & Funding unit within the CFO organisation (continuous monitoring of the liquidity risk situation and compliance with limits). The Strategic Credit & Integrated Risks unit monitors credit risk, business and real estate risk as well as the aggregate economic capital and the internal capital requirement. Financial investment risk is depicted via market risk and credit risk. The monitoring of strategic risk is the shared responsibility of HVB's Management Board. Sustainability risk materialises via the traditional risk types (credit risk, market risk, operational and reputational risk, liquidity and funding risk) and is gradually being integrated into risk monitoring in the course of a project.

Risk Report (Continued)

The following are quantifiable risk types: credit risk, market risk (including behavioural model risk), operational risk, business risk, financial investment risk (covered under credit risk and market risk), real estate risk, pension risk, reputational risk, and the model risk quantified as risk charge on the established risk types. The available risk coverage potential is defined, quantified and compared with the risk capital in order to analyse the risk-taking capacity.

Liquidity risk is also a quantifiable risk but is not included in the calculation of the risk-taking capacity.

A qualitative approach is used to monitor strategic risk.

Implementation of overall bank management

Strategy

The business strategy and the risk strategy define the cornerstones of business and risk policy for HVB Group. The subsidiaries, outsourcing and information and communication technology (ICT) are incorporated in both the risk strategy and the business strategy. The HVB Group business strategy describes the strategic starting point and the organisational structure, the strategic cornerstones at overall bank level and the sub-strategies of the individual operating segments.

The HVB Group risk strategy is derived consistently from the business strategy, supplementing it with the relevant aspects of risk management. The HVB Group risk strategy controls the risk types, credit risk and market risk (including financial investment risk components for each), operational risk, pension risk, reputation risk, real estate risk and business risk using the economic capital. This control is supplemented by risk-type-specific limits in credit risk and market risk. Liquidity risk is managed quantitatively in terms of cash flow analyses and integrated into the planning process via the funding plan. A qualitative description is provided of the strategic objectives for strategic risk, sustainability risk and for outsourcing. The risk strategy is supplemented by the Industry Credit Risk Strategy, which specifies the risk appetite within the individual industries.

The strategies approved by the Management Board of HVB are reviewed on both an ad hoc and an annual basis and modified when necessary.

Overall bank management

The metrics defined for the overall bank management of HVB Group are reviewed in the annual budgeting process and used to assess the success of the business strategy and the risk strategy. Earnings targets, risk targets, liquidity targets and capital targets are defined in the budgeting process together with the targeted risk-taking capacity at overall bank level. The limits for internal capital are defined and monitored in order to guarantee the risk-taking capacity. For the purposes of operating segment management, the economic capital limits are distributed for the credit, market and real estate risk to ensure that the planned economic risks remain within the parameters defined by the Management Board of HVB.

Key performance indicators (KPIs) generally applicable across the operating segments have been defined for the management of HVB Group. These KPIs serve to entrench the aspects of profitability and growth, as well as constraints and sustainability.

The value-oriented management of HVB Group focuses on the measurement of the business activities in accordance with return and risk considerations, with a risk-return target set for each of the business units of HVB Group. The expected economic returns are calculated using the allocated capital principle that is applied group-wide by UniCredit. Within the scope of the principle of dual control, both regulatory capital, in the sense of used core capital (Common Equity Tier 1), and internal capital are allocated to the operating segments. Both resources are expected to yield an adequate return, the amount of which is derived from the returns expected by the capital market.

In line with the parameters defined in the business and risk strategies, the defined targets are broken down to operating segment level and then translated into operational metrics for sales management. The defined targets are monitored using a standardised report to the Management Board of HVB. The Management Board of HVB initiates countermeasures in response to significant deviations from the targets defined in the budgeting process.

Regulatory capital adequacy

Used core capital (Common Equity Tier 1)

For the purposes of planning and monitoring risk-weighted assets, the operating segments are required to have core capital backing of equivalent risk-weighted assets arising from credit, market and operational risks equal to an average of 13.0%. The expected return on investment is derived from the average used core capital (Common Equity Tier 1).

Management of regulatory capital adequacy requirements

Essentially, the following three processes have been defined from the normative capital perspective to safeguard an adequate capital base over the long term:

Yearly budgeting of the regulatory capital taking account of regulatory requirements, while applying the three capital ratios listed below, which are managed within HVB Group’s risk appetite framework using internal target, trigger and limit levels:

- Common Equity Tier 1 capital ratio: ratio of Common Equity Tier 1 capital to the sum of risk-weighted assets arising from credit risk positions and the equivalent risk-weighted assets from market and operational risk positions
- Tier 1 capital ratio: ratio of Tier 1 capital to the sum of risk-weighted assets arising from credit risk positions and the equivalent risk-weighted assets from market and operational risk positions
- total capital ratio: ratio of equity funds to the sum of risk-weighted assets arising from credit risk positions and the equivalent risk-weighted assets from market and operational risk positions

Quarterly performance of stress tests of the regulatory capital ratios under various scenarios (details on the stress tests can be found in the section entitled “Stress tests”).

Monthly performance of a rolling eight-quarter projection to provide an ongoing forecast of the capital ratios of HVB Group. This projection is supplemented on a quarterly basis by a 3-year simulation of the capital ratios based on three different scenarios to completely map the normative capital perspective.

More details on the development of these capital ratios are presented in the sections entitled “Risk-weighted assets, key capital ratios, and leverage ratio of HVB Group” and “Operating performance of HVB Group” in the section entitled “Financial Review” of this Interim Management Report.

The total capital ratio of HVB Group is 25.4% as at 30 June 2023 (31 December 2022: 23.4%).

Risk Report (Continued)

Economic capital adequacy

The internal capital is the sum of the aggregated economic capital for all quantified risk types (with the exception of liquidity risk). The economic capital measures the potential for unexpected loss over a time horizon of one year with a confidence level of 99.90%.

When the aggregated economic capital is determined, risk-mitigating diversification effects are taken into account between the individual risk types. HVB Group deploys UniCredit's group-wide model for risk aggregation that uses parameters that are uniform throughout the Group for determining interdependencies between the risk types. In terms of methodology, the model is based on a copula approach where the parameters are estimated using the statistical Bayesian method.

An all-round overview of the risk situation of HVB Group is obtained by assessing the risk-taking capacity on a quarterly basis, as shown in the table "Internal capital after portfolio effects".

Internal capital after portfolio effects (confidence level 99.90%)

	30/6/2023		31/12/2022	
Broken down by risk type	**€ millions**	**in %**	**€ millions**	**in %**
Credit risk	3,874	39.5	4,077	41.4
Market risk[1]	3,757	38.3	3,634	36.9
Pension risk	1,117	11.4	1,100	11.2
Operational risk	432	4.4	428	4.3
Real-estate risk	126	1.3	129	1.3
Business risk	234	2.4	215	2.2
Reputational risk	55	0.6	47	0.5
Aggregated economic capital	**9,595**	**97.9**	**9,629**	**97.9**
Model risk charge	209	2.1	211	2.1
Internal capital of HVB Group	**9,804**	**100.0**	**9,840**	**100.0**
Included diversification effects	(1,096)		(1,086)	
Risk coverage potential of HVB Group	**17,504**		**19,306**	
Risk taking capacity of HVB Group, in %		**178.5**		**196,2**

1 Including behavioural model risk
Contains rounding differences.

Internal capital fell by €36 million in comparison to 31 December 2022.

Internal capital (without pension risk and without the model risk charge) broken down by operating segment (confidence level 99.90%)

	30/6/2023		31/12/2022	
Broken down by operating segment	**€ millions**	**in %**	**€ millions**	**in %**
Retail	638	7.5	640	7.5
Corporates	4,309	50.8	4,517	53.0
Other	3,531	41.7	3,373	39.5
Internal capital (without pension risk and without the model risk charge) of HVB Group	**8,478**	**100.0**	**8,530**	**100.0**

Risk appetite
The risk appetite is defined as part of the annual strategy and planning process for HVB Group, whereby selected metrics are monitored only for HVB. The risk appetite metrics comprise specifications that are broken down into regulatory metrics and managerial metrics and subdivided into categories such as capital, liquidity and interest rate risk, credit risk or risk and earnings. For the most part, targets, triggers and limits are defined for these metrics that allow excessive risk to be identified and countermeasures to be initiated at an early stage. The matter is escalated to the appropriate persons with authority, committees and the Management Board of HVB, should the defined limits be exceeded or not reached.

Consistent going concern approach
Since 2019, HVB Group has managed its risk-taking capacity from an economic perspective as part of an approach to the ongoing protection against risks and the continuation of business activities from a capital perspective (continuity of operations). At the same time, targets, triggers and limits are defined for regulatory capital backing as well as for risk-taking capacity.

Recovery plan
The preparation of recovery plans (RPs) is intended to facilitate the restructuring of systemically important financial institutions. UniCredit S.p.A. has been identified as systemically important at a global level and HVB has at a national level. Supervision of HVB passed to the ECB when the Single Supervisory Mechanism (SSM) came into effect in November 2014. According to a decision of the Joint Supervisory Team (JST), HVB, as part of UniCredit, has not been required to prepare an HVB Group recovery plan since 2015. For this reason, HVB works in close collaboration with UniCredit S.p.A. each year to prepare a joint “UniCredit Group Recovery Plan”. This Recovery Plan was officially submitted to the ECB on 14 October 2022 and has been in effect since then.

Risk-taking capacity
As part of an analysis of the risk-taking capacity, HVB Group measures its internal capital against the available risk coverage potential (available financial resources). Furthermore, the risk-taking capacity is analysed across a defined multi-year period as part of the planning process.

HVB Group uses an internal definition for the risk coverage potential that, like risk measurement, has been based on a going concern approach since 2019. Under this approach, available financial resources are sufficient to continuously hedge against risks so as to ensure business operations are maintained. The risk-taking capacity is defined by comparing unexpected losses at the confidence level (internal capital) with the ability to absorb losses using the available financial resources (risk coverage potential). When determining the risk coverage potential, regulatory core capital is taken as the starting point. To maintain consistency with internal risk quantification, certain capital deductions (particularly expected losses and securitisation positions) within the definition of equity are brought into line with the internal economic perspective and some future profits are taken into account. The risk coverage potential at HVB Group totalled €17,504 million as at 30 June 2023 (31 December 2022: €19,306 million).

Risk Report (Continued)

With internal capital (including the model risk charge) of €9,804 million, the risk-taking capacity of HVB Group is 178.5% (31 December 2022: 196.2%). This figure is higher than the target of 160% HVB Group set itself in the 2023 risk appetite framework. The decline of 17.7 percentage points in comparison with 31 December 2022 for HVB Group is attributable to the adjustment of the definition of risk coverage potential. From 2023, no additional Tier 1 capital instruments are taken into account within the risk coverage potential. For this reason, the risk coverage potential fell by €1,802 million or 9.3% in the first half of 2023. By contrast, the internal capital remained stable (marginal decline of €36 million or 0.4%).

Limit concept

The risk limit system is a key component of the ICAAP at HVB Group. Its purpose is to guarantee the Bank's risk-taking capacity at each reporting date by means of an integrated controlling process. A wide-ranging, consistent limit system that includes the specification of limits for internal capital and economic capital, risk-type-specific limits and limits for risk concentrations has been implemented to ensure this. It covers all the risks that need to be backed with capital. Consequently, unexpected losses for credit, market (including pension risk and behavioural model risk), operational, business, real estate and reputational risk are currently recorded. In addition, any model risks are included in the internal capital by means of a charge.

This system of limits reflects the business and risk strategies, taking into account the risk appetite and the risk coverage potential, at the level of HVB Group, and ensures compliance with the risk-taking capacity. The risk limits are approved by HVB's Management Board each year during the strategy process.

The internal capital limits are allocated at the level of HVB Group, broken down by risk type and for the internal capital as a whole. Based on the aggregate limit set for internal capital, the risk-taking capacity of HVB Group is guaranteed at each reporting date.

In order to identify at an early stage any potential overshooting, HVB Group has specified triggers in the form of early warning indicators in addition to the defined limits. The utilisation of, and hence compliance with, the limits is presented in the Bank's reports. Any overshooting of limits is immediately escalated and the return to compliance with limits is monitored.

Stress tests

The MaRisk rules call for stress tests to be carried out regularly using various scenarios.

Various macroeconomic downturn scenarios and a historical scenario were calculated for the cross-risk-type stress tests in the first half of 2023:

– Recession scenario (from June 2022) – recession in Europe driven by rising energy prices
– Hawkish scenario (from June 2022) – deep recession in Europe forces the ECB to raise interest rates
– No recovery scenario (from September 2022) – recession in Germany with only a mild recovery in 2025
– Historical scenario (from December 2020) – historical scenario based on the 2009 financial crisis
– Financial intermediary scenario - a tougher version of the historical scenario (additionally maps the default of the financial intermediary with the highest stressed counterparty risk exposures)

The stress tests across risk types are presented and analysed on a quarterly basis in the Financial and Credit Risk Committee and any measures required are presented to the Management Board of HVB. Both the risk-taking capacity and the minimum requirements for regulatory capital ratios of HVB Group were met and complied with after the occurrence of the stress test scenarios listed. The risk-taking capacity within the scope of the stress test was established with a confidence level of 99.90%.

Furthermore, inverse and ad hoc stress tests are carried out.

Inverse stress tests involve analysing what events could endanger the continued existence of the Bank as a going concern. The continued existence as a going concern is considered at risk when the original business model proves to be no longer feasible or viable. The hypothetical events analysed included fraud by a trader, rating downgrades, a bank run and default by customers and industries.

Ad hoc stress tests are carried out in response to internal and external events that might have a considerable impact on HVB Group.

Concentrations of risk and earnings

Concentrations are accumulations of risk positions that react in a similar way to specific developments or events. Concentrations may have an impact within a risk type or equally across risk types. They indicate increased potential losses resulting from an imbalance of risk positions held with customers and in products or specific industries and countries.

Concentrations are analysed, monitored, managed and reported at least once a year with regard to the relevant risk drivers for credit, market, liquidity and operational risk. In particular, appropriate instruments and processes ensure the prompt identification of concentrations. Monitoring, the suitability of which is reviewed each year, is used as the steering approach for the risk types financial investment risk, real estate risk and pension risk.

Risk management processes for concentrations have been set up with a view to interlinking risk drivers across risk types, such that concentration risk is integrated into assessment and controlling functions.

The concentration of earnings with individual customers or in operating segments, products, industries or regions represents a business-related strategy risk for the Bank. Risks arising from concentrations of earnings are monitored each year, as avoiding these is an important indicator of sustainable diversification and hence the viability of the business model in crisis situations.

Risk Report (Continued)

Risk inventory
The scheduled comprehensive yearly risk inventory at HVB Group was started in the first quarter of 2023. Existing and potential new risks are analysed and critically evaluated by means of structured interviews with numerous decision-makers within HVB Group and by means of questionnaires, among other things. This interview also covers aspects concerning the Russia-Ukraine conflict as well as sustainability topics. The outcome of the 2023 risk inventory will be presented to HVB's Financial and Credit Risk Committee in September 2023 and included in the calculation and planning of the risk-taking capacity. The risk inventory serves to review the overall risk profile of HVB Group. Various topics are identified, some of which are included in the stress test and in the validation of the measurement methods used for the material risk types and other ICAAP components.

Internal reporting system
The internal reporting system supports risk monitoring at portfolio level in particular. Within the framework of the internal reporting system, information is provided on the overall risk to HVB's Management Board and the Risk Committee of the Supervisory Board on a monthly basis, to the full Supervisory Board at least on a quarterly basis and also on an ad hoc basis. In addition, further monthly risk reports are created, which focus on specific countries or industries.

Risk types in detail

We provided extensive details on the management (strategy, limitation, risk mitigation, measurement), monitoring and control of the individual types of risk in HVB Group in the 2022 Annual Report. Where the measurement methods for individual risk types have meanwhile been refined, details are presented under the risk type concerned.

1 Credit risk

The economic capital for credit risk at HVB Group, without taking account of diversification effects between the risk types and without the model risk charge, amounts to €4,083 million, which is €200 million lower than the reported figure as at 31 December 2022 (€4,283 million).

Credit default risk
The following tables and charts for credit default risk show the aggregate exposure values (total of non-performing and performing exposure) of HVB Group including issuer risk from the trading book. Issuer risk from the trading book is also included in the regulatory market risk analysis by way of the incremental risk charge. Comments in this regard can be found in the section covering market risk.

The aggregate exposure to credit default risk is referred to as credit default risk exposure, or simply exposure, in the following. Account balances on the entry date are included in the calculation of exposure.

The remaining exposures assigned to the former Real Estate Restructuring business area are excluded from the analysis because the portfolio does not include any further new business and is earmarked for elimination. The portfolio has been reduced consistently in recent years and now stands at €16 million (31 December 2022: €17 million).

Development of metrics by operating segment

Broken down by operating segment	EXPECTED LOSS[1] € millions		RISK DENSITY[2] in bps	
	30/6/2023	31/12/2022	30/6/2023	31/12/2022
Retail	109	97	25	23
Corporates	243	274	15	17
Other	2	3	—	—
HVB Group	**354**	**374**	**13**	**14**

1 Expected loss of the performing exposure without issuer risk in the trading book.
2 Risk density as a ratio of expected loss to performing exposure without issuer risk in the trading book in basis points (bps); 100bps = 1%.

In the first half of 2023, the expected loss of HVB Group was reduced by €20 million, the risk density improved by 1bp.

The key contributor to this development was the Corporates operating segment, which recorded decreases of €31 million in expected loss and 2bp in risk density. Decisive factors in this connection were rating upgrades and reductions in exposure, among other things.

Breakdown of credit default risk exposure by operating segment and risk category

Broken down by operating segment (€ millions)	CREDIT DEFAULT RISK EXPOSURE		OF WHICH COUNTERPARTY RISK		OF WHICH ISSUER RISK IN BANKING BOOK		OF WHICH ISSUER RISK IN TRADING BOOK	
	30/6/2023	31/12/2022	30/6/2023	31/12/2022	30/6/2023	31/12/2022	30/6/2023	31/12/2022
Retail	43,385	43,122	71	70	—	—	—	—
Corporates	161,937	169,365	19,400	22,324	15,387	16,527	1,832	1,545
Other	67,044	65,210	38	1,142	30,339	28,497	—	—
HVB Group	**272,366**	**277,697**	**19,509**	**23,536**	**45,726**	**45,024**	**1,832**	**1,545**

HVB Group's credit default risk exposure declined by €5,331 million in the first half of 2023.

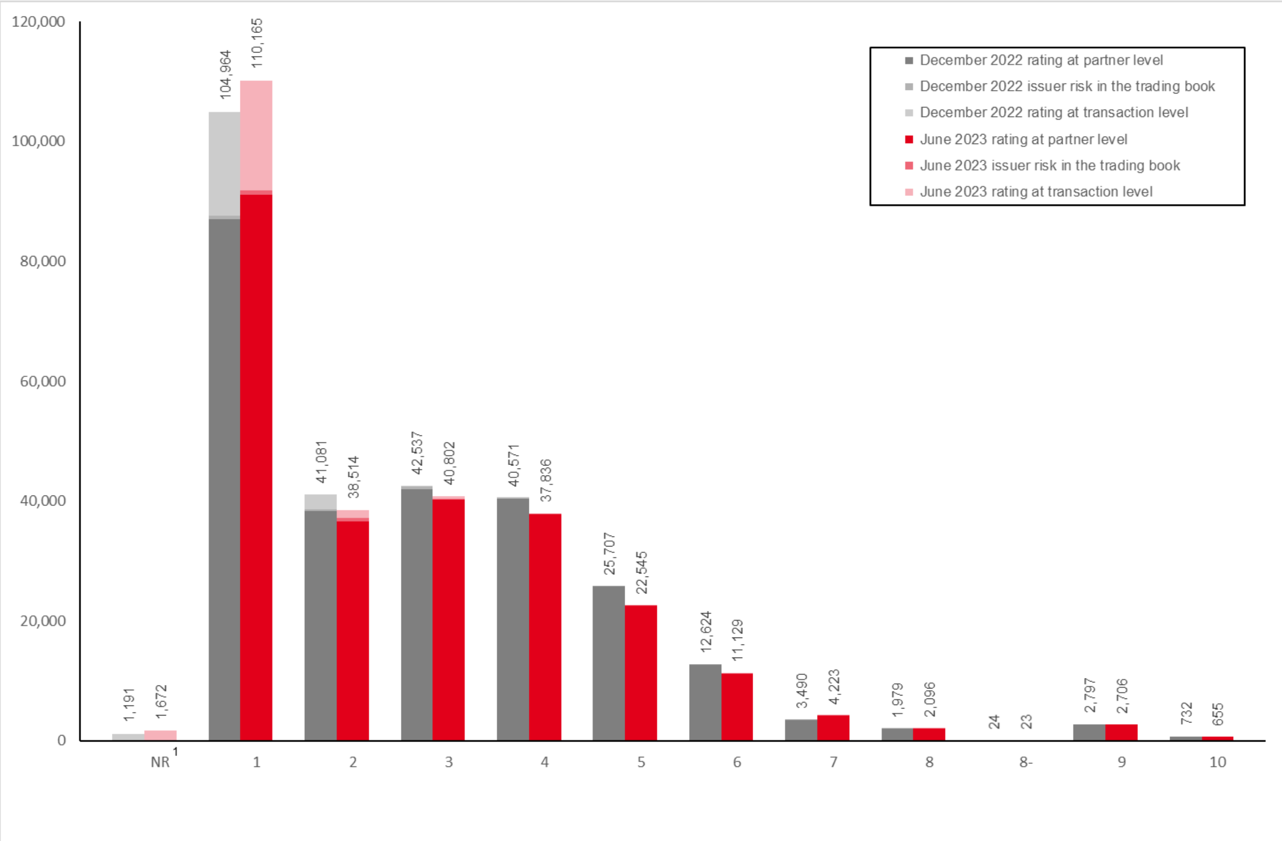
This is primarily due to the reduction in exposure of €7,428 million in the Corporates operating segment, which can be observed in the financial institutions and energy industry groups in particular.

By contrast, the exposure in the Other operating segment rose by €1,834 million, mainly caused by treasury business in the financial institutions industry group.

In the Retail operating segment, exposure rose slightly by €263 million.

Risk Report (Continued)

Breakdown of credit default risk exposure by rating class (€ millions)



1 Not rated.

The rating structure of HVB Group improved in the course of first half of 2023, primarily as a result of the increase in exposure of €5,201 million in rating class 1 with a simultaneous decline in exposure totalling €10,199 million in rating classes 2 to 6. Decisive factors in this connection were rating upgrades in addition to the business development of various customers.

Development of metrics by industry group

Broken down by industry group	CREDIT DEFAULT RISK EXPOSURE € millions		OF WHICH ISSUER RISK IN TRADING BOOK € millions		EXPECTED LOSS[1] € millions		RISK DENSITY[2] in bps	
	30/6/2023	**31/12/2022**	**30/6/2023**	**31/12/2022**	**30/6/2023**	**31/12/2022**	**30/6/2023**	**31/12/2022**
Financial institutions (incl. foreign sovereigns)	74,298	74,746	1,287	1,117	25	40	3	5
Real estate	32,953	33,510	12	19	56	54	17	16
Special products	21,550	19,899	—	2	12	5	5	3
Public sector (incl. German sovereign, excl. public service companies)	16,946	18,574	34	43	—	—	—	—
Machinery, metals	12,012	12,276	32	21	30	29	25	24
Energy	11,813	13,287	60	44	11	12	9	9
Chemicals, pharma, healthcare	11,746	11,851	48	41	37	33	32	28
Automotive	10,575	10,578	88	28	13	17	13	17
Construction, building materials	7,437	8,219	7	11	16	18	22	22
Consumer goods	7,286	6,984	18	21	19	16	27	23
Services	6,628	6,754	44	33	29	21	44	32
Food, beverages	6,251	6,468	13	20	11	12	19	19
Telecommunication, IT	5,976	6,835	48	37	10	8	17	12
Transport, travel	5,121	5,662	41	22	8	13	15	23
Electronics	3,574	3,428	4	5	7	6	21	18
Agriculture, forestry	3,344	3,634	2	6	7	7	21	19
Tourism	2,429	2,623	1	1	4	9	23	43
Media, paper	2,144	2,325	19	17	5	14	25	60
Textile	1,779	1,879	4	10	4	4	22	21
Public service companies	1,271	1,072	68	44	1	1	5	6
Shipping	998	1,308	—	—	2	7	17	55
Private customers	26,135	25,742	—	—	47	48	18	19
Other	100	43	2	3	—	—	42	2
HVB Group	**272,366**	**277,697**	**1,832**	**1,545**	**354**	**374**	**13**	**14**

1 Expected loss of the performing exposure without issuer risk in the trading book.
2 Risk density as a ratio of expected loss to performing exposure without issuer risk in the trading book in basis points (bps); 100bps = 1%

How the top five industry groups developed by exposure within HVB Group is described below.

Financial institutions (including foreign sovereigns)
The exposure in the financial institutions (including foreign sovereigns) industry group fell by €448 million as at 30 June 2023 compared with year-end 2022. The portfolio's expected loss decreased by €15 million and the risk density by 2bp, driven by the reduction in exposure among other things.

Part of the exposure in the financial institutions (including foreign sovereigns) industry group resulted from credit risk exposure to UniCredit S.p.A. and other entities affiliated to UniCredit (upstream and downstream exposure) on account of the strategic positioning of HVB as the group-wide centre of competence for the client risk management and investment banking of UniCredit and other business activities (such as export finance and guarantees).

Risk Report (Continued)

Real estate
In the real estate industry group, exposure as at 30 June 2023 fell slightly by €557 million compared with year-end 2022. Both the expected loss and the risk density increased, by €2 million and 1bp, respectively. This was mainly due to a generally weaker real estate market with fewer transactions in commercial real estate. The financing business remains focused on Germany.

Special products
Special products transactions include ABS/CDO bond investments, customer-related securitisations, securitisations of UniCredit's own assets, structured credit products such as structured working capital finance, margin loan finance and other structured financial transactions (not including project and acquisition finance).

In the special products industry group, exposure increased by €1,651 million in the first half of 2023 compared with year-end 2022. In this context, the focus remained on customer-related securitisations and ABS/CLO bond investments, which is also in line with the 2023 risk strategy. The latter determined a strategy of growth within clearly defined parameters involving conservative credit standards (for instance in relation to asset classes and rating quality) for sub-segments of the special products portfolio. Although this growth led to an increase in the expected loss and the risk density, these key ratios, at €12 million and 5bps respectively, continue to remain at a very low level compared with other industry groups.

Public sector (including German sovereign, excluding public service companies)
The public sector (including German sovereign, excluding public service companies) industry group essentially contains public authorities and the customer group comprising legal entities under public law in general. As the German states and the development banks enjoying the formers' full liability represent important counterparties for internal liquidity management, the vast majority of the exposure is due to HVB's own liquidity reserves

In the public sector (including German sovereign, excluding public service companies) industry group, exposure decreased by €1,628 million in the first half of 2023. This decline is largely attributable to the change in a customer's allocation to an industry group as well as HVB's expired liquidity reserves.

Machinery, metals
Compared with year-end 2022, exposure in the machinery, metals industry group fell by €264 million at the reporting date of 30 June 2023, primarily due to lower utilisation of credit lines in connection with normal corporate business, particularly in the metals industry segment. As we focus on large companies with a good credit rating in new business, as defined in our risk strategy, the portfolio quality was kept almost stable with an expected loss of €30 million and a risk density of 25bps.

Exposure development of countries/regions
The following tables provide a comprehensive view of the concentration risk at country level. The exposure figures are shown with regard to the risk country of the customer.

Development of credit default risk exposure of eurozone countries

Broken down by eurozone countries (€ millions)	CREDIT DEFAULT RISK EXPOSURE		OF WHICH ISSUER RISK IN TRADING BOOK	
	30/6/2023	31/12/2022	30/6/2023	31/12/2022
Germany	190,329	191,353	400	117
France	12,483	12,631	108	151
Spain	7,281	6,629	33	41
Ireland	7,052	6,866	2	4
Italy	6,326	6,359	319	248
Luxembourg	4,854	4,532	19	26
Netherlands	4,590	4,736	30	31
Austria	2,543	2,163	82	173
Finland	734	606	10	1
Belgium	726	711	16	16
Portugal	68	88	14	8
Slovenia	28	9	1	1
Estonia	24	22	1	—
Greece	14	16	—	—
Cyprus	12	14	—	—
Lithuania	10	5	10	4
Slovakia	8	2	7	2
Croatia[1]	6	8	3	4
Malta	—	42	—	—
Latvia	—	—	—	—
Supranational organisations and multilateral banks	3,996	2,783	296	223
HVB Group	**241,084**	**239,575**	**1,351**	**1,050**

1 Croatia has been a member of the eurozone since 1 January 2023. The previous-year figures have been adjusted accordingly.

Italy

The size of the portfolio results from HVB Group’s role as group-wide centre of competence for the client risk management and investment banking of UniCredit. The exposure to Italy also includes the exposure with UniCredit S.p.A.

Risk Report (Continued)

Development of credit default risk exposure by country/region outside the eurozone

Broken down by country/region outside the eurozone (€ millions)	CREDIT DEFAULT RISK EXPOSURE E		OF WHICH ISSUER RISK IN TRADING BOOK	
	30/6/2023	31/12/2022	30/6/2023	31/12/2022
USA	9,664	10,929	206	239
Switzerland	5,534	6,072	26	97
United Kingdom	5,440	6,936	9	16
Asia/Oceania (without Japan, China, Hong Kong)	1,976	2,311	—	1
Western Europe (without Switzerland, UK)	1,624	1,780	16	1
Eastern Europe (without euro countries)	1,602	1,226	200	128
Near/Middle East	889	981	—	—
Africa	888	779	—	—
CIS/Central Asia (without Turkey)	813	928	6	6
including Russia	601	705	6	6
including Ukraine	4	4	—	—
including Belarus	—	1	—	—
Turkey	801	725	6	—
Japan	703	3,383	—	—
China (including Hong Kong)	578	1,412	—	—
North America (without USA)	527	488	5	6
Central/South America	147	172	8	1
Without country classification	96	—	—	—
HVB Group	**31,282**	**38,122**	**482**	**495**

1 Croatia has been a member of the eurozone since 1 January 2023. The previous-year figures have been adjusted accordingly.

In the first half of 2023, the total exposure to customers in countries/regions outside the eurozone fell by €6,840 million, The exposure to customers in Russia decreased by a further €104 million in the first half of 2023.

Financial derivatives
Alongside the goal of generating returns, derivatives are employed to manage market price risks resulting from trading activities (in particular, risks arising from interest-rate fluctuations and currency fluctuations), and also serve to provide cover for on- and off-balance-sheet items within asset/liability management. Besides market risk, derivatives entail counterparty risk and, in the case of credit derivatives, which additionally serve to manage credit risk, also issuer risk.

For purposes of credit default risk, the positive fair values are relevant as replacement values for OTC derivatives. These represent the potential costs that HVB Group would incur to replace all of the original contracts with equivalent transactions in case of the simultaneous default by all counterparties.

On the basis of these replacement values and not taking into account any risk-reducing effects, the maximum counterparty risk for HVB Group as at 30 June 2023 totalled €284.5 billion (31 December 2022: €308.3 billion). The decline of €23.8 billion compared with year-end 2022 is primarily attributable to interest rate derivatives (down €20.1 billion), and here in particular to OTC interest rate swaps (down €18.6 billion). In addition, cross-currency swaps were down by €2.2 billion and other transactions by €2.1 billion while equity/index derivatives posted an increase of €1.5 billion.

In accordance with the regulatory provisions under the CRR and taking account of the internal model method (IMM) that has been approved by the regulatory authorities for use by HVB to determine counterparty risk, risk-weighted assets for counterparty risk in HVB Group's derivatives business were €5.9 billion as at 30 June 2023 (31 December 2022: €6.5 billion).

The following tables provide detailed information on the nominal amount and fair values of all derivative transactions and credit derivative transactions of HVB Group.

Derivative transactions

	NOMINAL AMOUNT					FAIR VALUE			
	RESIDUAL MATURITY			TOTAL	TOTAL	POSITIVE		NEGATIVE	
€ millions	**Up to 1 year**	**More than 1 year up to 5 years**	**More than 5 years**	**30/6/2023**	**31/12/2022**	**30/6/2023**	**31/12/2022**	**30/6/2023**	**31/12/2022**
Interest rate derivatives	3,286,620	2,469,448	2,321,334	8,077,402	6,876,005	264,126	284,185	261,670	281,745
Foreign exchange derivatives	209,533	43,587	1,501	254,621	273,516	3,603	4,440	3,155	4,410
Cross-currency swaps	41,492	100,578	64,329	206,399	214,365	4,896	7,076	6,148	8,859
Equity/index derivatives	140,143	94,718	14,190	249,051	212,174	9,676	8,167	7,019	6,002
Credit derivatives	1,702	8,643	570	10,915	53,628	95	256	141	564
- Protection buyer	753	5,905	231	6,889	28,470	50	23	98	502
- Protection seller	949	2,738	339	4,026	25,158	45	233	43	62
Other transactions	35,137	20,930	815	56,882	58,900	2,065	4,139	2,205	3,675
HVB Group	**3,714,627**	**2,737,904**	**2,402,739**	**8,855,270**	**7,688,588**	**284,461**	**308,263**	**280,338**	**305,255**

Derivative transactions with a residual maturity of up to three months accounted for a nominal total amount of €1,414,610 million as at 30 June 2023 (of which for credit derivatives: €228 million).

Derivative transactions by counterparty type

	FAIR VALUE POSITIVE		FAIR VALUE NEGATIVE	
€ millions	**30/6/2023**	**31/12/2022**	**30/6/2023**	**31/12/2022**
Central governments and central banks	3,457	3,647	1,258	1,291
Banks	153,513	163,379	150,251	163,480
Financial institutions	122,442	134,680	123,633	134,187
Other companies and private individuals	5,049	6,557	5,196	6,297
HVB Group	**284,461**	**308,263**	**280,338**	**305,255**

Risk Report (Continued)

2 Market risk

The economic capital for market risk at HVB Group, without taking account of diversification effects between risk types, amounts to €3,981 million (31 December 2022: €3,857 million).

The following table shows the aggregated market risk for internal risk controlling at HVB Group over the course of the year. Most of the market risk arises from positions of the Corporates operating segment of HVB Group.

Market risk of HVB Group (VaR, 99.00% confidence level, one-day holding period)

	MARKET RISK OF POSITIONS RECOGNISED AT FVTPL			MARKET RISK OF POSITIONS RECOGNISED AT FVTOCI		
	AVERAGE	PERIOD END		AVERAGE	PERIOD END	
€ millions	**2023**	**30/6/2023**	**31/12/2022**	**2023**	**30/6/2023**	**31/12/2022**
Credit spread risk	6.0	4.4	5.4	9.4	8.4	9.1
Interest rate positions	7.0	4.6	9.6	6.9	9.3	3.0
Foreign exchange positions	1.9	2.8	3.9	0.2	0.0	0.4
Equity/index positions[1]	3.6	1.6	13.8	—	—	—
Commodity risk	5.3	4.3	13.8	—	—	—
HVB Group[1]	**10.1**	**7.3**	**31.5**	**7.9**	**8.0**	**7.9**

1 Because of the diversification effects between the risk categories, the total risk is less than the sum of the individual risks.

The regulatory capital requirements for the quarter-ends of the previous year are described below, broken down by the relevant risk metrics.

Regulatory capital requirements of HVB Group

€ millions	**30/6/2023**	**31/3/2023**	**31/12/2022**	**30/9/2022**	**30/6/2022**
Value at risk	79	82	160	232	142
Stressed value at risk	118	135	239	346	227
Incremental risk charge	93	82	87	103	231
Market risk standard approach	32	40	47	53	52
CVA value at risk	16	13	14	14	10
Stressed CVA value at risk	30	33	37	36	33
CVA standard approach	38	34	34	40	37

Regulatory back-testing of the internal model at HVB

The forecasting quality of the VaR measurement method is reviewed by means of daily back-testing that compares the computed regulatory VaR figures with the changes in the hypothetical portfolio value and additionally with the actual profit/loss. Reportable back-testing outliers occurred on three days in the last 250 days. The hypothetical loss was greater than the forecast VaR figure on these days. Furthermore, one of these outliers showed an actual single-day loss that was also greater than the VaR figure.

In addition to back-testing, further methods are used to check the quality of the model. These involve analysing the risk factors used and adjusting them as required. Risks that cannot be adequately modelled are also monitored and limits set for them if they are material. Furthermore, the suitability of the modelling of the UniCredit risk model used throughout the Group is validated by the “Group Internal Validation” unit.

Market liquidity risk
Market liquidity risk relates to the risk that the Bank will suffer losses due to the disposal of assets that can only be liquidated on the market at a discount. In an extreme case, HVB Group may not be able to sell such an asset, as the market does not offer enough liquidity, or the Bank holds a position that is too large relative to market turnover. The CRO organisation is responsible for managing market liquidity risk and conducts advanced market liquidity analyses. These uncertainties are taken into account in the income statement in the form of valuation adjustments and in capital withdrawals via additional valuation adjustments (AVA).

Interest rate risk in the banking book
The interest rate risk in the banking book describes the risk relating to the Bank’s capital and income caused by changes in interest rates. The strategy of the interest rate risk in the banking book aims to reduce fluctuations in net interest income as a result of interest rate movements over several years by hedging deposits and capital as well as early mortgage loan repayments in line with internal models. Parameters are based on statistical analyses. Market risk also includes the behavioural model risk, which represents the statistical uncertainty involved in the model assumptions for sight and savings deposits as well as the early repayment of mortgage loans.

HVB Group measures and monitors interest rate risk in terms of the change in the economic value as well as the income of the Bank. In this context, consistent methods and models as well as limits or thresholds are ensured for the sensitivity of net interest and the present value. Interest rate risk exposure from commercial banking transactions is managed and hedged by the Treasury department. The market risk of the Treasury department is monitored on a daily basis. Present value-based measurement shows the effects of fluctuations in the interest rate on the economic value of assets and liabilities as a relevant risk measure. The absolute change in present value and the coefficients from the change in present value and regulatory own funds are calculated on a monthly basis, taking into account the supervisory requirements, in the event of a 200bps increase or a 200bps decrease in interest rates. In addition, six further interest rate scenarios are calculated as early warning indicators, in which, however, the changes in present value are considered in relation to the core capital. In June 2023, the 200bps increase in interest rates and the parallel shift upwards as an early warning indicator resulted in the greatest negative changes in present value. The interest rate scenarios stated are calculated according to the BaFin Circular 6/2019 (BA) on interest rate risk in the banking book. The evaluations are carried out as required without taking account of the hedge effect from the model book for own funds from a regulatory perspective. In accordance with the European Banking Authority, additional modified model assumptions have been included in the calculation of sight and savings deposits.

Risk Report (Continued)

Information on interest rate risk in the banking book

	30/6/2023		31/12/2022	
	€ millions	in %	€ millions	in %
+ 200 basis points	(2,226)	(11.7)	(1,954)	(10.2)
- 200 basis points	999	5.2	906	4.7

HVB Group is well below the specified 20% mark, above which the banking supervisory authorities consider a bank to have increased interest rate risk, and below the 15% mark, which is seen as an early warning indicator. These figures include HVB's positions as well as the positions of the material Group companies, customer margins are not included. The changes in figures compared with year-end 2022 are due to changes in positions.

In addition to the present value approach, a simulation of net interest in the banking book is performed for HVB Group on a monthly basis. This analysis focuses on the impact that changes in interest rates have on net interest income compared with the benchmark scenario over a defined time horizon. The scenarios are limited internally with parallel shifts in the yield curve by 25bps to 100bps upwards (parallel upwards) or downwards (parallel downwards), with the yield curve shifted by 50bps in EUR in each case. This means that yield shifts were halved in EUR in internally limited scenarios compared with the previous year. Assumptions regarding the elasticity of sight and savings deposits are also taken into account. Depending on the contractual agreement with the customer, a floor of 0% could be employed for commercial banking products. In such a case, the interest rate shock downwards would not be fully applied. The simulation is calculated based on the assumption that the balance remains constant. The sensitivity of income (NII sensitivity) is then obtained from the resulting changes in income in relation to the planned net interest income (NII budget) for the current financial year. The results are below the internal early warning indicator of minus 12.0%.

Effects of interest rate changes on net interest

	30/6/2023		31/12/2022	
	€ millions	in %	€ millions	in %
Parallel upwards	(84)	(3.1)	(195)	(8.5)
Parallel downwards	84	3.1	74	3.2

The changes in results compared with the previous year can be explained by the changes in limited interest rate scenarios.

Furthermore, additional stress test scenarios are considered to estimate the basis risk (resulting from the imperfect correlation in interest rate benchmarks for different instruments and products) and the effects of nonparallel shocks.

3 Liquidity risk

Short-term liquidity risk
Within the framework of our limit system, we showed an overall positive balance of short-term liquidity risk of €43.7 billion at HVB Group for the three-month maturity bucket as at 30 June 2023 (30 June 2022: €62.6 billion). The holding of available securities eligible as collateral for central bank borrowings that can be employed on the next banking day to compensate for unexpected outflows of liquidity amounted to €29.4 billion at the end of the first half of 2023 (30 June 2022: €10.0 billion).

Institution-specific, market-wide and combined scenarios are included in the calculation of our stress tests. The calculations at the end of the first half of 2023 showed that the available liquidity reserves will cover our funding requirements beyond the minimum period required in each case.

The liquidity coverage ratio (LCR) of a minimum of 100% to ensure that an institution is able to meet its short-term payment obligations was exceeded at HVB as at 30 June 2023 with a value of more than 100%.

Structural liquidity risk
The structural liquidity risk (funding risk) of HVB Group was again low in the first half of 2023 thanks to our broad funding base in terms of products, markets and investor groups. This ensured that we were able to obtain adequate funding for our lending operations in terms of volume and maturity within the framework of our limit system. By the end of June 2023, HVB Group had obtained a volume of €6.1 billion in longer-term funding (30 June 2022: €4.9 billion). There is a regulatory minimum ratio of 100% to be complied with from June 2021 for the NSFR. HVB adhered to a ratio of over 100% in the first half of 2023 based on CRR II requirements. The internal ratio "structural liquidity ratio greater than one year and greater than three years" was over 100% in this period. On account of their ratings, our Pfandbriefe still remain an important funding instrument.

4 Operational risk

The operational risk of HVB Group is calculated for HVB and its material subsidiaries – HVB Immobilien AG and UniCredit Leasing GmbH (together with subsidiaries) – using an internal model in accordance with the Advanced Measurement Approach (AMA model). The standard approach is applied for all other subsidiaries in the respective area of application.

The AMA model is based mainly on internal and external loss data. The process involves computing loss distributions for each model risk category. A model risk category is determined by combining the Basel loss event category and the product category of the loss event. Scenario data are used to complete the data for rare yet extreme events. The method used to aggregate the individual data sources is based on the Bayesian model and is applied to the loss distribution parameters for each model risk category.

The VaR is determined using a Monte Carlo simulation. The VaRs of the individual model risk categories are modified to reflect internal control and business environment factors. In the aggregation, correlations between the model risk categories and risk-reducing measures, such as insurance policies, are taken into account.

Risk Report (Continued)

In line with UniCredit's approach, operational risk capital is calculated based on the Advanced Measurement Approach (AMA) at the level of the UniCredit corporate group as a whole and then distributed as a first step to the subgroups (known as hubs), including HVB Group, and as a second step, to the AMA subsidiaries, using a risk-sensitive allocation mechanism.

The model was developed by UniCredit S.p.A. HVB checks the plausibility of the calculation results at regular intervals. The AMA model is validated on an annual basis to ensure that it is appropriate.

Information technology (IT)
UniCredit Services S.p.A. provides most IT services for HVB Group. IT services needed to meet special requirements of HVB subsidiaries are provided by additional selected providers. In this connection, both HVB and HVB Group adhere to a control framework set by the UniCredit corporate group in order to monitor and manage all significant IT and cyber risks adequately within the ICT management processes, among other things. Any such outsourcing of activities to further providers is subject to clear IT compliance guidelines and will also be monitored in the context of the overarching control processes.

Business continuity management, IT service continuity management and crisis management
The business continuity, IT service continuity and crisis management function demonstrated its effectiveness and appropriateness by successfully mastering critical situations. In addition, the precautions taken for crisis and emergency situations are adapted constantly to accommodate new threats.

Legal risk and compliance risk
Legal risk as a subcategory of operational risk is defined as the possibility of losses, damage or costs caused by lack of knowledge of the current legal situation or by a delay in reacting to changes in the law, insufficient and/or inadequate application of the law or unforeseeable changes to case law and/or the interpretation of the law by the authorities.

The Legal department is responsible for managing legal risk and provides advice on legal matters to all units of HVB. Excluded from this are tax law, labour law, data protection and the legal areas covered by compliance, which are overseen by the respective functional departments.

Compliance risk is defined as an existing or future risk to income or capital as a consequence of infringements of or non-compliance with laws, regulations, statutory provisions, agreements, mandatory practices or ethical standards. This may result in fines, compensation for damage and/or contracts being rendered null and void in addition to damaging a bank’s reputation.

The management of compliance risk is normally a task of the Bank’s Management Board. Pursuant to Section 25a of the German Banking Act (Kreditwesengesetz – KWG), it is required to ensure that a proper business organisation is in place, encompassing in particular effective risk management, including an internal control system (ICS). Part of the ICS is the compliance function (second line of defence), which helps the Management Board to manage compliance risk. In terms of the three lines of defence, however, the business units have the task (first line of defence) of knowing and mitigating their own compliance risks.

The Minimum Requirements for Compliance (MaComp) and MaRisk both require a compliance function to be put into place. Both also contain rules on how such a compliance function should be structured. At HVB, both functions are combined in the Compliance unit in order to ensure a uniform approach. Anti-money laundering and fraud prevention as well as preventive measures against infringements of financial sanctions and embargos are also assigned to the Compliance unit. Comprehensive risk assessment is ensured by this approach. On account of its high degree of specialisation, tax compliance is managed and refined within the CFO organisation exclusively by the Tax Affairs unit.

Legal risks
HVB and other companies belonging to HVB Group are involved in various legal proceedings. The following is a summary of cases against HVB and other companies belonging to HVB Group, which individually or collectively in the respective subject areas have a value in dispute exceeding €50 million or are of substantial significance for HVB for other reasons.

In many cases, there is substantial uncertainty regarding the outcome of the proceedings and the amount of possible damages. These cases include criminal or administrative proceedings by the relevant authority and claims in which the petitioner has not specifically quantified the amounts in dispute. In all proceedings where a loss is considered likely, and it is possible to reliably estimate the amount of possible losses, provisions have been set up based on the circumstances and consistent with IFRS accounting principles applied by HVB Group.

VIP 4 Medienfonds
Various investors in Film & Entertainment VIP Medienfonds 4 GmbH & Co. KG to whom the Bank issued loans to finance their participation, brought legal proceedings against HVB. In the context of the conclusion of the loan agreements, the plaintiffs claim that the Bank provided inadequate disclosure about the fund structure and the related tax consequences. A settlement was reached with the vast majority of the plaintiffs. An outstanding final decision with respect to the question of HVB's liability for the prospectus in the proceeding pursuant to the Capital Markets Test Case Act (Kapitalanleger-Musterverfahrensgesetz) which is pending at Munich Higher Regional Court, will affect only a few pending cases.

Proceedings related to claims for withholding tax credits
On 31 July 2014 the Supervisory Board of HVB concluded its internal investigations into the so-called “cum-ex” transactions (the short selling of equities around dividend dates and claims for withholding tax credits on German share dividends) at HVB. In this context, criminal investigations have been conducted against current or former employees of HVB and HVB itself as an ancillary party by the Prosecutors in Frankfurt/Main, Cologne and Munich. With respect to HVB, all proceedings originally initiated by the aforesaid prosecution offices were finally closed with payment of a fine or the payment of a forfeiture.

In December 2018, in connection with an ongoing investigation against other financial institutions and former Bank employees, HVB was informed by the Cologne Prosecutor of the initiation of a new investigation in connection with an administrative offence regarding “cum-ex” transactions involving Exchange Traded Funds (“ETF”). In April 2019 these investigations were extended to so called ex/ex-transactions, in which an involvement of the Bank in the sourcing of cum/ex transactions of other market participants on the ex-day is suspected. The facts are being examined internally. HVB is cooperating with the authorities.

Risk Report (Continued)

On 28 July 2021, the Federal Criminal Court (BGH) rendered a decision through which the principle criminal liability of cum/ex structures was determined the first time. With its decisions of 6 April 2022 and 17 November 2022, the BGH confirmed two criminal judgements in other cum-ex cases of the Regional Court of Bonn, thus further solidifying its case law. HVB is monitoring the development.

In June 2023, the Munich tax authorities completed a regular field audit of HVB for the years 2013 to 2016 which includes, among other things, a review of transactions in equities around the dividend record date (so called cum/cum transactions). During these years HVB performed, among other things, securities-lending transactions with different domestic counterparties which include, but are not limited to, different types of cum/cum transactions. It still remains to be clarified whether, and under which circumstances, tax credits can be obtained or taxes refunded with regard to different types of cum/cum transactions. Some of the taxes credited from the cum/cum transactions are currently not recognized for tax purposes by the tax audit. HVB reserves the right to appeal against the tax authorities´view. Moreover, with respect to cum/cum transactions in which the counterparty of HVB claimed tax credits in the past, it cannot be ruled out that HVB might be exposed to third party claims under civil law.

HVB has made provisions.

Claim in relation to collateral enforcement
In late 2019, a holding company of a German industrial group brought a claim against HVB, in its capacity as security agent for a group of noteholders and lenders, aiming at obtaining the annulment and/or damages in relation to an allegedly fraudulent collateral enforcement. In December 2020, the case was formally registered before the District Court of Luxembourg. The proceeding is stayed.

Financial sanctions matters
Following the settlement in April 2019, the U.S. and New York Authorities require an annual external review regarding the evolution of the process implementation. In light of the request, in 2020, the Group appointed an external independent consultant. Following the interaction with the independent consultant and also considering the mandatory commitments towards the Authorities, HVB has implemented additional requirements and controls, about which the bank makes periodic reports to the Authorities. According to the positive outcomes of the reviews, the Federal Reserve has suspended the external independent consultant's review going forward.

Euro-denominated bonds issued by EU countries
On 31 January 2019 UniCredit S.p.A. and HVB received a Statement of Objections from the European Commission referring to the investigation by the European Commission of a suspected violation of antitrust rules in relation to European government bonds. The subject matter of the investigation extended to certain periods from 2007 to 2011 and included activities by HVB between September and November 2011. The European Commission concluded its investigation by issuance of its decision on 20 May 2021. The decision provides for the imposition of a fine of €69.4 million on the parent company UniCredit S.p.A and HVB. UniCredit S.p.A. and HVB contest the European Commission's findings and brought an action for the annulment of its decision before the General Court of the European Union on 30 July 2021.

On 11 June 2019, HVB and UniCredit Capital Markets LLC were named, among other financial institutions, as defendants in a putative class action already pending in the United States District Court for the Southern District of New York. The third amended class action complaint, filed on 3 December 2019, alleges a conspiracy among dealers of Euro-denominated bonds issued by European central banks to fix and manipulate the prices of those bonds, among other things by widening the bid-ask spreads they quoted to customers. The putative class consists of those who purchased or sold Euro-denominated bonds issued by European central banks in the US between 2007 and 2012. On 23 July 2020, the court granted motions to dismiss the third amended complaint by certain defendants, including HVB and UniCredit Capital Markets LLC, without prejudice. Plaintiffs filed their fourth amended class action complaint on 9 February 2021, repleading their claim against HVB and UniCredit Capital Markets LLC and other financial institutions. Like earlier pleadings, the fourth amended class action complaint does not include a quantification of damages claimed. On 14 March 2022, the court granted UniCredit Capital Markets LLC motion to dismiss while denying HVB's motion to dismiss. The court has since denied HVB's motion for reconsideration, HVB has answered the operative complaint, and discovery has commenced. On 7 November 2022, plaintiffs sought leave to file a fifth amended class action complaint, which would continue to name HVB among others (but not UniCredit Capital Markets LLC) as a defendant. HVB reached a settlement with the plaintiffs and the putative class in May 2023, and the court preliminarily approved that settlement on 16 May 2023. The court will consider final approval of the settlement at a hearing scheduled for 5 January 2024.

Adjustment of fees conditions as well as general terms and conditions
On 27 April 2021, the Federal Court of Justice (Bundesgerichtshof) decided in a ruling against another financial institution that in ongoing contracts fee conditions as well as general terms and conditions can only be amended vis-à-vis consumers if the customer declares his consent. Until now, the financial industry had assumed, based on a common provision in the general terms and conditions, that it was sufficient if the customer was notified of the changes and did not object within two months. The bank has examined the effects of the ruling on its contractual relationships. For a part of the contracts, adjustments to fee conditions made in the past under this provision are ineffective, so that repayment obligations may arise. The bank is asking the clients concerned to declare their consent to the current fees and general conditions. The vast majority of the clients has already agreed.

Claims in relation to a syndicated loan
HVB, together with several other financial institutions, has been named as a defendant in complaints filed by the judicial administrator and foreign representative of a Brazilian oil and gas conglomerate in July 2021 in the United States before the Southern District of New York court claiming damages in connection with the repayment of a syndicated loan for two oil drilling rigs HVB participated that defendants are alleged to have unlawfully obtained.

Claim in relation to interest rate swap
In December 2021 HVB was named as defendant in a case pertaining to an interest rate swap commenced by an Italian region before the Court of Bologna in Italy. The region argues, inter alia, HVB´s precontractual and/or non-contractual liability because HVB had allegedly missed to include certain requirements in the swap allegedly needed for the validity of the contract. The region seeks damages for an amount of approx. €52 million (equal to the payments made under the swap), as well as a declaration that no further sums are due to HVB (equal to approx. €18 million). The case is ongoing.

Claims in relation to sanctions legislation
Two aircraft leasing companies filed lawsuits in March and April 2022 against HVB´s foreign branch in London before a London court. The claims relate to payments arising under certain letters of credit, all of which are governed by English law. The disputes hinge on the interpretation of sanctions legislation and its effect on the letters of credit. After the trial, the required UK licences authorising payments under the letters of credits were granted and HVB London branch made payments of the principal under the letters of credit to the claimants in autumn 2022. In spring 2023, HVB London branch was nevertheless ordered to pay interest and legal costs. HVB London branch has applied for permission to appeal this decision.

5 Other risks

In the section entitled "Other risks", HVB Group collates the following types of quantifiable risk: real estate risk, business risk, pension risk, reputational risk, financial investment risk and model risk as well as the risk type strategic risk, which is described exclusively in qualitative terms. The risk arising from outsourcing activities and sustainability risk is not treated as a separate risk type at HVB Group but is considered a cross-risk type and is consequently listed under other risks.

Real estate risk
A fundamental distinction is made in real estate risk between real estate required for operations (used by the Bank) and real estate that is not used for operations (not used by the Bank).

Real estate management ensures value- and cost-optimised management, the operation of the buildings and the fulfilment of the UniCredit Bank AG's space requirements in terms of size, quality and cost optimisation. The longer-term orientation for real estate used by the Bank corresponds with the Bank's strategy of preferring Bank-owned properties over rented properties for own use and making such properties available for the banking operations of HVB Group at market terms on a cost-optimised basis.

The main risks for the Bank-owned portfolio primarily stem from the development of the market value. The risk drivers are the future usage by the Bank, market rents, occupancy rate, required investment and the price development on the real estate market. Environmental, social and governance (ESG) criteria are also becoming important factors for portfolio strategy, maintenance and investment decisions. The medium-term goal for the real estate portfolio not used by the Bank, on the other hand, is to realise the best possible value upon disposal of the portfolio; in this regard, the impact on both the income statement and the Bank's other management instruments is crucial for the individual decisions. This tallies with the overarching strategy for dealing with real estate risk.

The Russian-Ukraine conflict and the resulting economic consequences have led to rising costs, especially in the area of energy and construction. It remains to be seen to what extent this trend will continue or whether further effects will be noticeable.

Due to the changes in the macroeconomic environment, such as high inflation rates and rising interest rates, there is a certain degree of uncertainty on the real estate market at the present time. This is currently leading to restricted transaction activity and a downward trend in property prices.

The economic capital for real estate risk at HVB Group, without taking account of diversification effects between the risk types and without the model risk charge, amounts to €283 million as at 30 June 2023, which represents a decrease of €8 million (31 December 2022: €291 million). The fully diversified economic capital for real estate risk at HVB Group stands at €126 million (31 December 2022: €129 million).

The risk figures relate to a portfolio valued at €2,692 million.

Breakdown of the real estate portfolio by type

	PORTFOLIO VALUE € millions		SHARE in %	
	30/6/2023	31/12/2022	30/6/2023	31/12/2022
Real estate used by the Bank	2,104	2,231	78.2	80.6
Real estate not used by the Bank	588	536	21.8	19.4
HVB Group	**2,692**	**2,767**	**100.0**	**100.0**

The impact of macroeconomic scenarios on real estate risk is analysed within the scope of the cross-risk-type stress tests.

Business risk

The strategy for business risk is based on the direction of business over the medium term and is reflected in planning. As part of its general cost and income management, each business unit is responsible for the operational management of business risk.

The economic capital for HVB Group's business risk, without taking account of diversification effects between the risk types and without the model risk charge, amounts to €364 million as at 30 June 2023 (31 December 2022: €337 million). The fully diversified economic capital for HVB Group's business risk totals €234 million as at 30 June 2023 (31 December 2022: €215 million).

The impact of macroeconomic scenarios on business risk is analysed within the scope of the cross-risk-type stress tests.

Pension risk

In risk management, risks are calculated and monitored at regular intervals using a model devised specifically for pension risk. A risk figure is determined periodically using calculations based on changes in key risk parameters for both the various capital investments and the cash flows on the obligations side. A figure of €1,183 million was determined as at 30 June 2023 for the total pension risk of HVB Group (31 December 2022: €1,167 million). The increase compared with year-end 2022 is primarily due to a higher assumed potential interest rate shock on pension obligations as a result of an increase in interest rates. The risk figure is incorporated in the calculation of the risk-taking capacity in the form of an additive component in market risk before aggregation as internal capital. In addition, the impact on pension risk is analysed at regular intervals as part of the cross-risk-type stress tests.

Risk Report (Continued)

The interest rate level still appears to be the main driver of risks when determining pension obligations. The huge increase in returns in the past year led to a considerable reduction in the present value of obligations, which more than compensated the decline on the asset side. The funding situation has improved significantly. Looking ahead, the rise in interest rates makes it easier to generate returns on plan assets from the fixed-income securities segment. The sharp rise in inflation has also led to a reassessment of medium- and longer-term inflation assumptions, partly offsetting the positive effect of higher interest rates. Central banks seem to be determined to combat inflation by raising key interest rates. However, this could also adversely affect economic development and, as a result, lead to an increase in the range of fluctuation on capital markets with potentially negative effects on the asset side.

Financial investment risk

The financial investment portfolio mainly consists of holdings in unlisted companies, equity derivatives and other fund units (real estate funds and other closed-end funds). All the investments to be included in financial investment risk are either considered strategic and allocated to an operating segment or competence line, or deemed non-strategic and connected with the fundamental goal of reduction.

The risk from holdings in unlisted companies has been included under credit risk since September 2020. The following risk drivers are relevant for financial investment risk: the carrying amounts of investments and the related residual capital contribution liabilities and the macroeconomic situation. In addition, risks from hedge funds, private equity funds (including issuer risk from the trading book) and FX risk from the investment portfolio are included in the calculation of the market risk.

Breakdown of the financial investment portfolio

	PORTFOLIO VALUE € millions		SHARE in %	
	30/6/2023	31/12/2022	30/6/2023	31/12/2022
Private equity investments	9	10	3.9	4.0
Other investments[1]	235	227	96.1	96.0
HVB Group	**244**	**237**	**100.0**	**100.0**

1 Listed and unlisted investments.

The impact of macroeconomic scenarios on financial investment risk within credit risk is examined in the course of cross-risk-type stress tests.

Strategic risk

The statements made on strategic risk in the 2022 Annual Report still apply. Changes in the performance of the overall economy and the ratings of HVB are shown in the section entitled “Economic report” in this Interim Management Report.

Reputational risk

HVB and its most important subsidiaries apply a holistic approach to reputational risk management. This means that all significant new activities and transactions at the Bank are analysed with regard to reputational risk as a basic rule ("change-the-bank" approach) and individual units at the Bank are examined at regular intervals for latent reputational risk at the same time ("run-the-bank" approach).

Commercial transactions and new activities such as new product processes, outsourcing, projects and particular investments (such as special purpose vehicles) are included in the "change-the-bank" approach, as well as any other new activity as is appropriate. The employees responsible in each case are required to analyse the transactions/activities to identify any reputational risk, taking into account the existing guidelines. Once a reputational risk has been identified, the appropriate specialist departments are called in who will assess the reputational risk identified in terms of quality. The final decision based on the risk analysis and qualitative assessment is the responsibility of the Non Financial Risks and Controls Committee or the head of Non Financial Risk.

Under the "run-the-bank" approach, the individual units of the Bank are examined at regular intervals for existing and/or latent reputational risk. For this purpose, senior management is interviewed about the current reputational risk. Senior managers then have the opportunity to review the reputational risk identified in their unit and add any further material reputational risks. Where it is possible and makes sense to do so, additional countermeasures are defined for the individual reputational risks.

Within the framework of the "run-the-bank" approach, the risk is classified in accordance with a three-tier system (traffic light logic). This involves determining the aggregate risk across two dimensions: impact on the income statement and probability of occurrence.

The individual business areas and central units are responsible for reputational risk management. Overall responsibility for monitoring rests with the Non Financial Risk unit (CRO organisation). The Non Financial Risk unit consolidates the results of senior management interviews and prepares a yearly RepRisk Report covering the greatest reputational risks at HVB.

In addition to the "change-the-bank" and the "run-the-bank" approach, UniCredit's method for quantifying reputational risk was introduced at HVB Group in the first quarter of 2020. For the purposes of quantification, reputation risk is defined as the impact of "negative sentiment" in the opinion-forming media (press, television, online media) on UniCredit's future profits generated by the reporting of an event that has a negative impact on the Bank's reputation.

UniCredit's method for quantifying reputational risk is based on measuring the semi-elasticity between the development of the Media Tonality Index (a measure whose development reflects changes in UniCredit's reputation) and the development of the idiosyncratic portion of the expected profits. The economic capital for reputational risk is based on the value-at-risk (VaR) measure, which is calculated at a confidence level of 99.90% and is derived from the distribution of expected declines in profit.

The economic capital for reputational risk is calculated on a quarterly basis at UniCredit corporate group level and – based on the weighted "ratio of capital for the subsidiary's operational risk to the capital for the UniCredit corporate group's operational risk" – distributed between the subsidiaries of UniCredit corporate group.

The Non Financial Risk department checks the results obtained from calculating the economic capital for HVB Group's reputational risk for plausibility on a quarterly basis. The method for the quantification of reputational risk is validated at regular intervals.

The impact on reputation risk stemming from a change in sentiment about UniCredit in the opinion-forming media is examined in the course of cross-risk-type stress tests. The extent of this change is determined by assessing the severity of the respective macroeconomic scenario.

Model risk

Model risk is taken into account via a charge, which reflects the risk of model weaknesses due to data errors, inaccurate assumptions and incorrect methodology within the framework of ICAAP calculations. The estimation of this economic capital component is based on an internally developed methodology. The results of this methodology are converted into model risk percentages based on defined scoring functions and added to the risk types. A model risk percentage is also taken into account for the risk aggregation model, which aims to estimate the diversification benefit. In this case the relevant model risk percentage is applied directly to the diversification benefit. The model risk charge is also taken into account in the limitation of internal capital.

The model risk charge amounted to €209 million as at 30 June 2023 (31 December 2022: €210 million).

Sustainability risk

In addition to the "Social and Corporate Governance" component, HVB Group focuses in particular on the "Climate & Environment" (C&E) component.

Climate and environment (C&E) factors relate to the quality and functioning of the natural environment and systems and include factors such as climate change, biodiversity, energy consumption, air pollution and waste management. These are factors that can have a negative financial impact through various risk drivers.

These can be categorised into physical and transitional risks:
- Physical risks relate to adverse financial effects from climate change, including more frequent extreme weather events and gradual global warming, as well as environmental degradation (e.g. water and land pollution, biodiversity loss and deforestation). Physical risks are divided into "acute" caused by extreme weather events (such as droughts, floods and storms) and "chronic" caused by ongoing climate change (such as rising sea levels, loss of biodiversity, scarcity of resources). These can directly result in damage to buildings and reduced productivity.
- Transitional risks relate to the financial loss to the institution that may result directly or indirectly from the process of transitioning to a low-carbon and more environmentally friendly, sustainable economy. For example, this could be triggered by an abrupt shift in climate and environmental policy, technological progress or changing consumer behaviour.

Social and corporate governance factors relate to rights, the welfare of people and communities, including the organisational management of environmental and social factors in terms of strategy and processes.

Sustainability risk is materialising across the traditional risk types (credit risk, market risk, operational and reputational risk, liquidity and funding risk) and is gradually being integrated into risk monitoring within the framework of a project.

Risks arising from outsourcing activities

Outsourcing involves the transfer of activities and processes to intragroup and external service providers. Parts of the operational risk can also be mitigated by transferring the liability, while contractual risks arising from the outsourcing arrangement remain within HVB or a subsidiary of HVB Group. An outsourcing arrangement is deemed to exist when a different company is contracted to carry out activities and processes in connection with the performance of banking business, financial services or other typical banking services that would otherwise be performed by the outsourcing company itself. This includes outsourcing arrangements within UniCredit as well as the subcontracting of outsourced activities and functions to subcontractors.

Outsourcing risk is considered a cross-risk-type risk at HVB Group and is not treated as a separate risk type. Outsourcing activities affect the following risk types in particular: operational risk, reputational risk, strategic risk, business risk, credit risk, market risk and liquidity risk. Those risks that are identified and assessed in an in-depth risk analysis are managed as part of the respective risk type. Specific risks arising from outsourcing activities that cannot be assigned directly to a specific risk type are managed by the unit responsible for the outsourcing in question.

The respective project team and defined functional departments (including Operational Risk Management, Compliance, Legal, Corporate Affairs & Documentation, Data Protection and Business Continuity Management) use a standardised procedure to classify outsourcing arrangements as “not critical/material” and “critical/material”. An in-depth risk analysis covering the other risk types as well as operational risk is performed for all outsourcing arrangements. A retained organisation (RTO) responsible for the arrangement is set up for each outsourcing arrangement that manages the risks identified. The identified risks are incorporated in HVB Group’s risk management in the processes defined for the risk types concerned. The operational risk managers help the project managers and the heads of the RTOs to prepare and/or update the related risk analyses. Other external service providers for whom aspects of ICT security, data protection or business continuity are relevant have been evaluated in a dedicated third-party risk management process since mid-2020.

In HVB Group, no new critical/material outsourcing contract was concluded by HVB in the first half of 2023. In the course of the closure of the branch in Luxembourg as at 30 June 2023, three contracts with UniCredit International Bank Luxembourg S.A. on “Compliance support services”, “Operations services in the area of the settlement of collateral, payments and taxes as well as general master data maintenance” and “Support services for software maintenance” were terminated. The change in contracts did not result in a significant change in the risk.

Consolidated Statement of Total Comprehensive Income

Consolidated Income Statement

INCOME/EXPENSE (€ millions)	NOTE	1/1-30/6/2023	1/1-30/6/2022
Interest income		4,025	1,600
of which calculated using the effective interest method (based on classification according to IFRS 9)		3,303	1,138
Negative interest on financial assets		(3)	(159)
Interest expense		(2,620)	(480)
Negative interest on financial liabilities		3	330
Net interest	12	1,405	1,291
Dividends and other income from equity investments	13	24	23
Net fees and commissions	14	647	607
Net trading income	15	749	340
Net gains/(losses) on financial assets and liabilities at fair value	16	49	141
Net gains/(losses) on derecognition of financial instruments measured at cost	17	(2)	6
Net other expenses/income	18	(148)	(164)
Payroll costs		(665)	(694)
Other administrative expenses		(532)	(590)
Amortisation, depreciation and impairment losses on intangible and tangible assets		(79)	(46)
Operating costs	19	(1,276)	(1,330)
Net write-downs of loans and provisions for guarantees and commitments	20	(50)	29
Provisions for risks and charges	21	(13)	9
Restructuring costs	22	(45)	(9)
Net gains/(losses) on remeasurement of consolidated companies	23	—	(4)
PROFIT/(LOSS) BEFORE TAX		**1,340**	**939**
Income tax for the period		(319)	(188)
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))		**1,021**	**751**
attributable to the shareholder of UniCredit Bank AG		1,021	751
attributable to minorities		—	—

Consolidated Statement of Total Comprehensive Income

€ millions	1/1-30/6/2023	1/1-30/6/2022
Profit/(loss) after tax recognised in the income statement (consolidated profit/(loss))	**1,021**	**751**
Income and expenses recognised in other comprehensive income		
Income and expenses not to be reclassified to the income statement in future periods		
Actuarial profit/(loss) on defined benefit plans (pension commitments)	(43)	915
Allocation to/withdrawal from the revaluation surplus for owner-occupied property (IAS 16)	(71)	29
Change in the fair value of financial liabilities at FVTPL attributable to changes in the default risk (own credit spread reserve)	(4)	16
Other changes	—	—
Taxes on income and expenses not to be reclassified to the income statement in future periods	48	(10)
Income and expenses to be reclassified to the income statement in future periods		
Changes from foreign currency translation	(2)	10
Changes in the measurement of financial instruments (hedge reserve)	(1)	(32)
Unrealised gains/(losses)	(1)	(32)
Gains/(losses) reclassified to the income statement	—	—
Changes in the measurement of financial instruments at FVTOCI (FVTOCI reserve)	1	(29)
Unrealised gains/(losses)	—	(14)
Gains/(losses) reclassified to the income statement	1	(15)
Other changes	—	—
Taxes on income and expenses to be reclassified to the income statement in future periods	—	14
Total income and expenses recognised in equity through other comprehensive income	**(72)**	**913**
Total comprehensive income	**949**	**1,664**
of which:		
attributable to the shareholder of UniCredit Bank AG	949	1,664
attributable to minorities	—	—

Consolidated Balance Sheet

ASSETS (€ millions)	NOTE	30/6/2023	31/12/2022
Cash and cash balances	24	37,343	36,833
Financial assets held for trading	25	78,935	82,258
Financial assets at FVTPL	26	3,324	4,933
Financial assets at FVTOCI	27	10,324	9,837
Loans and receivables with banks (at cost)	28	20,553	23,336
Loans and receivables with customers (at cost)	29	151,686	154,776
Hedging derivatives	30	491	636
Hedge adjustment of hedged items in the portfolio fair value hedge		(4)	6
Investments in associates and joint ventures accounted for using the equity method	31	—	13
Property, plant and equipment	32	2,234	2,368
Investment properties	33	346	335
Intangible assets	34	5	6
Tax assets		1,010	992
Current tax assets		177	147
Deferred tax assets		833	845
Non-current assets or disposal groups held for sale	35	704	715
Other assets	36	1,212	962
TOTAL ASSETS		**308,163**	**318,006**

LIABILITIES (€ millions)	NOTE	30/6/2023	31/12/2022
Deposits from banks	37	45,028	51,181
Deposits from customers	38	144,362	147,152
Debt securities in issue	39	35,695	31,140
Financial liabilities held for trading	40	58,785	64,304
Financial liabilities at FVTPL	41	4,800	4,818
Hedging derivatives	42	114	200
Hedge adjustment of hedged items in the portfolio fair value hedge	43	(5,067)	(5,474)
Tax liabilities		1,490	1,357
Current tax liabilities		1,154	993
Deferred tax liabilities		336	364
Liabilities of disposal groups held for sale	44	524	580
Other liabilities		1,297	1,231
Provisions	45	1,607	1,778
Shareholders' equity		19,528	19,739
Shareholders' equity attributable to the shareholder of UniCredit Bank AG		17,837	18,048
Subscribed capital		2,407	2,407
Additional paid-in capital		9,791	9,791
Other reserves		4,582	4,652
Currency reserves		21	23
Changes in valuation of financial instruments		15	15
Hedge reserve		3	4
FVTOCI reserve		12	11
Profit available for distribution		—	1,160
Consolidated profit/(loss) 1/1-30/6/2023[1]		1,021	—
Additional equity instruments		1,700	1,700
Minority interests		(9)	(9)
TOTAL LIABILITIES		**308,163**	**318,006**

1 Attributable to the shareholder of UniCredit Bank AG.

In the 2022 financial year, the profit available for distribution disclosed in the annual financial statements of HVB, which forms the basis for the appropriation of profit, amounts to €1,160 million. On 27 March 2023, HVB's Annual General Meeting passed a resolution to pay a dividend of €1,160 million to our sole shareholder, UniCredit S.p.A., Milan, Italy. This represents a dividend of around €1.45 per share after around €0.31 for the 2021 financial year. The profit available for distribution was distributed on 30 March 2023.

Statement of Changes in Consolidated Shareholders' Equity

€ millions	SUBSCRIBED CAPITAL	ADDITIONAL PAID-IN CAPITAL	OTHER RESERVES			
			TOTAL OTHER RESERVES	OF WHICH OWN CREDIT SPREAD	OF WHICH: REVALUATION RESERVE FOR OWN PROPERTIES	OF WHICH PENSIONS AND SIMILAR OBLIGATIONS (IAS 19)
Shareholders' equity as at 1/1/2023	**2,407**	**9,791**	**4,652**	**(37)**	**957**	**(1,007)**
Consolidated profit/(loss) recognised in the consolidated income statement	**—**	**—**	**—**	**—**	**—**	**—**
Total income and expenses recognised in equity through other comprehensive income[4]	**—**	**—**	**(70)**	**(2)**	**(39)**	**(29)**
Unrealised gains/(losses) due to changes in measurement	—	—	(41)	(2)	(39)	—
Gains/(losses) reclassified to the income statement	—	—	—	—	—	—
Actuarial gains/(losses) on defined benefit plans	—	—	(29)	—	—	(29)
Changes from foreign currency translation	—	—	—	—	—	—
Other changes	—	—	—	—	—	—
Total other changes in equity	**—**	**—**	**—**	**—**	**(4)**	**(2)**
Capital increase	—	—	—	—	—	—
Reclassification from equity reserves to retained earnings	—	—	—	—	(4)	(2)
Dividend payouts	—	—	—	—	—	—
Payouts on additional equity instruments	—	—	—	—	—	—
Transfers to/withdrawals from profit available for distribution	—	—	—	—	—	—
Changes in group of consolidated companies	—	—	—	—	—	—
Capital decreases	—	—	—	—	—	—
Shareholders' equity as at 30/6/2023	**2,407**	**9,791**	**4,582**	**(39)**	**914**	**(1,038)**
Shareholders' equity as at 1/1/2022	**2,407**	**9,791**	**3,589**	**(55)**	**945**	**(1,949)**
Consolidated profit/(loss) recognised in the consolidated income statement	**—**	**—**	**—**	**—**	**—**	**—**
Total income and expenses recognised in equity through other comprehensive income[4]	**—**	**—**	**950**	**11**	**13**	**926**
Unrealised gains/(losses) due to changes in measurement	—	—	24	11	13	—
Gains/(losses) reclassified to the income statement	—	—	—	—	—	—
Actuarial gains/(losses) on defined benefit plans	—	—	926	—	—	926
Changes from foreign currency translation	—	—	—	—	—	—
Other changes	—	—	—	—	—	—
Total other changes in equity	**—**	**—**	**—**	**—**	**(6)**	**—**
Capital increase	—	—	—	—	—	—
Reclassification from equity reserves to retained earnings	—	—	—	—	(6)	—
Dividend payouts	—	—	—	—	—	—
Payouts on additional equity instruments	—	—	—	—	—	—
Transfers to/withdrawals from profit available for distribution	—	—	—	—	—	—
Changes in group of consolidated companies	—		—	—	—	—
Capital decreases	—		—	—	—	—
Shareholders' equity as at 30/6/2022	**2,407**	**9,791**	**4,539**	**(44)**	**952**	**(1,023)**

1 The Shareholders' Meeting of 27 March 2023 resolved to distribute the 2022 profit available for distribution in the amount of €1,160 million to our sole shareholder UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €1.45 per share.
The Shareholders' Meeting of 5 May 2022 resolved to distribute the 2021 profit available for distribution in the amount of €245 million to our sole shareholder UniCredit S.p.A. (UniCredit), Milan, Italy. This represents a dividend of around €0.31 per share.
2 Attributable to the shareholder UniCredit Bank AG.
3 UniCredit Bank AG (HVB).
4 Recognised through the consolidated statement of total comprehensive income.

	CHANGE IN MEASUREMENT OF FINANCIAL INSTRUMENTS							
CURRENCY RESERVE	HEDGE RESERVE	FVTOCI RESERVE	PROFIT AVAILABLE FOR DISTRIBUTION[1]	CONSOLIDATED PROFIT 1/1-30/6[2]	TOTAL SHAREHOLDERS' EQUITY ATTRIBUTABLE TO THE SHAREHOLDER OF HVB[3]	ADDITIONAL TIER 1 INSTRU-MENTS	MINORITY INTERESTS	TOTAL SHARE-HOLDERS' EQUITY
23	**4**	**11**	**1,160**	**—**	**18,048**	**1,700**	**(9)**	**19,739**
—	**—**	**—**	**—**	**1,021**	**1,021**	**—**	**—**	**1,021**
(2)	**(1)**	**1**	**—**	**—**	**(72)**	**—**	**—**	**(72)**
—	(1)	—	—	—	(42)	—	**—**	**(42)**
—	—	1	—	—	1	—	**—**	**1**
—	—	—	—	—	(29)	—	**—**	**(29)**
(2)	—	—	—	—	(2)	—	**—**	**(2)**
—	—	—	—	—	—	—	**—**	**—**
—	**—**	**—**	**(1,160)**	**—**	**(1,160)**	**—**	**—**	**(1,160)**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	(1,160)	—	(1,160)	—	**—**	**(1,160)**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
21	**3**	**12**	**—**	**1,021**	**17,837**	**1,700**	**(9)**	**19,528**
16	**19**	**32**	**245**	**—**	**16,099**	**1,700**	**(9)**	**17,790**
—	**—**	**—**	**—**	**751**	**751**	**—**	**—**	**751**
10	**(27)**	**(20)**	**—**	**—**	**913**	**—**	**—**	**913**
—	(27)	(9)	—	—	(12)	—	**—**	**(12)**
—	—	(11)	—	—	(11)	—	**—**	**(11)**
—	—	—	—	—	926	—	**—**	**926**
10	—	—	—	—	10	—	**—**	**10**
—	—	—	—	—	—	—	**—**	**—**
—	**—**	**—**	**(245)**	**—**	**(245)**	**—**	**—**	**(245)**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	(245)	—	(245)	—	**—**	**(245)**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
—	—	—	—	—	—	—	**—**	**—**
26	**(8)**	**12**	**—**	**751**	**17,518**	**1,700**	**(9)**	**19,209**

Consolidated Cash Flow Statement (abridged version)

€ millions	2023	2022
CASH AND CASH EQUIVALENTS AS AT1/1	**36,833**	**27,692**
CASH FLOW FROM OPERATING ACTIVITIES	**1,714**	**22,983**
CASH FLOW FROM INVESTING ACTIVITIES	**(4)**	**51**
CASH FLOW FROM FINANCING ACTIVITIES	**(1,200)**	**974**
Effects of exchange rate changes	—	—
Less non-current assets or disposal groups held for sale	—	—
CASH AND CASH EQUIVALENTS AS AT 30/6	**37,343**	**51,700**

Legal Basis

Details of the company

Company name	UniCredit Bank AG
Legal form of the company	Aktiengesellschaft (public limited company)
Company headquarters	Germany
Country in which the company is registered as a legal entity	Germany
Address of the registered office and principal place of business	Arabellastrasse 12, 81925 Munich, Germany
Commercial Register	Number HRB 42148, B section of the Commercial Register, Munich Local Court
Type of business activity of the company	Universal bank providing banking and financial services
Name of the parent company	UniCredit S.p.A.
Name of the ultimate parent company of the corporate group	UniCredit S.p.A.

UniCredit Bank AG (HVB) is an affiliated company of UniCredit S.p.A., Milan, Italy in whose consolidated financial statements HVB Group is included. These are published on the UniCredit corporate group's website at the following address: https://www.unicreditgroup.eu/en/investors/financial-reports.html.

As a universal bank, HVB with its subsidiaries is one of the leading providers of banking and financial services in Germany and offers a comprehensive range of banking and financial products and services to private, corporate and public-sector customers, international companies and institutional customers.

We did not make use of the option of reviewing the present Half-yearly Financial Report of HVB Group provided for under Section 115 (5) of the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG).

The current consolidated financial statements comprise UniCredit Bank AG and its subsidiaries (HVB Group) and are prepared in euros, which is the reporting currency of the corporate group.

Accounting and Valuation

1 Reporting date/period
The amounts shown in the tables and texts below relate to the reporting date of 31 December for disclosures regarding balance sheet items and totals and to the period from 1 January to 30 June of the respective year for disclosures regarding the income statement.

2 Uniform Group accounting policies
The separate financial statements of the domestic and foreign subsidiaries are incorporated in the consolidated financial statements of HVB Group in accordance with uniform accounting and valuation principles.

3 Consistency
In accordance with the IFRS framework together with IAS 1 and IAS 8, the accounting, valuation and disclosure policies are applied consistently from one period to the next. Any changes in accounting policies are discussed, where necessary, as follows: the first-time adoption of new or amended IFRS accounting rules is described in the Note "First-time adoption of new IFRS accounting rules". Where significant accounting and valuation errors from earlier periods are corrected, the amounts involved are adjusted retroactively as a general rule. Where retroactive adjustment is not possible in exceptional circumstances, the amounts involved are adjusted against retained earnings. Where we effect changes in accounting and valuation policies, any resulting adjustments are similarly recognised retrospectively.

The present Half-yearly Financial Report for HVB Group has been prepared in accordance with the rules defined in the International Financial Reporting Standards (IFRS) and complies with IAS 34, which covers interim reporting. Thus, the present Half-yearly Financial Report meets the requirements of the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG) for the half-yearly financial reporting of capital-market-oriented companies.

In addition to the amendments listed above, the accounting and valuation policies have been applied unchanged compared with the previous year. These are described in the notes to the consolidated financial statements in the 2022 Annual Report.

4 First-time adoption of new IFRS accounting rules
New standards and interpretations
The following new standards or interpretations issued by the IASB were subject to mandatory adoption in the EU for the first time in the 2023 financial year.
– IFRS 17 "Insurance Contracts" (issued on 18 May 2017 / adopted into European law on 19 November 2021) including amendments to IFRS 17 (issued on 25 June 2020 / adopted into European law on 19 November 2021) (amended version of IFRS 17).

Amendments to existing standards and interpretations
The amendments to the following standards and interpretations revised by the IASB are subject to mandatory application in the EU for the first time in the 2023 financial year:
– Amendments to IAS 1 "Presentation of Financial Statements" and to the IFRS Practice Statement 2 – Disclosure of Accounting Policies (issued on 12 February 2021 / adopted into European law on 2 March 2022).
– Amendments to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors" – Definition of Accounting Estimates (issued on 12 February 2021 / adopted into European law on 2 March 2022).
– Amendments to IAS 12 "Income Taxes" – Deferred Tax related to Assets and Liabilities arising from a Single Transaction (issued on 7 May 2021 / adopted into European law on 11 August 2022).
– Amendments to IFRS 17 "Insurance Contracts" – Initial Application of IFRS 17 and IFRS 9: Comparative Information (issued on 9 December 2021 / adopted into European law on 8 September 2022).

HVB Group implemented the amended accounting rules. Unless the effects of this implementation are explicitly explained below, they did not impact or have any material effects on our consolidated financial statements.

5 Published IFRS that are not yet the subject of mandatory adoption and that have not been the subject of adoption or early adoption

The mandatory first-time adoption of the following rules revised by the IASB is planned for the 2023 financial year:

– Amendments to IAS 12 “Income Taxes” – International Tax Reform: Pillar 2 Model Rules (issued on 23 May 2023). The exception and the requirement to disclose the use of the exception is subject to mandatory adoption for the first time immediately after publication of the amendments. The remaining disclosure requirements are subject to mandatory adoption for the first time for annual reporting periods beginning on or after 1 January 2023.

A prerequisite for the first-time mandatory adoption in the EU is, however, the currently still pending adoption of the amendments into European law, which is why these were not applied in the first half of the year.

HVB Group has decided against the voluntary early adoption of the standards and interpretations adopted or revised by the IASB, which are subject to mandatory adoption for the 2024 financial year or thereafter. HVB Group will adopt these standards and interpretations in the financial year in which the new rules in question become mandatorily applicable for EU-based enterprises for the first time.

The EU has adopted the following into European law:

There are no new or revised rules issued by the IASB subject to mandatory adoption for the first time from the 2024 financial year or thereafter which the EU adopted into European law.

The EU has not yet adopted the following into European law:

– Amendments to IAS 1 “Presentation of Financial Statements” – Classification of Liabilities as Current or Non-current (issued on 23 January 2020), Classification of Liabilities as Current or Non-current: Deferral of Effective Date (issued on 15 July 2020) and Non-current Liabilities with Covenants (issued on 31 October 2022). The rules are subject to mandatory adoption for the first time for financial years beginning on or after 1 January 2024.
– Amendments to IFRS 16 “Leases” – Lease Liability in a Sale and Leaseback (issued on 22 September 2022). The rules are subject to mandatory adoption for the first time for financial years beginning on or after 1 January 2024.
– Amendments to IAS 7 “Statement of Cash Flows” and IFRS 7 “Financial Instruments: Disclosures” – Supplier Finance Arrangements (issued on 25 May 2023). The rules are subject to mandatory adoption for the first time for financial years beginning on or after 1 January 2024.

HVB Group does not expect these new or amended rules to be adopted in the future to have any significant effects on the consolidated financial statements.

Accounting and Valuation (Continued)

6 Companies included in consolidation

The following company was added to the group of companies included in consolidation for the first time in the first half of 2023:

– Monnet 8-10 S.à r.l., Luxembourg

The following companies left the group of companies included in consolidation in the first half of 2023 due to imminent or completed liquidation or loss of control:

– Elektra Purchase No. 57 DAC, Dublin
– Elektra Purchase No. 911 DAC, Dublin
– Wealthcap Immobilien Deutschland 46 GmbH & Co. KG, Munich
– Wealthcap Objekt Dresden GmbH & Co. KG, Munich
– Wealthcap Objekt Trudering GmbH & Co. KG, Munich

The following company left the group of companies included in consolidation in the first half of 2023 for reasons of materiality:

– Altus Alpha Plc, Dublin

The deconsolidation of this company does not have any material impact. This company's share in the total assets of the Group stood at 0.001% as at 31 December 2022.

Segment Reporting

7 Changes in segment reporting

In the course of the first half of 2023, HVB Group made the following adjustment to the segmented income statement: The imputed sales margin for derivatives and FX spot transactions is reclassified from net trading income to net fees and commissions. This means that only income from the bid/ask spreads in trading activities is now recognised in net trading income while the mark-up on this price to compensate for the sales performance is allocated to net fees and commissions. This adjustment was also made for the disclosure of the previous-year figures to ensure comparability between periods. No other methodical adjustments were made and the division of HVB Group's operating segments remained unchanged. In segment reporting, the activities of HVB Group continue to be divided into the following operating segments:

– Retail
– Corporates
– Other

Disclosures in segment reporting are based on HVB's internal management. Therefore, income and expenses that are not solely based on external business activities but represent internal allocations and the like may be recognised here for internal management purposes. Where such internal income/expenses between the respective segments are recognised in identical items of the segmented income statement, these allocations are netted across all the segments. Any remaining effects from internal allocations are eliminated during consolidation so that only external income/expenses remain as a result in the total segmented income/expenses across all the segments, including consolidation.

Differences between the segmented income statement and the income statement are addressed in the reconciliation. The change in disclosure in the first half of 2023 relates to the circumstances described above: As the sales margin was only reclassified to net fees and commissions in the segmented income statement for internal management purposes, although net trading income is disclosed unchanged in the income statement, this has resulted in a reconciliation difference of €117 million (previous-year period; €123 million) for the first half of 2023.

Due to rounding, minor deviations can occur when calculating totals and percentages.

8 Method of segment reporting by operating segment

In segment reporting, the activities of HVB Group are divided into the following operating segments:
– Retail
– Corporates
– Other

Segment reporting is based on the internal organisational and management structure together with internal financial reporting which reflect the perspective of the UniCredit corporate group and thus do not take factors into account that are not relevant for the UniCredit corporate group. In accordance with IFRS 8 "Operating Segments", segment reporting thus follows the Management Approach, which requires segment information to be presented externally in the same way as it is reported on a regular basis to the Management Board, as the responsible management body, and is used for the allocation of resources (such as risk-weighted assets compliant with CRR II) to the operating segments and for assessing profitability. In this context, the profit or loss after tax serves as the relevant result. The segment data are determined in accordance with International Financial Reporting Standards (IFRS). Due to rounding, minor deviations can occur when calculating totals and percentages.

Segment Reporting (Continued)

In segment reporting, the operating segments operate as autonomous companies with their own equity resources and responsibility for profits and losses. The operating segments are divided according to their responsibility for serving customers. For a description of the customer groups assigned to the individual operating segments and the main components of the segments, please refer to the Note “Components of segment reporting by operating segment”.

The income statement items “Net fees and commissions”, “Net trading income” and “Net other expenses/income” shown in the operating segments are based almost exclusively on transactions involving external customers. Net interest is assigned to the operating segments in accordance with the market interest calculation method on the basis of the external interest income and interest expense. For this reason, a separate presentation broken down by external/internal revenues (operating income) has not been included.

The equity capital allocation used to calculate the return on investment for companies assigned to several operating segments is based on a uniform core capital allocation for each operating segment. Pursuant to CRR II, this involves allocating 13.00% (previous year: 13.00%) of core capital from risk-weighted assets to the operating segments. The average tied core capital calculated in this way is used to compute the return on investment, which is disclosed under net interest. The percentage used for the return on the equity capital allocated to the companies of HVB Group equals the base rate according to the book of own funds. In addition, a premium for credit risk is charged in the amount of the average spread curve for the medium- and long-term lending business of HVB Group. This rate is set for one year in advance as part of each budgeting process. Equity capital is not standardised for the other companies included in the consolidated financial statements.

Operating costs, which include payroll costs, other administrative expenses as well as amortisation, depreciation and impairment losses on intangible and tangible assets, are allocated to the appropriate operating segment according to causation. The Operations (COO), Digital & Information (CDI) and Corporate Center divisions are treated as external service providers, charging the remaining operating segments and business units for their services at a price which covers their costs. The method of calculating the costs of general banking services involves employing a weighted allocation key (costs, income, FTEs, base amount) for each operating segment to determine the assigned costs that cannot be allocated directly. The majority of the depreciation and impairment losses taken on property, plant and equipment are posted for the real estate companies of HVB Group included in the Other business area.

The profit of €1 million (previous year: €1 million) from shares in associates relates to Comtrade Group B.V., Rotterdam, a company accounted for using the equity method. The profit is disclosed under the item “Dividends and other income from equity investments” in the income statement. In the reporting period, a write-up of €2 million was made on the carrying amount of the companies accounted for using the equity method (previous year: value adjustment of €1 million), which is reported under net income from investments. The company is allocated to the Corporates operating segment. In January 2023, HVB decided to sell its shares in Comtrade Group B.v. accounted for using the equity method and started sales negotiations. The sale is expected to be completed in the second half of 2023. The carrying amount of the company classified in the reporting period as non-current assets or disposal groups held for sale comes to €16 million (previous year: €13 million).

9 Components of segment reporting by operating segment

Retail operating segment

The Retail operating segment is subdivided into the Retail and Private business areas. The Retail business area serves retail customers as well as small business customers requiring simple, standardised products and advice in all areas of demand. The Private business area bundles wealth management and private banking customers.

The retail customer business provides universal banking services across all sales channels (branch, remote and digital) for discerning customers. The high standard of quality of the extensive and needs-based advisory services is supported by HVB's financial concept. This comprehensive advisory approach is supplemented by the smart banking service model for customers requiring standardised products and services. In the wealth management & private banking relationship model, very high net worth clients are served by advisors and a network of highly qualified specialists based on a 360-degree advisory approach with the aim of achieving a sustainable increase in the prosperity of our customers and thus maintaining long-term, trusting customer relationships.

In the area of small business customers, we offer our customers a full range of services in corporate and private financial and asset issues with customers set to benefit even more than before from the modernisation and expansion of our digital offering already embarked upon. In addition, our offerings for special target groups, such as healthcare professionals, are being developed on an ongoing basis.

In line with the universal bank model, the range of products and services of the Retail operating segment enables us to provide comprehensive customer support. In the Retail business area, this extends from payment services, investment products, mortgage loans, consumer loans, savings-and-loan and insurance products and banking services for retail customers through to short- and long-term business loans for small business customers. In the Private business area, customised portfolio concepts, financing solutions as well as the brokerage of corporate investments are also offered to high net worth private customers with an entrepreneurial background.

Corporates operating segment

The Corporates operating segment bundles the corporate banking business. In this context, we position ourselves as a strategic partner with complete and customised solutions for corporate customers. This segment covers the SME and Large Corporates business areas and serves the entire spectrum of small and medium-sized through to large companies.

In the SME business area, we maintain regional presence in the market. In doing so, we use differentiated relationship models to target our corporate customers depending on the needs of each customer. This enables resources to be distributed in line with heterogeneous market conditions and thus the earnings potential to be effectively exploited in each region.

Regional relationship management covers tailored financing offers, for example through the use of subsidies as well as solutions for the management of financial risks, in addition to the traditional banking services of payments and lending. Furthermore, the services provided for special target groups, such as insolvency administrators or public sector workers, are being continuously refined and special advisory services are offered, like in the Mergers & Acquisitions business area.

Segment Reporting (Continued)

The Large Corporates business area covers large corporate customers requiring highly complex services who are managed in the Industry Coverage sub-area. The quality of service in this sub-area lies in exploiting our strengths – our wide range of products, in-depth sector know-how and creation of customised customer solutions – in our customer relationships whilst assuming a leading core bank role. Our range of products and services also includes traditional banking products and the entire product portfolio of Client Solutions. It is rounded off by our own ESG products as well as external insurance products.

Furthermore, the customer relationship management of Financial Institutions (FI), the proprietary Private Investor Products business (PIP) as well as activities in our international network are shown within the Large Corporates business area.

In the business with Financial Institutions, selected FI customers are provided with the entire UniCredit platform simply and efficiently and served in dedicated teams for banks, insurances, fund managers and public institutions. In PIP, we offer private investors risk management solutions and investment products through our own or third-party networks. As a rule, the complete range of the Bank’s products is available to corporate customers and to financial institutions at HVB’s foreign branches.

In detail, the range of products and services of Corporates includes the following products of Client Solutions, UniCredit’s global product factory:

- Specialised Lending (SL) provides access to financial services with a diversified range of products that extends from core banking relationship products through to highly specialised and structured financing.
- Advisory & Capital Markets (A&CM) offers our customers access to market-leading capital procurement and advisory services by combining M&A expertise with content creation at industry sector level.
- Transactions & Payments offers a broad array of innovative products in the areas of cash management, trade finance and working capital, thus meeting customer needs in connection with transactions in the areas of payment services, account information, optimisation of cash flows and operating resources, liquidity management and mainly short-term import and export financing services.
- Client Risk Management is a customer-oriented product area that supports business with UniCredit’s corporate and institutional customers as an integral part of the value chain. This product area extends over all asset classes: interest, currencies, commodities and equity derivatives. It offers institutional customers, corporate customers and private investors risk management solutions and investment products through the Group’s own or third-party networks.

Other business area
The Other business area (Central Functions) combines the remaining areas not directly relating to customers: Operations (COO), Digital & Information (CDI), Corporate Center and Treasury. Furthermore, payments recognised through profit or loss between the individual companies belonging to and consolidated within HVB Group, whose amounts are of minor importance, are also reported under this area.

Since 1 May 2023, Artur Gruca, Chief Digital & Operating Officer (CDOO), has been responsible for the Digital & Information and the Operations divisions as a whole. Digital & Information and Operations are set to be completely merged into Digital & Operations by the end of 2023.

Operations sees itself as a central internal service provider for the Bank's day-to-day operations. While the Bank's sales units conclude business transactions with customers, Operations attends to the continued handling of internal processes insofar as these are within its remit. The activities of Operations cover core banking and investment banking operations. In addition, Operations is responsible for the physical security of the Bank's customers, employees and assets, crisis management, strategic real estate management, the valuation of real estate collateral in the context of granting loans, logistics, cost management as well as outsourcing and third-party management. Payments, securities settlement, parts of back-office processing, purchasing and facility management are purchased from outside sources and managed through what is known as the Retained Organisation functions in Operations.

Digital & Information manages the entire digital transformation of HVB. The division supports the achievement of business and corporate objectives vis-à-vis customers and employees and fosters a digital culture within HVB Group through targeted initiatives with internal and external stakeholders.

Digital & Information bears overall responsibility for the digital agenda for retail and corporate customers, including steering the digital roadmap. This involves creating state-of-the-art customer experiences across all channels (e.g. online, app, remote, smart banking, branches) and digital products (e.g. accounts and payments, lending, deposits and investments as core banking products) and providing support in simplifying related products.

The division is also responsible for promoting and coordinating the implementation of HVB's data strategy, supporting relevant functions relating to data architectures and products, developing local data products and enhances analytical skills for both the retail and the corporate customer business. Digital & Information protects HVB's digital services against risks in the context of information security threats in line with the Group's digital security strategy and at the same time fosters the introduction of best practices for cyber security. Further focal points are the management and control of the most important IT governance processes. In addition, Digital & Information is the central unit for simplifying processes, for contract management with specific partners and service providers as well as for monitoring products and services provided to HVB Group by the Group's IT structures.

The Corporate Center includes the Finance, CRO (Chief Risk Office) and CEO (Chief Executive Office) business units as well as profits and losses generated by other banking activities, consolidated subsidiaries and non-consolidated holdings that are not assigned to any other business area. Furthermore, the Corporate Center incorporates the net income from securities portfolios for which the Management Board is responsible. It also contains components of profit or loss from decisions taken by management with regard to asset/liability management. In addition, the Corporate Center incorporates the Real Estate Restructuring customer portfolio.

Treasury, in particular Medium Long Term (MLT), is responsible for funding, interest rate management and cash pooling in the medium- and long-term interest book, while Short Term Funding & IR Management is responsible for liquidity, interest and KPI management over the short term and for collateral trading. The main components of income come from securities portfolios where income is generated through maturity transformation and spread components. Further earnings drivers are short-term interest rate and liquidity management where spreads contribute to profits. Collateral Trading generates both interest and commission income.

Segment Reporting (Continued)

Information on products and services at company level
The information required by IFRS 8.32 on income from external customers generated from the products and services of HVB Group is contained in the disclosures regarding the income statement in these notes to the consolidated financial statements.

10 Income statement, broken down by operating segment

Income statement, broken down by operating segment for the period from 1 January to 30 June 2023

INCOME/EXPENSES (€ millions)	RETAIL	CORPORATES	OTHER	HVB GROUP
Net interest	532	743	111	1,385
Dividends and other income from equity investments	—	1	—	1
Net fees and commissions	271	534	(2)	803
Net trading income	5	653	32	691
Net other expenses/income	10	2	6	19
OPERATING INCOME	**819**	**1,933**	**147**	**2,899**
Payroll costs	(181)	(249)	(234)	(665)
Other administrative expenses	(284)	(427)	216	(495)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(2)	(7)	(39)	(49)
Operating costs	**(467)**	**(684)**	**(58)**	**(1,209)**
OPERATING PROFIT/(LOSS)	**351**	**1,250**	**89**	**1,690**
Net write-downs of loans and provisions for guarantees and commitments	(41)	(17)	3	(55)
NET OPERATING PROFIT/(LOSS)	**311**	**1,232**	**92**	**1,635**
Provisions for risks and charges	(15)	(195)	(6)	(216)
Restructuring costs	(17)	(27)	(15)	(59)
Net income from investments	(11)	3	(17)	(24)
PROFIT/(LOSS) BEFORE TAX	**268**	**1,014**	**54**	**1,336**
Income tax for the period	(69)	(269)	19	(319)
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**198**	**745**	**73**	**1,017**
attributable to the shareholder of UniCredit Bank AG	198	745	73	1,017
attributable to minorities	—	—	—	—

Reconciliation of the segmented income statement to the income statement from 1 January to 30 June 2023

INCOME/EXPENSES (€ millions)	INCOME STATEMENT, BROKEN DOWN BY OPERATING SEGMENT	RECLASSI-FICATION	ACCOUNTING AND VALUATION DIFFERENCES	CONSOLIDATED INCOME STATEMENT
Net interest	1,385	20	—	1,405
Reallocation of net interest from specific held-for-trading portfolios		44	—	
Compounding of provisions and of provisions for contingent liabilities		(21)	—	
Effect of derecognition of TLTRO III		—	—	
Interest expense for pension provisions		(3)	—	
Dividends and other income from equity investments	1	23	—	24
Dividends from assets mandatorily at FVTPL		23	—	
Net fees and commissions	803	(156)	—	647
Expense for purchased securities services for held-for-trading portfolios		19	—	
Share of commission from the placement of securities and derivatives		(58)	—	
Imputed sales margin for derivatives and FX spot transactions		(117)	—	
Net trading income	691	58	—	749
Financial assets mandatorily at FVTPL		11	—	
Financial liabilities designated at FVTPL		9	—	
Net gains/(losses) on the sale of securities (held-for-sale business model)		—	—	
Hedge accounting effects		(52)	—	
Fair value measurement of equity instruments		(17)	—	
Buy-backs of securities issued – recognised at cost		1	—	
Net gains/(losses) on the sale of performing securities (hold-to-maturity business model)		(2)	—	
Dividends from assets mandatorily at FVTPL		(23)	—	
Reallocation of net interest from specific held-for-trading portfolios		(44)	—	
Closing costs for derivatives with Russian banks		—	—	
Share of commission from the placement of securities and derivatives		58	—	
Net gains/(losses) on the sale of non-performing securities (hold-to-maturity business model)		—	—	
Imputed sales margin for derivatives and FX spot transactions		117	—	
Net gains/(losses) on financial assets and liabilities at fair value	n/a	49	—	49
Financial assets mandatorily at FVTPL		(11)	—	
Financial liabilities designated at FVTPL		(9)	—	
Net gains/(losses) on the sale of securities (held-for-sale business model)		—	—	
Hedge accounting effects		52	—	
Fair value measurement of equity instruments		17	—	
Net gains/(losses) on non-consolidated subsidiaries mandatorily at FVTPL		—	—	
Net gains/(losses) on derecognition of financial instruments measured at cost	n/a	(2)	—	(2)
Net gains/(losses) on the sale of performing loans and receivables, and securities (hold-to-maturity business model)		(1)	—	
Effect of derecognition of TLTRO III		—	—	
Buy-backs of securities issued – recognised at cost		(1)	—	
Net other expenses/income	19	(175)	8	(148)
Net gains/(losses) on the sale of performing loans and receivables (hold-to-maturity business model)		3	—	
Net gains/(losses) on the valuation/disposal of investment properties and operating leases		7	—	
Net gains/(losses) on the valuation of inventories		(6)	—	
European bank levy		(179)	—	
Other effects		—	—	
Elimination of UCI intragroup transaction CEE			—	
Adjustment of managerial scope of consolidation		—	8	
Retrospective intragroup transfer from UniCredit Services S.C.p.A.		—	—	
OPERATING INCOME	**2,899**	**(183)**	**8**	**2,724**
Payroll costs	(665)	4	(4)	(665)
Adjustment of managerial scope of consolidation		—	(4)	
Retrospective intragroup transfer from UniCredit Services S.C.p.A.		—	—	

Segment Reporting (Continued)

INCOME/EXPENSES (€ millions)	INCOME STATEMENT, BROKEN DOWN BY OPERATING SEGMENT	RECLASSI-FICATION	ACCOUNTING AND VALUATION DIFFERENCES	CONSOLIDATED INCOME STATEMENT
Interest expense for pension provisions		3	—	
Compounding of provisions		1	—	
Other administrative expenses	(495)	(34)	(3)	(532)
Adjustment of managerial scope of consolidation		—	(3)	
Retrospective intragroup transfer from UniCredit Services S.C.p.A.		—	—	
Deposit guarantee scheme		(19)	—	
Other effects		—	—	
Expense for purchased securities services for held-for-trading portfolios		(19)	—	
Depreciation on leasehold improvements in buildings		3	—	
Compounding of provisions		1	—	
Amortisation, depreciation and impairment losses on intangible and tangible assets	(49)	(30)	—	(79)
Depreciation on leasehold improvements in buildings		(3)	—	
Retrospective intragroup transfer from UniCredit Services S.C.p.A.		—	—	
Unscheduled write-ups and write-downs on land and buildings		(27)	—	
Operating costs	**(1,209)**	**(60)**	**(7)**	**(1,276)**
OPERATING PROFIT/(LOSS)	**1,690**	**(243)**	**1**	**1,448**
Net write-downs of loans and provisions for guarantees and commitments	(55)	2	3	(50)
Impairments/writebacks of securities at cost and at FVTOCI		2	—	
Net gains/(losses) on the sale of non-performing securities (hold-to-maturity business model)		—	—	
Compounding of provisions for contingent liabilities		—	—	
Closing costs for derivatives with Russian banks		—	—	
Valuation allowances relating to group-affiliated companies in Russia		—	3	
NET OPERATING PROFIT/(LOSS)	**1,635**	**(241)**	**4**	**1,398**
Provisions for risks and charges	(216)	203	—	(13)
European bank levy and deposit guarantee scheme		198	—	
Compounding of provisions		5	—	
Irrevocable payment commitments provided for bank levy and deposit guarantee scheme recognised as an expense		—	—	
Restructuring costs	(59)	14	—	(45)
Compounding of provisions		14	—	
Net income from investments	(24)	24	—	—
Impairments/writebacks of securities at cost and at FVTOCI		(2)	—	
Net gains/(losses on the valuation/disposal of investment properties and operating leases		(7)	—	
Net gains/(losses) on the valuation of inventories		6	—	
Net gains/losses on remeasurement of consolidated companies		—	—	
Net gains/(losses) on non-consolidated subsidiaries mandatorily at FVTPL		—	—	
Unscheduled write-ups and write-downs on land and buildings		27	—	
Net gains/losses on remeasurement of consolidated companies	n/a	—	—	—
PROFIT/(LOSS) BEFORE TAX	**1,336**	**—**	**4**	**1,340**
Income tax for the period	(319)	—	—	(319)
Tax on valuation allowances relating to group-affiliated companies in Russia		—	—	
Elimination of UCI-intragroup transaction CEE		—	—	
Other effects		—	—	
Differences arising from the adjustment of the estimated deferred taxes between UniCredit and HVB		—	—	
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**1,017**	**—**	**4**	**1,021**
attributable to the shareholder of UniCredit Bank AG	1,017	—	4	1,021
attributable to minorities		—	—	

Income statement, broken down by operating segment for the period from 1 January to 30 June 2022

INCOME/EXPENSES (€ millions)	RETAIL	CORPORATES	OTHER	HVB GROUP
Net interest	333	858	83	1,274
Dividends and other income from equity investments	—	1	—	2
Net fees and commissions	278	501	(12)	766
Net trading income	14	324	102	441
Net other expenses/income	8	24	36	68
OPERATING INCOME	**634**	**1,707**	**209**	**2,550**
Payroll costs	(185)	(273)	(245)	(703)
Other administrative expenses	(303)	(456)	238	(520)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(2)	(8)	(43)	(53)
Operating costs	**(490)**	**(736)**	**(50)**	**(1,276)**
OPERATING PROFIT/(LOSS)	**144**	**971**	**159**	**1,274**
Net write-downs of loans and provisions for guarantees and commitments	(23)	55	(61)	(29)
NET OPERATING PROFIT/(LOSS)	**121**	**1,026**	**98**	**1,245**
Provisions for risks and charges	(8)	(240)	(10)	(258)
Restructuring costs	—	(6)	(3)	(9)
Net income from investments	(3)	1	10	8
PROFIT/(LOSS) BEFORE TAX	**110**	**780**	**95**	**986**
Income tax for the period	(24)	(210)	(16)	(250)
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**86**	**570**	**79**	**736**
attributable to the shareholder of UniCredit Bank AG	86	570	79	736
attributable to minorities	—	—	—	—

Segment Reporting (Continued)

Development of the Retail operating segment

INCOME/EXPENSES (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Net interest	532	333
Dividends and other income from equity investments	—	—
Net fees and commissions	271	278
Net trading income	5	14
Net other expenses/income	10	8
OPERATING INCOME	**819**	**634**
Payroll costs	(181)	(185)
Other administrative expenses	(284)	(303)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(2)	(2)
Operating costs	**(467)**	**(490)**
OPERATING PROFIT/(LOSS)	**351**	**144**
Net write-downs of loans and provisions for guarantees and commitments	(41)	(23)
NET OPERATING PROFIT/(LOSS)	**311**	**121**
Provisions for risks and charges	(15)	(8)
Restructuring costs	(17)	—
Net income from investments	(11)	(3)
PROFIT/(LOSS) BEFORE TAX	**268**	**110**
Income tax for the period	(69)	(24)
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**198**	**86**
attributable to the shareholder of UniCredit Bank AG	198	86
attributable to minorities	—	—
Cost-income ratio in % (Ratio of operating costs to operating income)	57.1	77.3

In the first half of 2023, the Retail operating segment generated an operating profit (before net write-downs of loans and provisions for guarantees and commitments) of €351 million, which is thus a sharp €207 million (143.8%) higher than the previous-year period.

At €819 million, operating income was a substantial €185 million (29.2%) up on the figure of €634 million recognised in the previous-year period. Net interest of €532 million contained in operating income was a sharp €199 million (59.8%) higher than the amount of €333 million recognised in the previous-year period due to the significant rise in interest rates since the second half of 2022. Despite a stable level in the volume of new business, net interest generated in lending activities declined from €177 million in the previous-year period to €161 million in the reporting period as a result of various one-off effects in real estate financing. By contrast, there was a sharp increase of €114 million to €336 million in net interest from deposit-taking operations on the back of higher market interest rates.

Compared with the previous-year period, net fees and commissions fell by a slight €7 million to €271 million. Income generated with transactional banking services was unable to make up for the slight decline in the securities business due to the challenging market environment.

There was a significant reduction of €9 million in net trading income, which was down from €14 million in the previous-year period to €5 million in the reporting period.

Net other expenses/income reports income of €10 million for the reporting period and is thus significantly higher than the level posted in the previous-year period.

Compared with the previous-year period, operating costs fell a marked €23 million (4.7%) to €467 million in the reporting period. This is due to payroll costs that were down by a slight €4 million (2.2%) to €181 million compared with the previous-year period. Other administrative expenses were also down by a marked €19 million (6.3%) to €284 million on the back of lower expenses for postage and charged back-office activities in particular compared with the previous-year period.

The cost-income ratio fell significantly to 57.1% in the current reporting period compared with 77.3% in the previous-year period.

The item "Net write-downs of loans and provisions for guarantees and commitments" shows a net addition of €41 million compared with a net addition of €23 million in the previous-year period. In the reporting period, net additions of general loan loss allowances on the loan portfolio due to updated macroeconomic expectations and adjustments to LGD parameters left their mark here.

At €311 million, net operating profit was a sharp €190 million higher than the profit of €121 million generated in the previous-year period.

There was a net expense of €15 million from provisions for risks and charges in the reporting period compared with the €8 million in the previous-year period.

In the reporting period, restructuring costs of €17 million arose. These relate to the pro rata costs for the areas of UniCredit S.p.A. to be restructured that provide their services almost exclusively for HVB Group.

Net income from investments reports a negative result of €11 million in the reporting period and was thus €8 million higher than the negative result of €3 million posted in the same period of the previous year.

Overall, the Retail operating segment generated profit before tax of €268 million in the reporting period, which is considerably higher than the profit of €110 million recognised in the previous-year period as a result of the sharp increase in operating income and the marked decline in operating costs.

The tax expense incurred for income tax for the period comes to €69 million, reflecting a sharp increase on the tax expense of €24 million in the previous-year period. This is attributable to the significant improvement in profit before tax.

The Retail operating segment reports a profit after tax of €198 million for the reporting period, which is considerably higher than the comparative figure of €86 million in the previous-year period.

Segment Reporting (Continued)

Development of the Corporates operating segment

INCOME/EXPENSES (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Net interest	743	858
Dividends and other income from equity investments	1	1
Net fees and commissions	534	501
Net trading income	653	324
Net other expenses/income	2	24
OPERATING INCOME	**1,933**	**1,707**
Payroll costs	(249)	(273)
Other administrative expenses	(427)	(456)
Amortisation, depreciation and impairment losses on intangible and tangible assets	(7)	(8)
Operating costs	**(684)**	**(736)**
OPERATING PROFIT/(LOSS)	**1,250**	**971**
Net write-downs of loans and provisions for guarantees and commitments	(17)	55
NET OPERATING PROFIT/(LOSS)	**1,232**	**1,026**
Provisions for risks and charges	(195)	(240)
Restructuring costs	(27)	(6)
Net income from investments	3	1
PROFIT/(LOSS) BEFORE TAX	**1,014**	**780**
Income tax for the period	(269)	(210)
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**745**	**570**
attributable to the shareholder of UniCredit Bank AG	745	570
attributable to minorities	—	—
Cost-income ratio in % (Ratio of operating costs to operating income)	35.3	43.1

The Corporates operating segment generated operating income of €1,933 million in the reporting period, which was thus up a substantial 13.2% on the income of €1,707 million in the previous-year period.

Within this total, there was a significant decline of €115 million to €743 million in net interest compared with the previous-year period. This decline was driven primarily by the negative impact of higher market interest rates for funding trading activities (positive counter-effect is reflected in net trading income) coupled with lower income from the resolution or recovery of non-performing loans. This was offset by the positive effect caused by the trend in market interest rates on the profit contribution from deposit-taking operations, where margins were widened.

The item “Dividends and other income from equity investments” totalled €1 million and thus matches the level of the previous-year period.

Net fees and commissions increased a marked €33 million (6.6%) to €534 million in the reporting period compared with the figure of €501 million in the previous-year period. This development is based on significantly higher income from the lending and capital market business.

There was a sharp rise of €329 million to €653 million in net trading income compared with the previous-year period. This was mainly due to income from exceptionally strong business in the commodities and rates derivatives trading areas. In addition to the increase in volumes, the significant rise seen in market interest rates (the counter-effect is reflected in net interest) contributed to the higher net trading income. In the previous-year period, a loss in fair value had adversely affected net trading income.

Net other expenses/income shows income of €2 million, which is thus a sharp €22 million (91.7%) lower than the figure of €24 million reported in the previous-year period. Income from the premature termination of lease agreements and return flows from debtor warrants of previously consolidated companies had an impact on this item in the previous-year period.

At €684 million in the reporting period, operating costs are a notable €52 million (7.1%) lower than the €736 million recorded for the same period in the previous year. There was a distinct decline of €24 million (8.8%) to €249 million in payroll costs, which were down as a result of the reduction in full-time employees and lower payments for pension obligations. Other administrative expenses of €427 million also fell a marked 6.4% compared with the previous-year period. At €7 million, depreciation and amortisation was down significantly by 12.5% compared with the level reported in the previous year.

Due to the considerable increase in income, the cost-income ratio declined to 35.3% in the reporting period after 43.1% in the previous-year period.

With a net addition of €17 million, the item "Net write-downs of loans and provisions for guarantees and commitments" deteriorated sharply by €72 million compared with the net reversal of €55 million in the previous-year period. High net reversals of net write-downs of loans and provisions for guarantees and commitments had a positive effect in the previous-year period.

Net operating profit recognised in the current reporting period totals €1,232 million, which is €206 million higher than the profit of €1,026 million generated in the previous-year period.

There were net provisions for risks and charges of €195 million in the reporting period after €240 million in the previous-year period. This decline is largely due to lower payments to the SRF (European bank levy) in 2023.

Restructuring costs were up by €21 million, increasing from €6 million in the previous-year period to €27 million in the reporting period. These mainly relate to the pro rata costs for the areas of UniCredit S.p.A. to be restructured that provide their services almost exclusively for HVB Group.

Net income from investments reports income of €3 million in the reporting period after income of €1 million in the previous-year period.

The Corporates operating segment generated profit before tax of €1,014 million in the reporting period, which is thus significantly higher than the previous year's profit of €780 million.

At €269 million, income tax for the period shows a sharp increase in tax expense in the reporting period compared with a tax expense of €210 million in the previous-year period. This increase is primarily attributable to the sharp rise in profit before tax.

The Corporates operating segment reports profit after tax of €745 million for the reporting period compared with the profit of €570 million in the previous-year period.

Segment Reporting (Continued)

Development of the Other operating segment

INCOME/EXPENSES (€ millions)	1/1-30/6/2023	1/1-30/6/2022
Net interest	111	83
Dividends and other income from equity investments	—	—
Net fees and commissions	(2)	(12)
Net trading income	32	102
Net other expenses/income	6	36
OPERATING INCOME	**147**	**209**
Payroll costs	(234)	(245)
Other administrative expenses	216	238
Amortisation, depreciation and impairment losses on intangible and tangible assets	(39)	(43)
Operating costs	**(58)**	**(50)**
OPERATING PROFIT/(LOSS)	**89**	**159**
Net write-downs of loans and provisions for guarantees and commitments	3	(61)
NET OPERATING PROFIT/(LOSS)	**92**	**98**
Provisions for risks and charges	(6)	(10)
Restructuring costs	(15)	(3)
Net income from investments	(17)	10
PROFIT/(LOSS) BEFORE TAX	**54**	**95**
Income tax for the period	19	(16)
PROFIT/(LOSS) AFTER TAX (CONSOLIDATED PROFIT/(LOSS))	**73**	**79**
attributable to the shareholder of UniCredit Bank AG	73	79
attributable to minorities	—	—
Cost-income ratio in % (Ratio of operating costs to operating income)	39.5	23.9

The Other operating segment generated operating income of €147 million in the reporting period, which is thus a sharp €62 million lower than the figure of €209 million reported in the previous-year period.

At €111 million, net interest increased a significant €28 million compared with the previous-year period. This rise is largely attributable to the positive development in the Bank’s asset/liability management totalling €47 million, which was partly offset by a decline of €20 million in one-off effects from the interest on provisions for taxes.

At €32 million, net trading income fell a substantial €70 million. The decline is driven by €21 million from the IFRS fair value measurement of private equity funds, a decrease of €29 million from mark-to-market valuations and the utilisation of OCI reserves in the liquidity portfolio. In addition, income of €19 million was generated on the premature termination of interest rate swaps in Eastern European currencies in the first half of 2022.

Net other expenses/income of €6 million fell sharply by €30 million compared with the previous-year period. The main driver in this context is a miscellaneous factor that resulted in an expense of €23 million in the reporting period.

The sharp increase of €8 million to €58 million in operating costs is primarily attributable to one-off effects in connection with the closure of the foreign branch in Tokyo.

The Other operating segment generated operating profit of €89 million in the reporting period, which was thus down by a very substantial €70 million compared with the operating profit of €159 million recognised in the previous-year period.

On account of the significant decrease in operating income and the sharp increase in operating costs, there was a substantial rise in the cost-income ratio to 39.5% in the reporting period after 23.9% in the previous-year period.

The “Net write-downs of loans and provisions for guarantees and commitments” item reports a net reversal of €3 million compared with a net addition of €61 million in the previous-year period. The net addition in the previous-year period contains credit losses of €75 million in connection with the closing out of derivatives with Russian banks.

Net operating profit thus comes to €92 million, which is a marked €6 million decline on the profit of €98 million reported in the previous-year period.

Provisions for risks and charges show an expense of €6 million in the reporting period and are thus considerably lower than the figure of €10 million recognised in the previous-year period.

Restructuring costs total €15 million in the reporting period compared with restructuring costs of €3 million in the previous-year period. These mainly relate to the pro rata costs for the areas of UniCredit S.p.A. to be restructured that provide their services almost exclusively for HVB Group.

With an expense of €17 million, net income from investments posted a substantial decline of €27 million in net income compared with the previous-year period. This development is largely due to the results of the fair value measurement of properties that resulted in a net loss of €16 million in the reporting period, after a net gain of €13 million in the previous-year period.

Overall, the Other operating segment reported a sharply lower profit before tax of €54 million in the reporting period compared with the profit before tax of €95 million in the previous-year period.

Income of €19 million was generated from income tax for the period compared to an expense of €16 million in the previous-year period. This development is primarily due to higher tax refunds in the reporting period compared with the previous year.

The Other operating segment shows consolidated profit of €73 million for the reporting period, which represents a significant decrease of €6 million compared with the figure of €79 million reported in the previous-year period.

Segment Reporting (Continued)

11 Balance sheet figures, broken down by operating segment

€ millions	RETAIL	CORPORATES	OTHER	HVB GROUP
Loans and receivables with customers (at cost)[1]				
30/6/2023	36,732	89,454	1,913	128,099
31/12/2022	36,669	92,001	2,445	131,115
Deposits from customers				
30/6/2023	64,110	64,223	15,723	144,056
31/12/2022	64,302	71,365	11,141	146,809
Risk-weighted assets compliant with Basel III (including equivalents for market risk and operational risk)				
30/6/2023	11,987	59,417	2,951	74,355
31/12/2022	11,947	64,428	4,755	81,130

1 “Loans and receivables with customers (at cost)” do not contain any securities holdings for internal management purposes.

Notes to the Income Statement

12 Net interest

€ millions	1/1-30/6/2023	1/1-30/6/2022
Interest income	4,025	1,600
from financial assets at cost	3,250	1,112
from financial assets at FVTOCI	53	26
from financial assets at FVTPL and hedging derivatives	222	268
from financial assets held for trading	476	150
other interest income	24	44
Negative interest on financial assets	(3)	(159)
Interest expense	(2,620)	(480)
from financial liabilities at cost	(1,695)	(336)
of which from lease liabilities	(4)	(2)
from financial liabilities at FVTPL and hedging derivatives	(431)	(33)
from financial liabilities held for trading	(472)	(139)
other interest expense	(22)	28
Negative interest on financial liabilities	3	330
Net interest	**1,405**	**1,291**

The increase in net interest is largely due to a widening of margins in the deposit-taking business following the higher interest rate environment while the rise in funding costs for the held-for-trading portfolio weighed on net interest. This is offset by an increase in net trading income on the back of higher market interest rates. In the reporting period, this item also includes interest income of €20 million from the reversal of a provision for interest on tax payments. Net interest in the previous-year period also includes interest income of €42 million in connection with the reduction in statutory interest on tax refunds and payments of tax arrears from 6% to 1.8%. This was recognised in interest expense under the other interest expense item as the reversal of a provision set aside.

In the previous-year period, the negative interest on financial liabilities contained €115 million relating to the ECB's TLTRO III programme at the time. When calculating the effective interest for these liabilities, expected premiums were included that depend on the increase in net lending of eligible loans (loans to the non-financial sector in the eurozone without private construction finance). In the fourth quarter of 2022, the ECB adjusted the conditions resulting in the derecognition of these liabilities under the TLTRO III programme. Liabilities under the successor TLTRO III programme are subject to interest at the average key ECB interest rate.

Effects from the compounding of provisions totalling €24.6 million are contained under other interest expense in the reporting period. The discounting of provisions was generally waived in the previous-year period due to the negative interest environment prevailing at the time.

Notes to the Income Statement (Continued)

Net interest attributable to related parties

The item "Net interest" includes the following amounts attributable to related parties:

€ millions	1/1-30/6/2023	1/1-30/6/2022
Non-consolidated affiliates	(68)	(30)
of which:		
UniCredit S.p.A.	(79)	(34)
sister companies	11	3
subsidiaries	—	1
Joint ventures	—	—
Associates	—	—
Other investees	3	3
Total	**(65)**	**(27)**

13 Dividends and other income from equity investments

€ millions	1/1-30/6/2023	1/1-30/6/2022
Dividends and other similar income	23	22
Companies accounted for using the equity method	1	1
Total	**24**	**23**

14 Net fees and commissions

€ millions	1/1-30/6/2023	1/1-30/6/2022
Fee and commission income	847	778
Securities services for customers	414	367
Payment transactions	160	157
Lending business	112	87
Guarantees	75	74
Distribution of third-party products	55	56
Other commission income	31	37
Fee and commission expense	(200)	(171)
Securities services for customers	(124)	(100)
Payment transactions	(39)	(36)
Lending business	(5)	(3)
Guarantees	(5)	(2)
Distribution of third-party products	—	—
Other commission expense	(27)	(30)
Net fees and commissions	**647**	**607**

Net fees and commissions from related parties

The item "Net fees and commissions" includes the following amounts attributable to related parties:

€ millions	1/1-30/6/2023	1/1-30/6/2022
Non-consolidated affiliates	(35)	(13)
of which:		
UniCredit S.p.A.	(26)	2
sister companies	(9)	(15)
subsidiaries	—	—
Joint ventures	—	—
Associates	—	—
Other investees	—	—
Total	**(35)**	**(13)**

15 Net trading income

Net trading income totals €749 million in the reporting period (previous-year period: €340 million).

In particular, higher income in the areas of fixed income as well as currencies & commodities had an effect here. A key factor in this connection was an increase in customer demand for hedging transactions. In addition, income from the held-for-trading portfolio rose on the back of the increase in the level of market interest rates.

Net trading income includes valuation discounts in the context of the fair value measurement of derivatives, particularly credit value adjustments and funding value adjustments. The reduction in valuation discounts in connection with the fair value measurement had a positive impact and resulted in income of €43 million (previous-year period: €53 million).

In the previous-year period, losses totalling €94 million in connection with the closing out of derivatives transactions with Russian banks as a result of the sanctions against Russia had an impact on this item.

Notes to the Income Statement (Continued)

16 Net gains/losses on financial assets and liabilities at fair value

€ millions	1/1-30/6/2023	1/1-30/6/2022
Financial assets mandatorily at FVTPL	(11)	(43)
Financial liabilities designated at FVTPL	(9)	(75)
Derecognition from other comprehensive income	—	16
Hedge accounting effects	52	244
Fair value equity	17	(1)
Total	**49**	**141**

€ millions	1/1-30/6/2023	1/1-30/6/2022
Fair value hedges	52	244
Changes in fair value of hedged items	(359)	3,547
Portfolio fair value hedges	(426)	4,085
Micro fair value hedges	67	(538)
Changes in fair value of hedging instruments	411	(3,303)
Portfolio fair value hedges	480	(3,821)
Micro fair value hedges	(69)	518
Cash flow hedges	—	—
Net gains/(losses) on cash flow hedges (only ineffective part)	—	—
Total	**52**	**244**

The hedge accounting effects of the main hedge accounting approaches of HVB Group are shown below:

Hedge effectiveness is measured prospectively based on sensitivity as well as retrospectively using dollar offset or regression analysis. Sources of ineffectiveness are management within a range of 80%/125%, lack of a 1:1 ratio between the hedged item and the hedging transaction as well as discounting differences between the hedged item and hedging transactions.

Micro fair value hedge for holdings at FVTOCI

€ millions	REMAINING TERM			CUMULATIVE AMOUNT OF THE HEDGE-RELATED ADJUSTMENT TO THE FAIR VALUE INCLUDED IN THE CARRYING AMOUNT OF THE HEDGED ITEM RECOGNISED IN THE BALANCE SHEET		CARRYING AMOUNTS		CHANGE IN FAIR VALUE USED TO RECOGNISE AN INEFFECTIVE-NESS IN THE HEDGE FOR THE PERIOD
	LESS THAN 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	ASSETS	LIABILITIES	ASSETS	LIABILITIES	
Balance as at 30/6/2023								
Nominal								
Hedged items								
EUR	2,606	3,233	1,456	—	—	—	—	—
USD	145	3,190	215	—	—	—	—	—
Hedging transactions								
EUR	2,606	3,405	1,299	—	—	—	—	—
USD	1,092	3,204	177	—	—	—	—	—
Interest rate sensitivities in bps								
Hedged items								
EUR	—	(1)	(1)	—	—	—	—	—
USD	—	(1)	—	—	—	—	—	—
Hedging transactions								
EUR	—	1	1	—	—	—	—	—
USD	—	1	—	—	—	—	—	—
Carrying amounts								
Hedged items	—	—	—	(591)	—	10,245	—	—
Hedging transactions	—	—	—	—	—	399	2	—
Hedge result								2
Hedged items	—	—	—	—	—	—	—	45
Hedging transactions	—	—	—	—	—	—	—	(43)
Balance as at 31/12/2022								
Nominal								
Hedged items								
EUR	2,487	3,414	1,190	—	—	—	—	—
USD	32	3,101	83	—	—	—	—	—
Hedging transactions								
EUR	2,487	3,404	1,190	—	—	—	—	—
USD	32	3,132	82	—	—	—	—	—
Interest rate sensitivities in bps								
Hedged items								
EUR	—	(1)	(1)	—	—	—	—	—
USD	—	(1)	—	—	—	—	—	—
Hedging transactions								
EUR	—	1	1	—	—	—	—	—
USD	—	1	—	—	—	—	—	—
Carrying amounts								
Hedged items	—	—	—	(661)	—	9,733	—	—
Hedging transactions	—	—	—	—	—	401	2	—
Hedge result								(23)
Hedged items	—	—	—	—	—	—	—	(786)
Hedging transactions	—	—	—	—	—	—	—	763

Notes to the Income Statement (Continued)

The table shown above compares the nominal amounts of the hedged items and the hedging transactions. In addition, the interest rate sensitivities are stated in basis points (bps). This means that if the interest rate changes by one basis point (0.01%), the fair value will change by the amount stated in euro millions. The statement of interest rate sensitivities in bps is a suitable instrument for describing the effectiveness of a hedge.

Securities holdings, which are allocated to the balance sheet item "Financial assets at FVTOCI", are hedged against interest rate risks separately for each transaction through a hedging transaction. This includes up-front payments on conclusion of the interest rate swaps to compensate for premiums and discounts in the purchase price of the securities, which means that their fair value is not equal to zero at the inception of the hedge. Furthermore, the fair value of the derivatives also contains accrued interest (dirty fair value) whereas accrued interest for the hedged items is allocated to these directly and is thus not included in the cumulative amount of the hedge-related adjustments to the carrying amount of the hedged items. Consequently, the net fair value of the hedging derivatives does not equal the cumulative amount of hedge-related adjustments to the carrying amount of the hedged items.

Micro fair value hedge for holdings at cost

The micro fair value hedges for holdings at cost (loans and receivables with customers) are shown below:

	REMAINING TERM			CUMULATIVE AMOUNT OF THE HEDGE-RELATED ADJUSTMENT TO THE FAIR VALUE INCLUDED IN THE CARRYING AMOUNT OF THE HEDGED ITEM RECOGNISED IN THE BALANCE SHEET		CARRYING AMOUNTS		CHANGE IN FAIR VALUE USED TO RECOGNISE AN INEFFECTIVENESS IN THE HEDGE FOR THE PERIOD
€ millions	LESS THAN 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	ASSETS	LIABILITIES	ASSETS	LIABILITIES	
Balance as at 30/6/2023								
Nominal								
Hedged items								
JPY	—	—	636	—	—	—	—	—
USD	—	311	—	—	—	—	—	—
EUR	—	—	50	—	—	—	—	—
Hedging transactions								
JPY	—	83	1,350	—	—	—	—	—
USD	277	312	—	—	—	—	—	—
EUR	—	—	50	—	—	—	—	—
Interest rate sensitivities in bps								
Hedged items								
JPY	—	—	—	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
EUR	—	—	—	—	—	—	—	—
Hedging transactions								
JPY	—	—	—	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
EUR	—	—	—	—	—	—	—	—
Carrying amounts								
Hedged items	—	—	—	(50)	—	1,024	—	—
Hedging transactions	—	—	—	—	—	24	—	—
Hedge result								(4)
Hedged items	—	—	—	—	—	—	—	22
Hedging transactions	—	—	—	—	—	—	—	(26)
Balance as at 31/12/2022								
Nominal								
Hedged items								
JPY	2,559	—	711	—	—	—	—	—
USD	—	317	50	—	—	—	—	—
Hedging transactions								
JPY	2,641	200	1,562	—	—	—	—	—
USD	—	318	50	—	—	—	—	—
Interest rate sensitivities in bps								
Hedged items								
JPY	—	—	—	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
Hedging transactions								
JPY	—	—	—	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
Carrying amounts								
Hedged items	—	—	—	(72)	—	3,660	—	—
Hedging transactions	—	—	—	—	—	—	46	—
Hedge result								2
Hedged items	—	—	—	—	—	—	—	(69)
Hedging transactions	—	—	—	—	—	—	—	71

Notes to the Income Statement (Continued)

The nominal amounts of the hedged items and the hedging transactions are compared in the table above. In addition, the interest rate sensitivities are stated in basis points (bps). This means that if the interest rate changes by one basis point (0.01%), the fair value will change by the amount stated in euro millions. The statement of interest rate sensitivities in bps is a suitable instrument for describing the effectiveness of a hedge. With regard to hedging derivatives, it should be noted that these were concluded with London Clearing House and are therefore subject to the existing offsetting rules (see Note "Disclosures regarding the offsetting of financial assets and liabilities").

Portfolio fair value hedge

	REMAINING TERM			CUMULATIVE AMOUNT OF THE HEDGE-RELATED ADJUSTMENT TO THE FAIR VALUE INCLUDED IN THE CARRYING AMOUNT OF THE HEDGED ITEM RECOGNISED IN THE BALANCE SHEET		CARRYING AMOUNTS		CHANGE IN FAIR VALUE USED TO RECOGNISE AN INEFFECTIVE-NESS IN THE HEDGE FOR THE PERIOD
€ millions	LESS THAN 1 YEAR	1 YEAR TO 5 YEARS	MORE THAN 5 YEARS	ASSETS	LIABILITIES	ASSETS	LIABILITIES	
Balance as at 30/6/2023								
Interest rate sensitivities in bps								
Hedged items								
EUR	1	5	9	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
CHF	—	—	—	—	—	—	—	—
Hedging transactions								
EUR	(1)	(5)	(10)	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
CHF	—	—	—	—	—	—	—	—
Carrying amounts								
Hedged items	—	—	—	(4)	(5,067)	—	—	—
Hedging derivatives	—	—	—	—	—	68	112	—
Hedge result								54
Hedged items	—	—	—	—	—	—	—	(426)
Hedging transactions	—	—	—	—	—	—	—	480
Balance as at 31/12/2022								
Interest rate sensitivities in bps								
Hedged items								
EUR	—	4	17	—	—	—	—	—
USD	—	1	—	—	—	—	—	—
CHF	—	—	—	—	—	—	—	—
Hedging transactions								
EUR	—	(4)	(17)	—	—	—	—	—
USD	—	—	—	—	—	—	—	—
CHF	—	—	—	—	—	—	—	—
Carrying amounts								
Hedged items	—	—	—	6	(5,474)	—	—	—
Hedging derivatives	—	—	—	—	—	235	152	—
Hedge result								425
Hedged items	—	—	—	—	—	—	—	6,205
Hedging transactions	—	—	—	—	—	—	—	(5,780)

HVB Group has exercised the option of continuing to apply the provisions of IAS 39 on hedge accounting. The portfolio fair value hedge will thus be continued.

In line with the standard bank risk management procedures for hedging fixed interest rate risks, the interest rate risks entailed in the hedged items are managed on a cross-item basis in the portfolio fair value hedge. For this purpose, the interest rate-relevant cash flows of the hedged items (loans and receivables with banks (at cost), loans and receivables with customers (at cost), deposits from banks, deposits from customers and debt securities) are allocated separately by currency to maturity buckets and the net position is determined. The interest rate hedging derivatives concluded thus relate to net interest rate risk positions across several items in the respective maturity buckets and not to specific hedged items. The designated hedge relationships are dedesignated every two weeks and then redesignated. As a hedged item may thus have different effects in the respective maturity bucket, hedge accounting effects are presented by reference to interest sensitivity. The statement of interest rate sensitivity by maturity bucket represents an adequate measure for determining the hedged interest rate risks. The table shows the changes in fair value in euro millions if the interest rate changes by one basis point (bp or 0.01%).

17 Net gains/losses on derecognition of financial instruments measured at cost

€ millions	1/1-30/6/2023	1/1-30/6/2022
Loans and receivables (performing)	(3)	—
Buy-backs of securities issued and other liabilities	(1)	4
Promissory notes (assets side)	2	2
Total	**(2)**	**6**

Notes to the Income Statement (Continued)

18 Net other expenses/income

€ millions	1/1-30/6/2023	1/1-30/6/2022
Other income	103	102
Sale of land and buildings	—	—
Rental income	20	31
Valuation/disposals of investment properties	25	7
Other	58	64
Other expenses	(251)	(266)
Sale of land and buildings	—	—
Valuation/disposals of investment properties	(18)	(5)
Expenses of investment properties	(3)	(3)
Bank levy	(179)	(241)
Other	(51)	(17)
Total	**(148)**	**(164)**

Net other expenses/income attributable to related parties

The item “Net other expenses/income” includes the following amounts attributable to related parties:

€ millions	1/1-30/6/2023	1/1-30/6/2022
Non-consolidated affiliates	15	36
of which:		
UniCredit S.p.A.	7	5
sister companies	8	31
Joint ventures	—	—
Associates	—	—
Other investees	—	—
Total	**15**	**36**

19 Operating costs

€ millions	1/1/-30/6/2023	1/1/-30/6/2022
Payroll costs	(665)	(694)
Wages and salaries	(547)	(546)
Social security costs	(87)	(91)
Expenses for pensions and similar employee benefits	(31)	(57)
Other administrative expenses	(532)	(590)
Amortisation, depreciation and impairment losses	(79)	(46)
on property, plant and equipment	(54)	(18)
on software and other intangible assets, excluding goodwill	(2)	(2)
on right-of-use assets (leases)	(23)	(26)
Total	**(1,276)**	**(1,330)**

Operating costs of related parties

The item "Operating costs" includes the following amounts attributable to related parties:

€ millions	1/1-30/6/2023	1/1-30/6/2022
Non-consolidated affiliates	(270)	(315)
of which:		
UniCredit S.p.A.	(263)	(10)
sister companies	(1)	(299)
subsidiaries	(6)	(6)
Joint ventures	—	—
Associates	—	—
Other investees	—	—
Total	**(270)**	**(315)**

In the 2022 financial year, UniCredit Services S.C.p.A., Milan was transferred to UniCredit S.p.A., Milan. For this reason, operating costs for the use of IT services and back-office activities by the intragroup service provider is shown under sister companies in the previous-year period and under UniCredit S.p.A. in the reporting period.

Notes to the Income Statement (Continued)

20 Net write-downs of loans and provisions for guarantees and commitments

€ millions	1/1-30/6/2023	1/1-30/6/2022
Additions	(365)	(589)
Allowances for losses on loans and receivables at cost	(266)	(440)
Allowances for losses on loans and receivables at FVTOCI	—	—
Allowances for losses on guarantees and indemnities	(99)	(149)
Reversals	295	591
Allowances for losses on loans and receivables at cost	198	336
Allowances for losses on loans and receivables at FVTOCI	1	1
Allowances for losses on guarantees and indemnities	96	254
Gains/(losses) from non-substantial modification	1	—
Recoveries from write-offs of loans and receivables	19	21
Gains/(losses) on the disposal of impaired loans and receivables	—	6
Total	**(50)**	**29**

In the reporting period, net additions to net write-downs of loans and provisions for guarantees and commitments total €50 million after net income of €29 million was generated on the reversal of net write-downs of loans and provisions for guarantees and commitments in the previous-year period. This represents an increase of €79 million. The individual effects that offset each other are described below.

In the reporting period, a net amount of €31 million in portfolio allowances (general loan loss provisions) was reversed following a net addition of net €31 million in the previous-year period. The main factor in this connection was the reversal of a general loan loss provision for a bank headquartered in Russia that was classified with an impaired credit rating. The general loan loss provision will therefore be reversed and a specific loan loss provision added.

The positive development of general loan loss provisions in the portfolio due to better credit ratings of individual borrowers was largely offset by post-model adjustments. Updated forward-looking macroeconomic scenarios (marginally higher growth rates in the gross domestic product for 2023 with slightly lower growth rates for 2024 and 2025) have not, on balance, had any significant effect.

In the reporting period, net additions to specific loan loss provisions total €81 million after a net reversal of €60 million in the previous-year period. Additions to specific loan loss provisions on account of defaults were partly compensated for by reversals of existing specific loan loss provisions. The need for specific loan loss provisions for direct Russia exposure in connection with the Russia-Ukraine conflict remained at a relatively low level in the reporting period.

Net write-downs of loans and provisions for guarantees and commitments attributable to related parties
The item "Net write-downs of loans and provisions for guarantees and commitments" includes the following amounts attributable to related parties:

€ millions	1/1-30/6/2023	1/1-30/6/2022
Non-consolidated affiliates	3	(43)
of which:		
UniCredit S.p.A.	—	—
sister companies	3	(43)
Joint ventures	—	—
Associates	—	—
Other investees	—	—
Total	**3**	**(43)**

21 Provisions for risks and charges

In the reporting period, a net expense of €13 million was generated from the addition to provisions for risks and charges. This is offset by net income of €9 million from the reversal of provisions for risks and charges reported in the previous-year period. No individual items of significance occurred in the reporting period or in the previous-year period.

22 Restructuring costs

HVB Group uses the UniCredit groupwide service offering of IT activities and certain other administrative activities of UniCredit S.p.A. As a general rule, these services are charged to HVB Group at cost. In the course of the reorientation of the UniCredit corporate group, further restructuring measures involving the IT activities concerned/other service areas are planned for 2023 and 2024. HVB Group is assuming the pro rata costs of €50 million for the areas of UniCredit S.p.A. to be restructured as these provide their services almost exclusively for HVB Group. This one-time payment is offset by a significant reduction in costs in the future as UniCredit S.p.A. can provide equivalent services more cost effectively in the future. HVB Group will not suffer any disadvantage as a result. In the previous-year period, there were no items of significance that would need to be explained.

23 Net gains/losses on remeasurement of consolidated companies

€ millions	**1/1-30/6/2023**	**1/1-30/6/2022**
Shares in affiliates	(2)	(3)
Disposal of companies accounted for using the equity method	—	—
Net gains/(losses) on remeasurement of companies accounted for using the equity method	2	(1)
Total	**—**	**(4)**

In the reporting period and in the previous year, losses on shares in affiliates are primarily due to the deconsolidation of subsidiaries. In the reporting period and in the previous year, the net gains or losses on remeasurement of companies accounted for using the equity method is attributable to Comtrade Group B.V., Rotterdam, an associate accounted for using the equity method.

Notes to the Balance Sheet

24 Cash and cash balances

€ millions	30/6/2023	31/12/2022
Cash on hand	425	489
Balances with central banks	36,918	36,344
Total	**37,343**	**36,833**

25 Financial assets held for trading

€ millions	30/6/2023	31/12/2022
On-balance sheet financial instruments	25,365	21,376
Fixed-income securities	7,109	6,826
Equity instruments	5,151	5,107
Other financial assets held for trading	13,105	9,443
Positive fair values of derivative financial instruments	53,570	60,882
Total	**78,935**	**82,258**
of which subordinated assets	2	9

Financial assets held for trading of related parties

The item “Financial assets held for trading” includes the following amounts attributable to related parties:

€ millions	30/6/2023	31/12/2022
Non-consolidated affiliates	24,467	26,777
of which:		
UniCredit S.p.A.	19,033	20,849
sister companies[1]	5,434	5,928
Joint ventures	—	—
Associates	41	40
Other investees	3	—
Total	**24,511**	**26,817**

1 Mostly derivative transactions involving UniCredit Bank Austria AG.

26 Financial assets at FVTPL

€ millions	30/6/2023	31/12/2022
Fixed-income securities	1,852	3,417
Equity instruments	458	418
Loans and promissory notes	933	1,004
Other	81	94
Total	**3,324**	**4,933**
of which:		
subordinated loans and receivables	4	5
past-due loans and receivables	—	—

27 Financial assets at FVTOCI

Financial assets at FVTOCI total €10,324 million as at the reporting date (previous year: €9,837 million).

Changes in carrying amounts

€ millions	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance as at 1/1/2023	**9,824**	**13**	**—**	**—**	**9,837**
Transfers to another stage due to deterioration in credit quality	—	—	—	—	—
Transfers to another stage due to improvement in credit quality	—	—	—	—	—
Changes due to modification not leading to derecognition	—	—	—	—	—
Changes within the stage (net)[1]	488	(1)	—	—	487
Derecognition (due to uncollectibility)	—	—	—	—	—
Other changes	—	—	—	—	—
Balance as at 30/6/2023	**10,312**	**12**	**—**	**—**	**10,324**
Balance as at 1/1/2022	**11,956**	**50**	**—**	**—**	**12,006**
Transfers to another stage due to deterioration in credit quality	—	—	—	—	—
Transfers to another stage due to improvement in credit quality	—	—	—	—	—
Changes due to modification not leading to derecognition	—	—	—	—	—
Changes within the stage (net)[1]	(2,132)	(37)	—	—	(2,169)
Derecognition (due to uncollectibility)	—	—	—	—	—
Other changes	—	—	—	—	—
Balance as at 31/12/2022	**9,824**	**13**	**—**	**—**	**9,837**

1 Changes within the stage (net) include additions from purchases and disposals from sales and repayments.

The impairment of securities holdings totals €0 million (previous year: €1 million). The impairment decreased by €1 million (previous year: €3 million).

As in the previous year, no modifications were made to fixed-income securities in the reporting period.

No collateral was provided for assets held at FVTOCI in the reporting period or in the previous year.

Notes to the Balance Sheet (Continued)

28 Loans and receivables with banks (at cost)

€ millions	30/6/2023	31/12/2022
Current accounts	1,036	1,796
Cash collateral and pledged credit balances	3,831	5,596
Reverse repos	9,048	9,363
Securities	4,884	3,873
Other loans to banks	1,683	2,669
Non-performing loans and receivables	71	39
Total	**20,553**	**23,336**
of which subordinated assets	—	—

Changes in gross carrying amounts

€ millions	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance as at 1/1/2023	**23,226**	**107**	**28**	**33**	**23,394**
Addition due to new business	10,432	—	—	—	10,432
Change in carrying amount within the stage	(1,160)	15	1	—	(1,144)
Transfers to another stage due to deterioration in credit quality	(21)	(31)	52	—	—
from Stage 1 to Stage 2	(16)	16	—	—	—
from Stage 2 to Stage 3	—	(47)	47	—	—
from Stage 1 to Stage 3	(5)	—	5	—	—
Transfers to another stage due to improvement in credit quality	2	(2)	—	—	—
from Stage 2 to Stage 1	2	(2)	—	—	—
from Stage 3 to Stage 2	—	—	—	—	—
from Stage 3 to Stage 1	—	—	—	—	—
Increase reported directly in equity in gross carrying amounts for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets not leading to derecognition	—	—	—	—	—
Disposals due to repayments/sales	(12,027)	(44)	(1)	—	(12,072)
Disposals due to write-offs/write downs of loans and receivables	—	—	—	—	—
Foreign currency movements and other changes	(10)	—	1	—	(9)
Balance as at 30/6/2023	**20,442**	**45**	**81**	**33**	**20,601**
Balance as at 1/1/2022	**24,523**	**104**	**1**	**—**	**24,628**
Addition due to new business	13,397	—	—	33	13,430
Change in carrying amount within the stage	2,216	46	—	—	2,262
Transfers to another stage due to deterioration in credit quality	(160)	133	27	—	—
from Stage 1 to Stage 2	(133)	133	—	—	—
from Stage 2 to Stage 3	—	—	—	—	—
from Stage 1 to Stage 3	(27)	—	27	—	—
Transfers to another stage due to improvement in credit quality	141	(141)	—	—	—
from Stage 2 to Stage 1	141	(141)	—	—	—
from Stage 3 to Stage 2	—	—	—	—	—
from Stage 3 to Stage 1	—	—	—	—	—
Increase reported directly in equity in gross carrying amounts for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets not leading to derecognition	—	—	—	—	—
Disposals due to repayments/sales	(16,922)	(53)	—	—	(16,975)
Disposals due to write-offs/write downs of loans and receivables	—	—	—	—	—
Foreign currency movements and other changes	31	18	—	—	49
Balance as at 31/12/2022	**23,226**	**107**	**28**	**33**	**23,394**

Changes in allowances

€ millions	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance as at 1/1/2023	**2**	**34**	**13**	**9**	**58**
Addition due to new business	1	—	—	—	1
Change in carrying amount within the same stage	—	(2)	—	—	(2)
Transfers to another stage due to deterioration in credit quality	—	(24)	21	—	(3)
from Stage 1 to Stage 2	—	—	—	—	—
from Stage 2 to Stage 3	—	(24)	21	—	(3)
from Stage 1 to Stage 3	—	—	—	—	—
Transfers to another stage due to improvement in credit quality	—	—	—	—	—
from Stage 2 to Stage 1	—	—	—	—	—
from Stage 3 to Stage 2	—	—	—	—	—
from Stage 3 to Stage 1	—	—	—	—	—
Increase in impairment reported directly in equity for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets not leading to derecognition	—	—	—	—	—
Disposals (reversal due to disposal of receivable)	(1)	(3)	—	—	(4)
Disposals (utilisation of impairments)	—	—	—	—	—
Reversal of the discounted amount and recognition of interest claims not previously recognised in profit or loss	—	—	—	—	—
Foreign currency movements and other changes	—	(1)	(1)	—	(2)
Balance as at 30/6/2023	**2**	**4**	**33**	**9**	**48**
Balance as at 1/1/2022	**4**	**1**	**1**	**—**	**6**
Addition due to new business	1	—	—	—	1
Change in carrying amount within the same stage	1	10	12	9	32
Transfers to another stage due to deterioration in credit quality	—	24	—	—	24
from Stage 1 to Stage 2	—	24	—	—	24
from Stage 2 to Stage 3	—	—	—	—	—
from Stage 1 to Stage 3	—	—	—	—	—
Transfers to another stage due to improvement in credit quality	—	—	—	—	—
from Stage 2 to Stage 1	—	—	—	—	—
from Stage 3 to Stage 2	—	—	—	—	—
from Stage 3 to Stage 1	—	—	—	—	—
Increase in impairment reported directly in equity for interest claims not recognised in profit or loss	—	—	—	—	—
Changes due to modification of assets not leading to derecognition	—	—	—	—	—
Disposals (reversal due to disposal of receivable)	—	—	—	—	—
Disposals (utilisation of impairments)	(4)	(1)	—	—	(5)
Reversal of the discounted amount and recognition of interest claims not previously recognised in profit or loss	—	—	—	—	—
Foreign currency movements and other changes	—	—	—	—	—
Balance as at 31/12/2022	**2**	**34**	**13**	**9**	**58**

In the first half of 2023, total portfolio valuation allowances (Stage 1 and Stage 2) fell by €31 million. The reversal is largely driven by a bank that migrated from Stage 2 to Stage 3. In such cases, the existing general loan loss provisions are reversed and specific loan loss provisions are added at the full amount for the first time. Reductions in exposure for banks headquartered in Russia resulted in further reversals.

The rating for Russia and Ukraine has remained at "CCC" and banks headquartered in Russia are allocated to Stage 2.

Notes to the Balance Sheet (Continued)

The addition of specific loan loss allowances at Stage 3 in the reporting period is primarily to be seen against the backdrop of the migration of a bank to Stage 3. In addition, derivatives with Russian banks were prematurely terminated in view of the sanctions imposed and the final receivables remaining from the termination of derivatives were recognised at their fair value. As the banks in question are to be considered in part as having defaulted at the time when the derivatives were terminated, the receivables have been classified as POCI.

Loans and receivables with related parties

The item "Loans and receivables with banks (at cost)" includes the following amounts attributable to related parties:

€ millions	30/6/2023	31/12/2022
Non-consolidated affiliates	837	3,415
of which:		
UniCredit S.p.A.	757	3,334
sister companies[1]	80	81
Joint ventures	—	—
Associates	17	1
Other investees	—	10
Total	**854**	**3,426**

1 Mainly due from UniCredit Bank Austria AG.

29 Loans and receivables with customers (at cost)

€ millions	30/6/2023	31/12/2022
Current accounts	8,371	7,841
Cash collateral and pledged cash balances	3,003	3,360
Reverse repos	1,339	1,172
Mortgage loans	53,704	52,925
Finance lease receivables	497	648
Securities	24,462	24,606
Other loans and receivables	58,555	62,520
Non-performing loans and receivables	1,755	1,704
Total	**151,686**	**154,776**
of which subordinated assets	—	—

Other loans and receivables largely comprise miscellaneous other loans, instalment loans, term deposits and refinanced special credit facilities.

The item "Loans and receivables with customers (at cost)" includes an amount of €4,336 million (previous year: €5,049 million) funded under the fully consolidated Arabella conduit programme. This mainly involves buying short-term trade receivables and medium-term receivables under lease agreements from customers and funding them by issuing commercial paper on the capital market. The securitised loans and receivables essentially reflect loans and receivables of European borrowers.

Changes in gross carrying amounts

€ millions	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance as at 1/1/2023	**136,091**	**17,774**	**2,725**	**4**	**156,594**
Addition due to new business	21,198	1,186	59	—	22,443
Change in carrying amount within the stage	(4,520)	(787)	(67)	—	(5,374)
Transfers to another stage due to deterioration in credit quality	(5,413)	5,156	257	—	—
from Stage 1 to Stage 2	(5,314)	5,314	—	—	—
from Stage 2 to Stage 3	—	(158)	158	—	—
from Stage 1 to Stage 3	(99)	—	99	—	—
Transfers to another stage due to improvement in credit quality	3,275	(3,244)	(31)	—	—
from Stage 2 to Stage 1	3,265	(3,265)	—	—	—
from Stage 3 to Stage 2	—	21	(21)	—	—
from Stage 3 to Stage 1	10	—	(10)	—	—
Increase reported directly in equity in gross carrying amounts for interest claims not recognised in profit or loss	—	—	69	—	69
Changes due to modification of assets not leading to derecognition	—	1	6	—	7
Disposals due to repayments/sales	(18,073)	(1,620)	(226)	—	(19,919)
Disposals due to write-offs/write downs of loans and receivables	—	—	(18)	—	(18)
Foreign currency movements and other changes	(299)	(12)	90	—	(221)
Balance as at 30/6/2023	**132,259**	**18,454**	**2,864**	**4**	**153,581**
Balance as at 1/1/2022	**125,190**	**22,249**	**3,072**	**4**	**150,515**
Addition due to new business	39,730	2,851	287	1	42,869
Change in carrying amount within the stage	(6,100)	(1,511)	(106)	(1)	(7,718)
Transfers to another stage due to deterioration in credit quality	(9,494)	8,822	672	—	—
from Stage 1 to Stage 2	(9,127)	9,127	—	—	—
from Stage 2 to Stage 3	—	(305)	305	—	—
from Stage 1 to Stage 3	(367)	—	367	—	—
Transfers to another stage due to improvement in credit quality	11,208	(11,025)	(183)	—	—
from Stage 2 to Stage 1	11,186	(11,186)	—	—	—
from Stage 3 to Stage 2	—	161	(161)	—	—
from Stage 3 to Stage 1	22	—	(22)	—	—
Increase reported directly in equity in gross carrying amounts for interest claims not recognised in profit or loss	—	—	129	—	129
Changes due to modification of assets not leading to derecognition	—	(4)	8	—	4
Disposals due to repayments/sales	(24,264)	(3,767)	(864)	—	(28,895)
Disposals due to write-offs/write downs of loans and receivables	—	—	(316)	—	(316)
Foreign currency movements and other changes	(179)	159	26	—	6
Balance as at 31/12/2022	**136,091**	**17,774**	**2,725**	**4**	**156,594**

Notes to the Balance Sheet (Continued)

Changes in allowances

€ millions	STAGE 1	STAGE 2	STAGE 3	POCI	TOTAL
Balance as at 1/1/2023	**201**	**591**	**1,024**	**2**	**1,818**
Addition due to new business	49	—	—	—	49
Change in carrying amount within the same stage	(5)	(72)	19	—	(58)
Transfers to another stage due to deterioration in credit quality	(33)	164	86	—	217
from Stage 1 to Stage 2	(30)	175	—	—	145
from Stage 2 to Stage 3	—	(11)	67	—	56
from Stage 1 to Stage 3	(3)	—	19	—	16
Transfers to another stage due to improvement in credit quality	23	(66)	(5)	—	(48)
from Stage 2 to Stage 1	23	(68)	—	—	(45)
from Stage 3 to Stage 2	—	2	(4)	—	(2)
from Stage 3 to Stage 1	—	—	(1)	—	(1)
Increase in impairment reported directly in equity for interest claims not recognised in profit or loss	—	—	69	—	69
Changes due to modification of assets not leading to derecognition	—	—	—	—	—
Disposals (reversal due to disposal of receivables)	(12)	(59)	(31)	—	(102)
Disposals (utilisation of impairments)	—	—	(16)	—	(16)
Reversal of the discounted amount and recognition of interest claims not previously recognised in profit or loss	—	—	(29)	—	(29)
Foreign currency movements and other changes	—	—	(5)	—	(5)
Balance as at 30/6/2023	**223**	**558**	**1,112**	**2**	**1,895**
Balance as at 1/1/2022	**232**	**329**	**1,245**	**—**	**1,806**
Addition due to new business	77	—	—	—	77
Change in carrying amount within the same stage	19	211	204	2	436
Transfers to another stage due to deterioration in credit quality	(54)	207	184	—	337
from Stage 1 to Stage 2	(53)	221	—	—	168
from Stage 2 to Stage 3	—	(14)	141	—	127
from Stage 1 to Stage 3	(1)	—	43	—	42
Transfers to another stage due to improvement in credit quality	25	(111)	(13)	—	(99)
from Stage 2 to Stage 1	24	(114)	—	—	(90)
from Stage 3 to Stage 2	—	3	(1)	—	2
from Stage 3 to Stage 1	1	—	(12)	—	(11)
Increase in impairment reported directly in equity for interest claims not recognised in profit or loss	—	—	129	—	129
Changes due to modification of assets not leading to derecognition	—	—	—	—	—
Disposals (reversal due to disposal of receivables)	(98)	(44)	(262)	—	(404)
Disposals (utilisation of impairments)	—	—	(342)	—	(342)
Reversal of the discounted amount and recognition of interest claims not previously recognised in profit or loss	—	—	(43)	—	(43)
Foreign currency movements and other changes	—	(1)	(78)	—	(79)
Balance as at 31.12.2022	**201**	**591**	**1,024**	**2**	**1,818**

In the first half of 2023, total portfolio valuation allowances (Stage 1 and Stage 2) for loans and receivables with customers decreased by €11 million. An allocation of €22 million in portfolio valuation allowances at Stage 1, which were up from €201 million as at 31 December 2022 to €223 million as at 30 June 2023, is offset by a decline of €33 million in portfolio valuation allowances at Stage 2, which were down from €591 million as at 31 December 2022 to €558 million as at 30 June 2023.

On the one hand, post model adjustments led to an allocation to portfolio valuation allowances. In 2022, HVB made post model adjustments in particular for extraordinary effects for energy-intensive industries and certain individual customers that are not fully captured by the expected loss models. In the first half of 2023, these post model adjustments were increased as the exposure in question increased. In addition, a further post model adjustment was made to anticipate the introduction of a new expected loss model for the loss given default in the second half of 2023.

The update of macroeconomic expectations led to an overall neutral effect on portfolio valuation allowances. HVB now expects growth rates for major economies to be marginally higher this year than assumed at the end of 2022, but lower growth rates are expected for 2024 and 2025 than assumed at the end of 2022. Therefore, for example, the growth rates for annual real GDP in the baseline scenario for Germany have been adjusted to 0.0% for 2023, to 1.3% for 2024 and to 1.5% for 2025 (assumptions as at 31 December 2022: minus 0.2% for 2023, 1.6% for 2024 and 1.6% for 2025). The weighting of the macroeconomic scenarios remained unchanged at 60% for the baseline scenario, at 40% for the negative scenario and at 0% for the positive scenario.

There were counteracting offsetting effects due to the positive development of the credit portfolio, as the feared negative effects of the Covid 19 pandemic and the supply bottlenecks were not as strong for individual customers and there was an improvement in the rating in the first half of 2023. The positive portfolio development for individual customers also led to a reversal of portfolio valuation allowances for bullet loans.

In the previous-year period, portfolio valuation allowances for loans and receivables with customers of €19 million were reversed. The main influential factors here were a positive portfolio development due to the initial recovery in economic activity after the Covid 19 pandemic on the one hand and the adjustment of model parameters on the other hand.

In the reporting period, there was a net increase in specific valuation allowances of €88 million. Allocations to specific valuation allowances on account of defaults were only partially compensated for by reversals of existing specific valuation allowances.

In the previous year, there was a net decline in specific valuation allowances from €219 million to €1,026 million. The effect of classifying a portfolio of non-performing customer receivables as “Non-current assets or disposal groups held for sale” is included in the line item “Foreign currency movements and other changes”. Allocations to specific valuation allowances on account of defaults were largely compensated for by reversals of existing specific valuation allowances.

Loans and receivables with related parties
The item “Loans and receivables with customers (at cost)” includes the following amounts attributable to related parties:

€ millions	**30/6/2023**	**31/12/2022**
Non-consolidated affiliates	75	84
of which:		
sister companies	62	72
subsidiaries	13	12
Joint ventures	—	—
Associates	—	—
Other investees	339	344
Total	**414**	**428**

Notes to the Balance Sheet (Continued)

30 Hedging derivatives

€ millions	30/6/2023	31/12/2022
Micro fair value hedge	423	401
Portfolio fair value hedge[1]	68	235
Total	**491**	**636**

1 The cross-currency interest rate swaps used in hedge accounting are carried at their aggregate fair value in the portfolio fair value hedge.

31 Investments in associates and joint ventures accounted for using the equity method

€ millions	30/6/2023	31/12/2022
Associates accounted for using the equity method	—	13
of which goodwill	—	—
Joint ventures accounted for using the equity method	—	—
Total	**—**	**13**

On account of the classification as non-current assets or disposal groups held for sale as at 30 June 2023, the investment in Comtrade Group B.V. accounted for using the equity method is no longer shown under investments in associates and joint ventures accounted for using the equity method.

32 Property, plant and equipment

€ millions	30/6/2023	31/12/2022
Land	1,181	1,200
Buildings	787	876
Plant and office equipment	123	129
Right-of-use assets (leases)	143	163
of which land and buildings	137	156
Total	**2,234**	**2,368**

Impairments on land and buildings shown under changes in property, plant and equipment for the first half of 2023 are attributable to declines in the fair value of land and buildings. For properties, these amount to €27 million (previous year: €15 million) while there were no impairments on land in the reporting period or in the previous year. The declines in fair value are due to the current market trend in general. As a result of the significant increases in interest rates and the related higher capital costs, there was a considerable slump in volumes of property transactions in recent months, which saw the price expectations of buyers and sellers diverge further. This effect is reinforced by the substantial increase in construction costs which, in turn, additionally complicate the starting position for investors in new buildings and modernisation measures in existing buildings.

Changes in property, plant and equipment

€ millions	LAND	BUILDINGS	PLANT AND OFFICE EQUIPMENT	RIGHT-OF-USE ASSETS (LEASES)	TOTAL PROPERTY, PLANT AND EQUIPMENT
Acquisition costs as at 1/1/2023	**1,200**	**2,483**	**690**	**363**	**4,736**
Write-downs and write-ups from previous years	—	(1,607)	(561)	(200)	(2,368)
Carrying amounts as at 1/1/2023	**1,200**	**876**	**129**	**163**	**2,368**
Additions					—
Acquisition/production costs	—	8	6	15	29
Adjustment due to revaluation in reporting period (OCI)	3	7	—	—	10
Write-ups	—	1	—	1	2
Changes from currency translation	—	—	—	—	—
Other additions[1]	—	—	2	19	21
Disposals					—
Sales	—	—	(1)	(16)	(17)
Adjustment due to revaluation in reporting period (OCI)	(22)	(59)	—	—	(81)
Depreciation and write-downs	—	(15)	(13)	(23)	(51)
Impairments	—	(27)	—	(1)	(28)
Changes from currency translation	—	—	—	—	—
Non-current assets or disposal groups held for sale	—	—	—	—	—
Other disposals[1]	—	(4)	—	(15)	(19)
Carrying amounts as at 30/6/2023	**1,181**	**787**	**123**	**143**	**2,234**
Write-downs and write-ups from previous years plus the reporting period	—	1,588	558	198	2,344
Acquisition costs as at 30/6/2023	**1,181**	**2,375**	**681**	**341**	**4,578**
Acquisition costs as at 1/1/2022	**1,148**	**2,528**	**743**	**348**	**4,767**
Write-downs and write-ups from previous years	—	(1,623)	(529)	(165)	(2,317)
Carrying amounts as at 1/1/2022	**1,148**	**905**	**214**	**183**	**2,450**
Additions					
Acquisition/production costs	—	19	16	21	56
Adjustment due to revaluation in reporting period (OCI)	59	27	—	—	86
Write-ups	—	20	4	15	39
Changes from currency translation	—	—	—	2	2
Other additions[1]	—	3	6	9	18
Disposals					
Sales	—	(3)	(66)	(2)	(71)
Adjustment due to revaluation in reporting period (OCI)	(7)	(37)	—	—	(44)
Depreciation and write-downs	—	(32)	(30)	(51)	(113)
Impairments	—	(15)	(7)	(12)	(34)
Changes from currency translation	—	—	—	(1)	(1)
Non-current assets or disposal groups held for sale	—	—	—	—	—
Other disposals[1]	—	(11)	(8)	(1)	(20)
Carrying amounts as at 31/12/2022	**1,200**	**876**	**129**	**163**	**2,368**
Write-downs and write-ups from previous years plus the reporting period	—	1,607	561	200	2,368
Acquisition costs as at 31/12/2022	**1,200**	**2,483**	**690**	**363**	**4,736**

1 Including changes in the group of companies included in consolidation.

Notes to the Balance Sheet (Continued)

33 Investment properties

Investment properties are measured at fair value. As each property is unique and the fair value is determined by external expert opinions that take into account the special features of the property being valued, all fair values for investment properties reported in this balance sheet item are allocated to Level 3.

The net carrying amount of right-of-use assets from lease agreements classified as investment properties under this balance sheet item is €64 million as at the reporting date (previous year: €63 million).

Changes in investment properties

€ millions	**2023**	**2022**
Carrying amounts as at 1/1	**335**	**360**
Additions		
Acquisitions	1	—
Valuation gains	25	13
Subsequent expenses	—	—
Changes from currency translation	—	—
Other additions[1]	—	—
Disposals		
Sales	—	—
Valuation losses	(15)	(9)
Changes from currency translation	—	—
Non-current assets or disposal groups held for sale	—	(29)
Other disposals[1]	—	—
Carrying amounts as at 30/6/2023 / 31/12/2022	**346**	**335**

1 Also including changes in the group of companies included in consolidation.

34 Intangible assets

€ millions	**30/6/2023**	**31/12/2022**
Internally generated intangible assets	4	5
Other intangible assets	1	1
Total	**5**	**6**

HVB no longer generates any software internally. Software is provided to HVB by UniCredit S.p.A. as the group-wide service provider.

35 Non-current assets or disposal groups held for sale

€ millions	30/6/2023	31/12/2022
Cash and cash balances	—	—
Financial assets at FVTPL	227	217
Financial assets at FVTOCI	—	—
Loans and receivables with banks (at cost)	2	3
Loans and receivables with customers (at cost)	159	112
Investments in associates and joint ventures accounted for using the equity method	16	—
Property, plant and equipment	1	1
Investment properties	14	16
Intangible assets	5	5
Tax assets	4	5
Inventories (IAS 2)	228	312
Other assets	48	44
Total	**704**	**715**

As at 30 June 2023, non-current assets or disposal groups held for sale include the following selling activities:
- Planned sale of the subsidiary Wealth Management Capital Holding GmbH, Munich, which was already classified as non-current assets or disposal groups held for sale as at 31 December 2020 and is allocated to the Retail operating segment. The sale of this subsidiary is expected to be completed in the course of the second half of 2023.
- Planned sale of Comtrade Group B.V., Rotterdam, which is a company accounted for using the equity method allocated to the Corporates operating segment. The sale of this company is expected to be completed in the second half of 2023.

The planned sale of the subsidiary Wealth Management Capital Holding GmbH, Munich, mainly relates to the following assets: Minority interests in placed real asset funds are recognised under financial assets at FVTPL. The increase in financial assets at FVTPL is primarily based on additions of new shares totalling €10 million. The net increase of €47 million in loans and receivables with customers (at cost) is largely due to the financing of a fund that was placed in the first half of 2023 and was fully consolidated as a subsidiary in the previous year. The financing is recognised as an external receivable as at 30 June 2023. Properties that were purchased in order to either contribute them to funds and place the fund units with investors or to resell them directly to institutional investors are reported under inventories. The decrease of €84 million is mainly based on the contribution of two properties to funds. Consequently, this decline is based on the normal course of business of the subsidiary Wealth Management Capital Holding GmbH, which HVB is aiming to sell.

Furthermore, Comtrade Group B.V., Rotterdam, a company accounted for using the equity method, was classified as non-current assets or disposal groups held for sale in the first half of 2023. The carrying amount of €16 million for this company is reported under investments in associates and joint ventures accounted for using the equity method.

Notes to the Balance Sheet (Continued)

In the first half of 2023, the sale of a portfolio of non-performing customer receivables was completed that was classified as non-current assets or disposal groups held for sale for the first time as at 31 December 2022 and was reported at an amount of €13 million under loans and receivables from customers in the previous year.

No impairments were required to be recognised for non-current assets or disposal groups held for sale in the reporting period or in the previous year.

Fair value level hierarchy

Assets or liabilities whose valuation is derived from input data (valuation parameters) that is directly observable (as prices) or indirectly observable (derived from prices) are generally shown in Level 2. A price cannot be observed on an active market for the assets or liabilities concerned themselves. As real estate represents a unique item, there can be no trading for the same property or any observable price for it on an active market. However, offers submitted in the course of a selling process constitute observable input data for determining a fair value, as the real estate may be sold at this price on the basis of binding or reliable non-binding offers.

Level 3 generally relates to assets or liabilities whose fair value is not calculated exclusively on the basis of observable market data (non-observable input data). External valuation reports are based on generally recognised valuation procedures that refer to parameters determined by external assessors for the property (such as the current market rent assumed for the property). The respective fair values therefore feature valuation parameters that are based on model assumptions.

The following table shows the allocation of the investment properties measured at fair value to the respective fair value level hierarchy:

	FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2)		FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3)	
€ millions	**30/6/2023**	**31/12/2022**	**30/6/2023**	**31/12/2022**
Investment properties, classified as non-current assets or disposal groups held for sale	—	—	14	16

Changes in investment properties allocated to Level 3:

€ millions	**2023**	**2022**
Carrying amount as at 1/1	**16**	**23**
Additions to the portfolio (classified as Level 3)	—	—
Positive fair value changes (classified as Level 3)	—	—
Additions due to reclassification from Level 2 to Level 3	—	—
Disposals from the portfolio (classified as Level 3)	—	—
Negative fair value changes (classified as Level 3)	(2)	(7)
Disposals due to reclassification from Level 3 to Level 2	—	—
Carrying amount as at 30/6/2023 / 31/12/2022	**14**	**16**

There were no reclassifications from Level 2 to Level 3.

The financial assets at FVTPL shown here are allocated to Level 3 as the fair values are based on individual valuation reports. There were no reclassifications to other levels in the reporting year or in the previous year.

36 Other assets

Other assets include prepaid expenses of €138 million (previous year: €136 million). At the reporting date, the excess of assets over liabilities from offsetting the present value of the defined pension obligations against the fair value of the plan assets of defined benefit plans is also recognised under other assets as a capitalised excess of plan assets totalling €113 million (previous year: €178 million).

37 Deposits from banks

€ millions	30/6/2023	31/12/2022
Deposits from central banks	10,886	21,727
Deposits from banks	34,142	29,454
Current accounts	1,830	1,550
Cash collateral and pledged credit balances	10,214	8,417
Repos	5,416	2,957
Term deposits	1,712	1,700
Other liabilities	14,970	14,830
Total	**45,028**	**51,181**

Amounts payable to related parties

The item "Deposits from banks" includes the following amounts attributable to related parties:

€ millions	30/6/2023	31/12/2022
Non-consolidated affiliates	3,911	4,226
of which:		
UniCredit S.p.A.	3,301	3,042
sister companies[1]	610	1,184
Joint ventures	—	—
Associates	149	126
Other investees	21	25
Total	**4,081**	**4,377**

1 Largest single items relate to UniCredit Bank Austria AG.

Notes to the Balance Sheet (Continued)

38 Deposits from customers

€ millions	30/6/2023	31/12/2022
Current accounts	79,022	92,333
Cash collateral and pledged credit balances	2,572	3,489
Savings deposits	7,579	10,706
Repos	5,098	224
Term deposits	44,553	35,529
Promissory notes	740	861
Lease liabilities	305	344
Other liabilities	4,493	3,666
Total	**144,362**	**147,152**

Amounts payable to related parties

The item “Deposits from customers” includes the following amounts attributable to related parties:

€ millions	30/6/2023	31/12/2022
Non-consolidated affiliates	22	22
of which:		
sister companies	4	4
subsidiaries	18	18
Joint ventures	—	—
Associates	—	—
Other investees	314	313
Total	**336**	**335**

39 Debt securities in issue

€ millions	30/6/2023	31/12/2022
Bonds	35,695	31,140
of which:		
registered Mortgage Pfandbriefe	3,270	3,426
registered Public-sector Pfandbriefe	1,217	1,164
Mortgage Pfandbriefe	19,290	17,017
Public-sector Pfandbriefe	2,511	1,253
registered bonds	1,934	2,116
Other securities	—	—
Total	**35,695**	**31,140**

Debt securities in issue, payable to related parties

The item “Debt securities in issue” includes the following amounts attributable to related parties:

€ millions	30/6/2023	31/12/2022
Non-consolidated affiliates	3,556	3,568
of which:		
UniCredit S.p.A.	3,556	3,568
sister companies	—	—
Joint ventures	—	—
Associates	—	—
Other investees	2	2
Total	**3,558**	**3,570**

40 Financial liabilities held for trading

€ millions	30/6/2023	31/12/2022
Negative fair values of derivative financial instruments	49,824	58,310
Other financial liabilities held for trading	8,961	5,994
Total	**58,785**	**64,304**

The negative fair values of derivative financial instruments are carried as financial liabilities held for trading. In addition, warrants, certificates and bonds issued by our trading department as well as delivery obligations from short sales of securities, insofar as they serve trading purposes, are included here under other financial liabilities held for trading.

41 Financial liabilities at FVTPL

This item in the amount of €4,800 million (previous year: €4,818 million) primarily contains own structured issues.

42 Hedging derivatives

€ millions	30/6/2023	31/12/2022
Micro fair value hedge	2	48
Portfolio fair value hedge[1]	112	152
Total	**114**	**200**

1 The cross-currency interest rate swaps used in hedge accounting are carried at their aggregate fair value in the portfolio fair value hedge.

43 Hedge adjustment of hedged items in the portfolio fair value hedge

The hedge adjustment of interest rate-hedged receivables and liabilities in the portfolio fair value hedge totals net minus €5,067 million (previous year: minus €5,474 million). The fair value of the netted portfolio fair value hedge derivatives represents a net comparable amount resulting from a countermovement. On account of the higher interest rates since mid-2022, the amount reported for the hedge adjustment has increased sharply and is shown as a negative figure. Based on the rules of IAS 39.89A in conjunction with IAS 39.AG123, the nature of the hedged item determines the allocation either to the asset side or to the liabilities side, which means that a positive hedge adjustment for hedged liabilities and an excess of liabilities over assets is to be reported in the respective maturity buckets of the portfolio fair value hedge as a negative figure on the liabilities side.

44 Liabilities of disposal groups held for sale

€ millions	30/6/2023	31/12/2022
Deposits from banks	121	143
Deposits from customers	246	270
Tax liabilities	27	25
Other liabilities	126	139
Provisions	4	3
Total	**524**	**580**

As at 30 June 2023 and in the previous year, the liabilities of disposal groups held for sale relate exclusively to the liabilities of Wealth Management Capital Holding GmbH, Munich, and its consolidated subsidiaries, which are allocated to the Retail operating segment.

Notes to the Balance Sheet (Continued)

45 Provisions

€ millions	30/6/2023	31/12/2022
Provisions for pensions and similar obligations	63	71
Provisions for financial guarantees and irrevocable credit commitments	334	330
Restructuring provisions	416	595
Other provisions	794	782
Payroll provisions	353	317
Provisions for taxes (without income taxes)	112	116
Provisions for rental guarantees and dismantling obligations	94	105
Provisions for legal risks and similar risks	102	158
Other provisions	133	86
Total	**1,607**	**1,778**

Provisions for pensions and similar obligations
As at 30 June 2023, the provisions for pensions and similar obligations were remeasured on the basis of updated actuarial assumptions and market values of the plan assets. At the reporting date, a net defined benefit asset from defined benefit plans totalling €50 million was calculated for HVB Group, resulting from netting the present value of the aggregate (funded and unfunded) defined benefit obligations (DBO) of €3,987 million with the fair value of the plan assets of €4,037 million.

This amount was recognised in the consolidated balance sheet of HVB Group as at 30. June 2023 as follows:
- The surplus from pension plans with an excess of assets over liabilities was recognised at an amount of €113 million in the consolidated balance sheet as a capitalised excess cover of plan assets under other assets. No adjustments were required for the effects of limiting a net asset value to the asset ceiling.
- Deficits from pension plans with an excess of liabilities over assets and without an allocation to a plan asset were recognised at an amount of €63 million in the consolidated balance sheet as recognised pension provisions under provisions for pensions and similar obligations.

The following effects resulting from the capital market performance in the first half of 2023 were mainly responsible for the decline in pension provisions (down €8 million / minus 11.3%) and other assets (down €65 million / minus 36.5%) compared with year-end 2022:
– The increase in the actuarial interest rate (weighted average) by 20 basis points to 4.05% (previous year: 3.85%) resulted in greater discounting of the liabilities under defined benefit obligations and thus to a decrease in the present value of liabilities.
– In contrast, the pension adjustment in line with the consumer price index above the long-term pension trend of 2.25% on which the valuation is based taken into account at the end of the first half of 2023 caused an increase in the DBO which compensated the effect above in part.
– In addition, the decline in the market values of the plan assets in the first half of 2023 had the opposite effect.

The actuarial gains as at the reporting date resulting from the calculation of the estimated present value of the defined benefit obligations, offset by the losses from the current market measurement of the plan assets (difference between standardised earnings and earnings actually realised), resulted in a negative total effect from remeasurements of minus €43 million, which was recognised directly in shareholders' equity without affecting profit or loss and in other comprehensive income (OCI) within the statement of total comprehensive income.

46 Subordinated capital

The following table shows the breakdown of subordinated capital included in the balance sheet items “Deposits from banks”, “Debt securities in issue” and “Shareholders’ equity”:

€ millions	30/6/2023	31/12/2022
Subordinated liabilities	1,097	1,108
Hybrid capital instruments	1,700	1,700
Total	**2,797**	**2,808**

Other Information

47 Events after the reporting period
There were no significant events at HVB after 30 June 2023 to report.

48 Fair value hierarchy
The changes in financial instruments measured at fair value and recognised at fair value in the balance sheet are described below, notably with regard to the fair value hierarchy.

This fair value hierarchy is divided into the following levels:

Level 1 contains financial instruments measured using prices of identical assets or liabilities listed on active markets. These prices are incorporated unchanged. This category mainly includes listed equity instruments, bonds and exchange-traded derivatives.

Level 2 shows assets and liabilities whose valuation is derived from directly observable (prices) or indirectly observable (derived from prices) input data (valuation parameters). No price can be observed on an active market for the assets and liabilities concerned themselves. As a result of this, we notably show the fair values of interest rate and credit derivatives in this level together with the fair values of ABS bonds, provided a liquid market exists for the asset class in question.

Financial assets or liabilities of €785 million (previous year: €574 million) were transferred between Level 1 and Level 2. At the same time, financial assets or liabilities of €437 million (previous year: €711 million) were transferred between Level 2 and Level 1. Most of the transfers relate to securities and are due to an increase or decrease in the actual trading taking place in the securities concerned and the associated change in the bid-offer spreads and thus in the liquidity of the respective security.

The following table shows transfers between Level 1 and Level 2 for financial instruments where fair value is determined on a recurring basis:

€ millions	TO LEVEL 1	TO LEVEL 2
Financial assets held for trading		
Transfer from Level 1	—	190
Transfer from Level 2	36	—
Financial assets at FVTPL		
Transfer from Level 1	—	123
Transfer from Level 2	377	—
Financial assets at FVTOCI		
Transfer from Level 1	—	472
Transfer from Level 2	19	—
Financial liabilities held for trading		
Transfer from Level 1	—	—
Transfer from Level 2	5	—
Financial liabilities at FVTPL		
Transfer from Level 1	—	—
Transfer from Level 2	—	—

30 June is considered the transfer date for instruments transferred between the levels within the reporting period (1 January to 30 June). Therefore, the fair value as at 30 June is used as the value recognised for the transfer in levels.

Level 3 relates to assets or liabilities for which the fair value cannot be calculated exclusively on the basis of observable market data (non-observable input data). The amounts involved are stated in Level 2 if the impact of the non-observable input data on the determination of fair value is insignificant. Thus, the respective fair values also incorporate valuation parameters based on model assumptions. This includes derivatives and structured products that contain at least one “exotic” component, such as foreign currency or interest rate derivatives on illiquid currencies, derivatives without standard market terms, structured products with an illiquid underlying as a reference and ABS bonds of an asset class for which no liquid market exists.

Where the value of a financial instrument is based on non-observable valuation parameters, the value of these parameters may be selected from a range of possible appropriate alternatives at the reporting date. Appropriate values are determined for these non-observable parameters and applied for valuation purposes, upon valuation as at 30 June 2023. In addition, individual parameters that cannot be incorporated separately in the valuation model as standalone valuation parameters are taken into account by applying a model reserve.

The following measurement methods are applied for the individual classes of financial instrument depending on the product type. The measurements of financial instruments in fair value Level 3 depend upon the following significant parameters that cannot be observed on the market:

PRODUCT TYPE	MEASUREMENT METHOD	SIGNIFICANT NON-OBSERVABLE PARAMETERS	RANGE
Fixed-income securities and other debt instruments	Market approach	Price	1bps – 1,040bps
Equities	Market approach	Price	0% - 3%
Asset-backed securities (ABS)	DCF method	Credit spread curves	62bps – 2,876bps
		Residual value	0% - 70%
		Default rate	0% - 4%
		Prepayment rate	0% - 30%
Commodity/equity derivatives	Option price model	Commodity price volatility/equity volatility	1% - 9%
		Correlation between commodities/equities	2% - 24%
	DCF method	Dividend yields	1% - 26%
Interest rate derivatives	DCF method	Swap interest rate	0bps - 587bps
		Inflation swap interest rate	3bps - 12bps
	Option price model	Inflation volatility	1% - 3%
		Interest rate volatility	0% - 29%
		Correlation between interest rates	0% - 22%
Credit derivatives	Hazard rate model	Credit spread curves	1bps - 21bps
		Residual value	0% - 5%
Currency derivatives	DCF method	Yield curves	0bps - 587bps
	Option price model	FX volatility	0% - 139%

Other Information (Continued)

The sensitivity analysis presented below shows the impact of changing reasonable possible alternative parameter values on the fair value of the financial instruments classified as Level 3. The level of variation of the non-observable parameters reflects the prevailing market conditions regarding the valuation of sensitivities. For portfolios at fair value through profit or loss, the positive and negative fair value changes would amount to a plus or minus of €50 million respectively at the reporting date (previous year: a plus or minus of €40 million respectively).

The following table shows the significant sensitivity effects, broken down by the individual classes of financial instrument for the various product types:

	2023		2022	
€ millions	**POSITIVE**	**NEGATIVE**	**POSITIVE**	**NEGATIVE**
Fixed-income securities and other debt instruments	1	(1)	—	—
Equities	4	(4)	—	—
Asset-backed securities	—	—	—	—
Commodity/equity derivatives	42	(42)	36	(36)
Interest rate derivatives	2	(2)	4	(4)
Credit derivatives	—	—	—	—
Currency derivatives	1	(1)	—	—
Total	**50**	**(50)**	**40**	**(40)**

For fixed-income securities and other debt instruments as well as asset-backed securities, the credit spread curves were changed in the course of the sensitivity analyses. For equities, the spot price is varied using a relative value.

The following non-observable parameters were varied for the sensitivity analysis for equity derivatives included in Level 3: spot prices for hedge funds, implicit volatility, dividends, implicit correlations and the assumptions regarding the interpolation between individual parameters observable on the market, such as volatilities. For interest rate products, interest rates, interest rate correlations and implicit volatilities were varied during the sensitivity analysis. For credit derivatives, shifts in the risk premium curves for credit risk were assumed together with changes in implicit correlations and increases in default rates. Foreign currency derivatives were varied in terms of the implicit volatility.

Where trades are executed for which the trade price deviates from the fair value at the trade date and non-observable parameters are employed to a considerable extent in valuation models, the financial instrument concerned is recognised at the trade price. This difference between the trade price and the fair value of the valuation model is defined as the trade date gain/loss. Corresponding gains and losses determined at the trade date are deferred and recognised in the income statement over the term of the trade. As soon as a reference price can be determined for the trade on an active market, or the input parameters are based on observable market data, the deferred trade date gain is taken directly to the income statement in net trading income.

The following table shows a year-on-year comparison of changes in trade date gains and losses that were deferred on account of the application of significant non-observable parameters for financial instruments recognised at fair value:

€ millions	2023	2022
Balance as at 1/1	**27**	**21**
New trades during the period	—	9
Write-downs	(1)	(4)
Expired trades	—	—
Retroactive change in observability	14	7
Exchange rate changes	—	—
Balance as at 30/6/2023 / 31/12/2022	**14**	**27**

The following table shows the allocation of the financial assets and financial liabilities recognised in the balance sheet at fair value to the respective levels of the fair value hierarchy:

	FAIR VALUE OBSERVED ON AN ACTIVE MARKET (LEVEL 1)		FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2)		FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3)	
€ millions	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Financial assets recognised in the balance sheet at fair value						
Financial assets held for trading	18,502	17,023	58,961	62,932	1,472	2,303
of which derivatives	4,130	3,506	48,125	55,669	1,315	1,707
Financial assets at FVTPL	1,704	2,324	949	1,747	671	862
Financial assets at FVTOCI	9,688	9,702	636	135	—	—
Hedging derivatives	—	—	486	630	5	6
Financial liabilities recognised in the balance sheet at fair value						
Financial liabilities held for trading	8,449	6,719	49,092	55,688	1,244	1,897
of which derivatives	5,783	4,860	43,192	51,846	849	1,604
Financial liabilities at FVTPL	—	—	4,492	4,535	308	283
Hedging derivatives	—	—	112	200	2	—

Other Information (Continued)

The following table shows the changes in the financial assets allocated to Level 3 in the fair value hierarchy:

€ million	FINANCIAL ASSETS HELD FOR TRADING	FINANCIAL ASSETS AT FVTPL	FINANCIAL ASSETS AT FVTOCI	HEDGING DERIVATIVES
Balance as at 1/1/2023	**2,303**	**862**	**—**	**6**
Additions				
Purchases	225	249	—	—
Realised gains[1]	114	21	—	—
Transfer from other levels	194	18	—	1
Other additions[2]	24	—	—	—
Disposals				
Sales	(731)	(239)	—	(1)
Repayment	—	(50)	—	—
Realised losses[1]	(394)	(21)	—	(1)
Transfer to other levels	(242)	(166)	—	—
Other disposals	(21)	(3)	—	—
Balance as at 30/6/2023	**1,472**	**671**	**—**	**5**
,				
Balance as at 1/1/2022	**1,232**	**469**	**—**	**—**
Additions				
Purchases	2,349	229	—	5
Realised gains[1]	317	74	—	—
Transfer from other levels	291	250	—	1
Other additions[2]	38	—	—	—
Disposals				
Sales	(1,692)	(106)	—	—
Repayment	—	(8)	—	—
Realised losses[1]	(75)	(41)	—	—
Transfer to other levels	(147)	—	—	—
Other disposals	(10)	(5)	—	—
Balance as at 31/12/2022	**2,303**	**862**	**—**	**6**

1 In the income statement and shareholders' equity.
2 Also including changes in the group of companies included in consolidation.

The decline in Level 3 financial assets held for trading is mainly due to the disposal and realisation of Level 3 instruments combined with a realised net loss.

The following table shows the changes in the financial liabilities allocated to Level 3 in the fair value hierarchy:

€ millions	FINANCIAL LIABILITIES HELD FOR TRADING	FINANCIAL LIABILITIES AT FVTPL	HEDGING DERIVATIVES
Balance as at 1/1/2023	**1,897**	**283**	**—**
Additions			
Sales	96	—	—
Issues	90	76	—
Realised losses[1]	114	5	—
Transfer from other levels	237	99	2
Other additions[2]	37	1	—
Disposals			
Buy-backs	(406)	(2)	—
Repayment	(3)	(28)	—
Realised gains[1]	(283)	(3)	—
Transfer to other levels	(526)	(122)	—
Other disposals	(9)	(1)	—
Balance as at 30/6/2023	**1,244**	**308**	**2**
Balance as at 1/1/2022	**1,161**	**395**	**—**
Additions			
Sales	652	—	—
Issues	180	46	—
Realised losses[1]	193	1	—
Transfer from other levels	626	49	—
Other additions[2]	25	2	—
Disposals			
Buy-backs	(307)	(37)	—
Repayment	(49)	(32)	—
Realised gains[1]	(228)	(33)	—
Transfer to other levels	(323)	(108)	—
Other disposals	(33)	—	—
Balance as at 31/12/2022	**1,897**	**283**	**—**

1 In the income statement and shareholders' equity.
2 Also including changes in the group of companies included in consolidation.

The decline in Level 3 instruments within financial liabilities held for trading is largely due to buybacks coupled with a net gain. In addition, there are net transfers to other levels that are primarily attributable to derivative instruments in the equity sector. These result from the regular review of the fair value levels determined and the materiality of individual non-observable parameters.

Other Information (Continued)

49 Fair values of financial instruments compliant with IFRS 7

The fair values are calculated using the market information available at the reporting date as well as specific company valuation methods.

	CARRYING AMOUNT		FAIR VALUE	
€ billions	**2023**	**2022**	**2023**	**2022**
Assets				
Cash and cash balances	37.3	36.8	37.3	36.8
Financial assets held for trading	78.9	82.3	78.9	82.3
Financial assets at FVTPL	3.3	4.9	3.3	4.9
Financial assets at FVTOCI	10.3	9.8	10.3	9.8
Loans and receivables with banks (at cost)	20.6	23.3	21.3	22.9
Loans and receivables with customers (at cost)	151.7	154.8	144.7	159.0
of which finance lease receivables	0.5	0.6	0.5	0.6
Hedging derivatives	0.5	0.6	0.5	0.6
Total	**302.6**	**312.5**	**296.3**	**316.3**
Liabilities				
Deposits from banks	45.0	51.2	45.7	51.2
Deposits from customers	144.4	147.2	144.2	147.3
Debt securities in issue	35.7	31.1	33.1	28.4
Financial liabilities held for trading	58.8	64.3	58.8	64.3
Financial liabilities at FVTPL	4.8	4.8	4.8	4.8
Hedging derivatives	0.1	0.2	0.1	0.2
Total	**288.8**	**298.8**	**286.7**	**296.2**

	FAIR VALUE OBSERVED ON AN ACTIVE MARKET (LEVEL 1)		FAIR VALUE BASED ON VALUATION PARAMETERS OBSERVED ON THE MARKET (LEVEL 2)		FAIR VALUE BASED ON VALUATION PARAMETERS NOT OBSERVED ON THE MARKET (LEVEL 3)	
€ billions	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Financial assets not carried at fair value in the balance sheet						
Cash and cash balances	—	—	37.3	36.8	—	—
Loans and receivables with banks (at cost)	2.7	2.0	16.7	18.7	1.9	2.2
Loans and receivables with customers (at cost)	9.7	8.4	76.8	71.6	58.2	79.0
of which finance lease receivables	—	—	—	—	0.5	0.6
Financial liabilities not carried at fair value in the balance sheet						
Deposits from banks	—	—	44.5	49.6	1.2	1.6
Deposits from customers	—	—	141.2	144.2	3.0	3.1
Debt securities in issue	17.5	14.0	6.8	6.4	8.8	8.0

At HVB Group, the difference between the fair values and carrying amounts totals minus €6.3 billion for assets (previous year: €3.8 billion) and minus €2.1 billion for liabilities (previous year: minus €2.6 billion). The net balance of these amounts is minus €4.2 billion (previous year: €6.4 billion). When comparing carrying amounts and fair values of the hedged items, it should be noted that part of the hidden reserves/hidden liabilities has already been included in the hedge adjustment.

50 Disclosures regarding the offsetting of financial assets and liabilities

The following two tables separately show the recognised financial assets and financial liabilities that have already been netted in the balance sheet in accordance with IAS 32.42 together with the financial instruments that are subject to a legally enforceable master netting arrangement or similar arrangement but that do not satisfy the criteria for offsetting in the balance sheet.

Financial assets that are netted in the balance sheet or subject to a legally enforceable master netting arrangement or similar arrangement:

				AMOUNTS NOT RECOGNISED			
€ millions	FINANCIAL ASSETS (GROSS)	FINANCIAL LIABILITIES NETTED IN THE BALANCE SHEET (GROSS)	RECOGNISED FINANCIAL ASSETS (NET)	EFFECTS OF MASTER NETTING ARRANGEMENTS	FINANCIAL INSTRUMENTS AS COLLATERAL	CASH COLLATERAL	NET AMOUNT
Derivatives[1]	284,461	(230,400)	54,061	(35,987)	(328)	(9,408)	8,338
Reverse repos[2]	18,363	(4,280)	14,083	—	(13,703)	—	380
Loans and receivables[3]	81,446	(4,967)	76,479	—	—	—	76,479
Total as at 30/6/2023	**384,270**	**(239,647)**	**144,623**	**(35,987)**	**(14,031)**	**(9,408)**	**85,197**
Derivatives[1]	308,263	(246,745)	61,518	(41,389)	(260)	(9,829)	10,040
Reverse repos[2]	11,726	—	11,726	—	(11,157)	—	569
Loans and receivables[3]	87,776	(3,994)	83,782	—	—	—	83,782
Total as at 31/12/2022	**407,765**	**(250,739)**	**157,026**	**(41,389)**	**(11,417)**	**(9,829)**	**94,391**

1 Derivatives are included in the balance sheet items “Financial assets held for trading” and “Hedging derivatives”.
2 Reverse repos are covered in the Notes “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at cost)” They are also included in financial assets held for trading at an amount of €3,696 million (previous year: €1,191 million).
3 Only relates to current accounts, cash collateral or pledged credit balances and other loans and receivables (including cumulative variation margins),as covered in the Notes “Loans and receivables with banks (at cost)” and “Loans and receivables with customers (at cost)”.

Financial liabilities that are netted in the balance sheet or subject to a legally enforceable master netting arrangement or similar arrangement:

				AMOUNTS NOT RECOGNISED			
€ millions	FINANCIAL LIABILITIES (GROSS)	FINANCIAL ASSETS NETTED IN THE BALANCE SHEET (GROSS)	RECOGNISED LIABILITIES (NET)	EFFECTS OF MASTER NETTING ARRANGEMENTS	FINANCIAL INSTRUMENTS AS COLLATERAL	CASH COLLATERAL	NET AMOUNT
Derivatives[1]	284,540	(234,602)	49,938	(35,987)	(360)	(6,069)	7,522
Reverse repos[2]	18,716	(4,280)	14,436	—	(14,251)	—	185
Liabilities[3]	113,866	(765)	113,101	—	—	—	113,101
Total as at 30/6/2023	**417,122**	**(239,647)**	**177,475**	**(35,987)**	**(14,611)**	**(6,069)**	**120,808**
Derivatives[1]	306,270	(247,760)	58,510	(41,389)	(357)	(8,061)	8,703
Reverse repos[2]	3,245	—	3,245	—	(3,175)	—	70
Liabilities[3]	127,264	(2,979)	124,285	—	—	—	124,285
Total as at 31/12/2022	**436,779**	**(250,739)**	**186,040**	**(41,389)**	**(3,532)**	**(8,061)**	**133,058**

1 Derivatives are included in the balance sheet items “Financial liabilities held for trading” and “Hedging derivatives”.
2 Repos are covered in the Notes “Deposits from banks” and “Deposits from customers”. They are also included in financial liabilities held for trading at an amount of €2,321 million (previous year: €64 million).
3 Only relates to current accounts, cash collateral or pledged credit balances and other liabilities (including cumulative variation margins), as covered in the Notes “Deposits from banks” and “Deposits from customers”.

Other Information (Continued)

Compliant with IAS 32.42, financial assets and liabilities with the same counterparty are to be netted and the net amount recognised in the balance sheet if such netting of the amounts recognised at the present date is legally enforceable and the intention is to settle on a net basis during the normal course of business or to realise the asset and settle the liability simultaneously. The tables show a reconciliation from the gross amounts prior to netting via the offset amounts to the net amounts after netting for these offsets in the balance sheet. At HVB Group, the offsets in the balance sheet relate to transactions with central counterparties (CCPs), i.e. OTC derivatives (offset of positive and negative fair values that balance out at currency level) and the receivables and liabilities arising from reverse repos and repos concluded with the same central counterparty. At the same time, nettable receivables and liabilities repayable on demand with the same counterparties in the banking business are also offset in the balance sheet. In addition, cumulative changes in the fair value of derivatives on futures exchanges are netted with the cumulative variation margin payments.

The column “Effects of master netting arrangements” shows the financial instruments that are subject to a legally enforceable bilateral master netting arrangement or similar arrangement, but which are not netted in the balance sheet as they do not satisfy the IAS 32.42 netting requirements as described above. At HVB Group, this includes OTC derivatives and repo transactions with individual counterparties with which legally enforceable master netting arrangements have been concluded allowing an offset in the event of default.

In addition, collateral in the form of financial instruments and cash collateral pledged or received in this connection is presented in the tables. Furthermore, securities lending transactions shown off the balance sheet without cash collateral are not included in the above netting tables.

As part of credit risk management notably with regard to the counterparty risk arising from derivatives, netting arrangements are frequently concluded that, in the event of default by the counterparty, permit all derivatives with this counterparty to be netted and positive and negative fair values of the individual derivatives to be offset to create a net receivable. Such net receivables are normally secured by cash collateral to further reduce the credit risk. This involves the debtor of the net receivable transferring money to the creditor and pledging these cash balances. The amount of the cash collateral is adjusted at regular intervals to reflect the current amount of a potential net receivable, although a receivable from cash collateral provided can become a liability from cash collateral received and vice versa depending on the balance of the potential net receivable.

This cash collateral is shown separately as “Cash collateral and pledged credit balances” in the following notes: loans and receivables with banks (at cost), loans and receivables with customers (at cost), deposits from banks and deposits from customers.

51 Securities sale and repurchase and securities lending transactions by balance sheet item

€ millions	2023		2022	
	CARRYING AMOUNT	OF WHICH TRANSFERRED AS COLLATERAL	CARRYING AMOUNT	OF WHICH TRANSFERRED AS COLLATERAL
Financial assets held for trading	78,935	2,710	82,258	1,066
Financial assets at FVTPL	3,324	—	4,933	—
Financial assets at FVTOCI	10,324	2,154	9,837	1,407
Loans and receivables with banks (at cost)	20,553	—	23,336	—
Loans and receivables with customers (at cost)	151,686	—	154,776	—
Total	**264,822**	**4,864**	**275,140**	**2,473**

52 Contingent liabilities and other commitments

€ millions	2023	2022
Contingent liabilities[1]	29,389	29,629
Financial guarantees (guarantees and indemnities)	29,389	29,629
Other commitments	106,595	103,158
Irrevocable and revocable credit commitments with default risk	106,590	103,154
Other commitments	5	4
Total	**135,984**	**132,787**

1 Contingent liabilities are offset by contingent assets of the same amount.

The reporting of contingent liabilities arising from loan commitments was adjusted in the reporting period. In addition to the irrevocable loan commitments, revocable loan commitments, which are in principle subject to credit default risk, are also recognised. A contingent liability exists if an outflow of economic resources is possible (IAS 37.28). The contractual obligation to pay out under the loan commitment granted is irrelevant in this respect. With regard to the revocable loan commitments, which are in principle subject to credit default risk, such an outflow is possible, as only this subsequently also leads to credit default risk. Since the revocable loan commitments, which are in principle subject to credit default risk, are already included in the calculation of expected credit losses, it is consistent and contributes to increasing transparency if they are also included in the reporting of the contingent liabilities arising from loan commitments.

The change in reporting was made retrospectively. In this respect, revocable loan commitments in the amount of €39,437 million, which are in principle subject to credit default risk, are recognised as at 31 December 2022. At the reporting date, these amount to €40,441 million. The previous year's figure was corrected by €6,499 million.

In previous years HVB made use of the option to provide up to 15% of the annual contribution to the bank restructuring fund in the form of fully secured payment claims (irrevocable payment commitments) in accordance with Section 12 of the German Bank Restructuring Fund Act (Restrukturierungsfondsgesetz – RStruktFG). The cash collateral provided for this purpose amounted to €104 million at the reporting date. No new irrevocable payment commitments were issued in the reporting period.

Other Information (Continued)

In previous years HVB made use of the option to provide up to 30% of the annual contribution to the deposit guarantee scheme of German banks in the form of fully secured payment claims (irrevocable payment commitments) in accordance with Section 5a (10) of the German Statute of the Deposit Guarantee Scheme (Statut des Einlagensicherungsfonds – SESF). The cash collateral provided for this purpose amounts to €22 million at the reporting date. No new irrevocable payment commitments were issued in the reporting period.

HVB has made use of the option to provide up to 30% of the annual contribution to the deposit guarantee scheme of German banks (Entschädigungseinrichtung deutscher Banken) in the form of fully secured payment claims (irrevocable payment commitments) in accordance with Section 19 of the German Regulation on Financing the Deposit Guarantee Scheme (Entschädigungseinrichtungs-Finanzierungsverordnung – EntschFinV). The financial collateral provided in this regard amounted to €39 million as at the reporting date (previous year: €39 million). No new irrevocable credit commitments were given in the reporting period.

Contingent liabilities payable to related parties

€ millions	**30/6/2023**	**31/12/2022**
Non-consolidated affiliates	1,835	1,682
of which:		
UniCredit S.p.A.	1,221	1,009
sister companies	612	671
subsidiaries	2	2
Joint ventures	—	—
Associates	—	—
Other investees	97	86
Total	**1,932**	**1,768**

53 Information on relationships with related parties

Besides the relationships with consolidated affiliates, there are a number of transactions involving UniCredit S.p.A. and other affiliated but not consolidated UniCredit companies as a result of the integration of HVB Group into the UniCredit corporate group. The quantitative information in this regard can be found in the notes to the income statement and the notes to the balance sheet.

Within the UniCredit corporate group, HVB has been assigned the role of the group-wide centre of competence for the group-wide hedging of derivative positions of other members of the group. In this role, HVB acts as counterparty for derivative transactions conducted by UniCredit companies, among other things. For the most part, this involves hedging derivatives that are externalised on the market via HVB. Information regarding the exposure to UniCredit and its subsidiaries is provided in the notes to the respective balance sheet item.

Like other affiliates, HVB has outsourced IT activities to UniCredit S.p.A., Milan, a company that is affiliated with the Bank. The goal is to exploit synergies and enable the Bank to offer fast, high-quality IT services by means of a service level agreement. HVB incurred expenses of €246 million for these services in the reporting year (previous-year period: €252 million). This was offset by income of €5 million from services rendered and internal charges (previous-year period: €12 million). Moreover, software products worth €0.3 million were purchased from UniCredit S.p.A. (previous-year period: €0.4 million).

Furthermore, HVB Group has transferred certain back office activities to UniCredit S.p.A. In this context, the latter provides settlement services for HVB and other affiliates in line with a standard business and operating model. HVB Group incurred expenses of €23 million for these services in the reporting period (previous-year period: €53 million).

Loans and advances made to, and contingent liabilities and liabilities assumed for, related parties at the reporting date were as follows:

€ thousands	2023			2022		
	LOANS AND RECEIV-ABLES	CONTINGENT LIABILITIES ASSUMED	LIABILITIES	LOANS AND RECEIVABLES	CONTIN-GENT LIABILITIES ASSUMED	LIABILITIES
Members of the Management Board of UniCredit Bank AG and their related parties	1,331	98	3,949	4,711	123	3,144
Members of the Supervisory Board of UniCredit Bank AG and their related parties	—	30	1,224	—	21	669
Members of the Group Executive Committee[1] and their related parties	—	—	124	—	—	125
Companies controlled by the group of persons listed above	—	—	—	—	—	—

1 Excluding members of the Management Board and Supervisory Board of UniCredit Bank AG.

Members of the Supervisory Board and Management Board at HVB, as well as members of the Group Executive Committee of UniCredit S.p.A. and their respective immediate family members are considered related parties.

Mortgage loans were granted to members of the Management Board and their immediate family members with interest rates of between 0.35% and 4.50% falling due in the period from 2025 to 2039.

All banking transactions involving the group of people listed were conducted at customary market terms with the usual collateral.

Other Information (Continued)

54 Supervisory Board[1]

Andrea Orcel	**Chairman**
Florian Schwarz	**Deputy Chairmen**
Dr Bernd Metzner	
Gianpaolo Alessandro	
Sabine Eckhardt	**Members**
Dr Claudia Mayfeld	
Fiona Melrose	
Claudia Richter	
Thomas Schöner	
Oliver Skrbot	
Christian Staack	
Gregor Völkl	

1 As at 30 June 2023.

55 Management Board[1]

Dr Michael Diederich until 28 February 2023	**Spokesman of the Management Board (CEO)** **(including Labour and Social Affairs pursuant to Section 27 (2) 2 MgVG)**
Marion Höllinger	**Spokeswoman of the Management Board (CEO)** **(since 1 March 2023)** **(including Labour and Social Affairs pursuant to Section 27 (2) 2 MgVG)** **Private Clients Bank** **(until 28 February 2023)**
Artur Gruca	**Digital & Information (CDOO)** **(since 1 May 2023)**
Dr Jürgen Kullnigg	**Risk Management (CRO)**
Jan Kupfer	**Corporates**
Monika Rast since 1 March 2023	**Private Clients Bank**
Christian Reusch	**Client Solutions**
Boris Scukanec Hopinski until 30 April 2023	**Operations Germany (COO)**
Ljubisa Tesić	**Finance (CFO)**

1 As at 30 June 2023

Munich, 1 August 2023

UniCredit Bank AG
The Management Board

Gruca Höllinger Dr Kullnigg Kupfer

Rast Reusch Tesić

Declaration by the Management Board

To the best of our knowledge, and in accordance with the applicable reporting principles for interim financial reporting, the interim consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Interim Management Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group for the remaining months of the financial year.

Munich, 1 August 2023

UniCredit Bank AG
The Management Board

Gruca Höllinger Dr Kullnigg Kupfer

Rast Reusch Tesić

Contacts
Should you have any questions about the annual report or our half-yearly financial report, please contact Media Relations by calling +49 (0)89 378-25801,
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