Basis of the Commerzbank Group

Structure and organisation

Commerzbank is the leading bank for SMEs (the Mittelstand) and a partner to some 26,000 corporate client groups and almost 11 million private and small-business customers in Germany. The Bank offers a comprehensive portfolio of financial services in two business segments – Private and Small-Business Customers and Corporate Clients.

In its corporate client business, Commerzbank focuses on German SMEs, large companies and institutional customers. In international business, the Bank supports customers who have business links with Germany and companies in selected future-oriented sectors. In the Private and Small-Business Customers segment, the Bank serves its customers through the Commerzbank and comdirect brands: via online and mobile channels, in the advisory centre and in person at a local level. The Polish subsidiary mBank is an innovative digital bank. It serves around 5.7 million private and small-business customers, mainly in Poland but also in the Czech Republic and Slovakia.

The two segments Private and Small-Business Customers and Corporate Clients are each managed by a member of the Board of Managing Directors. All staff and management functions are contained in Group Management: Group Audit, Group Big Data & Advanced Analytics, Group Communications, Group Compliance, Group Finance, Group Human Resources, Group Investor Relations, Group Legal, Group Research, Group Strategy, Transformation & Sustainability, Group Tax, Group Treasury and the central risk functions. The support functions are provided by Group Services. These include Group client.data, Corporate Clients & Treasury Platforms, Group Operations, Group Business Platforms, Group Digital Transformation, Group Credit, Group Technology Foundations, Group Organisation & Security, and Group Securities & Brokerage. The staff, management and support functions are combined in the Others and Consolidation division for external reporting purposes.

On the domestic market, Commerzbank Aktiengesellschaft is headquartered in Frankfurt am Main, from where it manages its branch network and its advisory centre serving all customer groups. Following the merger with comdirect Bank AG, which will continue as a brand of Commerzbank Aktiengesellschaft, Commerz Real AG is the most significant domestic subsidiary. Outside of Germany, following the sale of Commerzbank Zrt., Budapest, as at the reporting date Commerzbank had 4 material subsidiaries, 16 operational foreign branches and 26 representative offices in just under 40 countries and was represented in all major financial centres, such as London, New York, Tokyo and Singapore. However, the focus of the Bank's international activities is on Europe.

Commerzbank prepares Group financial statements which, in addition to Commerzbank Aktiengesellschaft as operating lead company, incorporate all material subsidiaries over which the Bank exercises control. The financial year is the calendar year.

Objectives and strategy

Through our "Strategy 2024" programme we are securing the future of Commerzbank – and becoming *the* digital advisory bank for Germany. In so doing, we are combining our greatest strengths to create a unique business model: Commerzbank's advisory excellence, which is based on in-depth knowledge of customer needs, and comdirect's digital capabilities.

With this business model, we are focusing even more than before on the customer – as a reliable partner, as a source of inspiration: we seek to enthuse customers who have set ambitious goals for themselves whether in their personal lives or their businesses. Customers who need an effective partner at their side offering tailored advice on complex issues and straightforward digital solutions and access in all other matters. We are directing our focus towards discerning customers, and in the Corporate Clients segment in particular towards German SMEs, for whom we are and remain the first port of call.

We are using digitalisation to ensure we are just a click away from our customers at times when they do not wish to visit a branch. To become more digital, we are taking our organisation to the next level of development: streamlining our structures and standardising our processes. At the same time, we are using digitalisation to optimise our business model and tap into new sources of revenue.

In this way, we are helping to bring about a significant increase in profitability – an important prerequisite for providing the returns expected by our shareholders and securing our investment strength for the future.

However, it is not only profitability and capital strength that are crucial for securing Commerzbank's future, but also the contribution the Bank makes to meeting the challenges facing society, above all to combating climate change. Commerzbank takes this responsibility seriously and is seeking to become a net zero bank. With ambitious climate protection targets and solutions for our customers' green transformation, we are driving the sustainability of our business and of society as a whole.

In the 2022 financial year, the Bank reached further important transformation milestones in the restructuring and reorganisation of its business model. For example, we have already finalised most of the planned gross reduction of 10,000 full-time positions. The reduction of almost 9,000 positions was contracted by the end of 2022, the majority of them in Germany. A large part of the remaining reduction will come from the optimisation or closure of foreign locations.

Important milestones in restructuring and organizational restructuring have been achieved

All 12 locations of the advisory centre for the German retail banking business have started operating. The original target for rationalising the branch network was also achieved ahead of schedule.

"Mittelstandsbank Direkt" was successfully established in the Corporate Clients segment. By the end of 2022, we had already provided services to 6,000 clients via the German market's first direct bank offering for SMEs.

The Environmental, Social and Governance (ESG) strategy has also been firmly anchored within the Group. For example, the volume of sustainable business reached €247bn in the year under review. We are thus well on the way towards achieving the intended volume of €300bn by 2025.

For the next phase of the implementation of the "Strategy 2024" programme, the Bank has defined new priorities to continue developing earnings potential while continuing to focus on further efficiency increases in both customer segments. The successful launch of "Mittelstandsbank Direkt" in the Corporate Clients segment will be opened up for new customers in the coming year. Furthermore, the international network will be optimised in line with the changing trade corridors. As a result, Commerzbank will continue to be represented in all locations where its customers require it. The Bank is thus consolidating its position as the leading trade finance bank for Germany.

The retail strategy is centred around the Bank's positioning as a digital advisory bank with a needs-based product portfolio and full exploitation of the growth potential offered by the two-brand model. comdirect is the bank for digitally savvy customers who do not require advice. Commerzbank stands for personal customer relationships and advisory services, both at branches and digitally. A large proportion of customer requirements will be addressed via its new advisory centre as well as via digital channels. Commerzbank's personal advisory service offering will in future be tailored more strongly to the needs of wealthy customers and those with more complex advisory needs.

We reaffirmed the key financial targets of the "Strategy 2024" programme at the end of 2022. The Bank is targeting a net return on tangible equity of more than 7.3% and a cost-income ratio of 60%. Based on the positive development of the customer business and supported by higher interest rates, the revenue forecast for the year 2024 has been raised to €10bn; the previous target was €9.1bn. The Bank is implementing the cost-cutting programme as planned. Due to the ongoing inflation, total expenses for 2024 are expected to be €6.0bn. Overall, Commerzbank now anticipates an operating result of around €3.2bn for 2024, against the previous forecast of €3.0bn.

Detailed information on the "Strategy 2024" programme can be found both in the Annual Report 2020 and on the Commerzbank website at https://www.commerzbank.com.

Corporate management

Corporate management in the Commerzbank Group is based on a value-oriented steering concept. This concept is focused on ensuring that the risks entered into by the business units are in line with the external and internal guidelines on risk-bearing capacity and on striving to achieve an appropriate return over the long term on the capital employed. In this respect, the Bank regularly monitors the allocation of scarce resources to business units and actively adapts its business strategy to changing market circumstances in order to boost the enterprise value over the long term.

The annual planning process is a key corporate management tool. In this process, the Board of Managing Directors sets targets for the business units based on the business strategy. Existing resources such as capital and risk limits are allocated to the segments in a way that reflects the targets and risk profiles. The segments operationalise the targets based on the business strategy and the results of the planning process. The Board of Managing Directors carries out regular checks to ensure that business planning is being followed. This ensures that any deviations are identified at an early stage through monthly management reporting, and corrective measures are taken.

In order to manage the Group and its segments, the Bank uses the standard controlling indicators described below, which cover all the essential dimensions of Group management. Their development is monitored as part of regular management reporting.

The management of the Bank takes account of both pillars of capital adequacy requirements. To ensure internal risk-bearing capacity at all times, planning includes allocating economic capital to the segments according to type of risk. The average capital employed in the segments is calculated based on the average segmented risk-weighted assets. At Group level, Common Equity Tier 1 (CET1) capital is shown. The reconciliation of average capital employed in the segments to the Group's CET1 capital is carried out in Others and Consolidation. The Common Equity Tier 1 ratio is a key indicator for the Bank in capital management.

The key figures used for measuring success in the corporate management process are operating profit/loss and group profit/loss after tax and non-controlling interests, along with the cost/income and return on equity ratios and the economic value added calculated from these ratios. The cost/income ratio is used to assess cost efficiency and is defined as the ratio of operating expenses (excluding impairments of goodwill and restructuring expenses) to income before the risk result. The cost/income ratio is calculated in two variants: with and without the inclusion of compulsory contributions in the item "expenses". Segment return on equity is calculated as the ratio of operating profit/loss or pre-tax profit/loss to the average amount of regulatory capital employed. It shows the return on the equity invested in a given business segment. As is standard for value-based management concepts, the target minimum return on capital employed is derived from the expected return on the capital market. Here the focus at Group level is on the return on tangible equity.

Economic value added is the indicator used for determining the performance of the Group. It is defined as the difference between the Group's return on equity and the capital cost rate, multiplied by the Group's equity. The Group's return on equity is the ratio of the consolidated profit after tax and non-controlling interests to the average CET1 capital of the Group.

The calculation of the capital cost rate is based on the Bank's strategic target return on tangible equity and the capital market-oriented Capital Asset Pricing Model (CAPM) and is subject to an annual review. Commerzbank currently calculates its post-tax cost of capital to be 9.2%. The cost of capital is recalculated in an annual review, which is to take place in the first half of 2023.

As Group figures, the controlling data listed above form part of a system of other segment-specific data that vary from segment to segment depending on the business strategy.

Remuneration report

The remuneration report for the Board of Managing Directors and the Supervisory Board is published as a separate report and can be found on the Commerzbank website.

Details pursuant to Art. 315 (4) of the German Commercial Code (HGB)

Details pursuant to Art. 315 (4) of the German Commercial Code (HGB) can be found in the Annual Report section on corporate responsibility. They form part of the Group management report.

Details pursuant to Art. 315a of the German Commercial Code (HGB) and explanatory report

Details pursuant to Art. 315a of the German Commercial Code (HGB) and the explanatory report can be found in the Annual Report section on corporate responsibility. They form part of the Group management report.

Details pursuant to Art. 315d of the German Commercial Code (HGB)

Details pursuant to Art. 315d in conjunction with Art. 289f of the German Commercial Code (HGB), "Declaration on corporate governance", can be found in the Annual Report section on corporate responsibility. They form part of the Group management report. The declaration on corporate governance can also be found on the Commerzbank website.

Details pursuant to Art. 340i (5) in conjunction with Art. 315b (3) of the German Commercial Code (HGB)

Details pursuant to Art. 340i (5) in conjunction with Art. 315b (3) of the German Commercial Code (HGB) can be found in the Annual Report section on corporate responsibility as a combined separate non-financial report. They form part of the Group management report. The combined separate non-financial report can also be found on the Commerzbank website.

Important staffing and business policy events

A report on important staffing changes at management level and special business policy events during the past financial year is provided below.

There were changes in the composition of the Board of Managing Directors during the year under review. Changes for the current financial year 2023 were also announced at both Board of Managing Directors and Supervisory Board level. With the establishment of a Sustainability Advisory Board, Commerzbank has further anchored this particularly important topic in its sustainability strategy. In the summer of 2022, the Bank provided information on the progress it has made with the sustainability strategy through its second Sustainability Dialogue event. To give our investors the opportunity to participate in the transformation of the real economy towards greater sustainability, the Bank issued its third green bond in the middle of the year. In order to remain focused on market developments and trends with respect to the key issue of sustainability, the Main Incubator has been realigned. The bank-specific capital requirements set by the European Central Bank (ECB) for 2023 as part of the Supervisory Review and Evaluation Process (SREP) clearly confirm once again that Commerzbank is well positioned in terms of its capitalisation. The Bank also further strengthened its compliance function in the 2022 financial year.

Changes in the Board of Managing Directors of Commerzbank

At its meeting on 6 July 2022, the Supervisory Board of Commerzbank appointed Sabine Mlnarsky to the Bank's Board of Managing Directors with effect from 1 January 2023. She has assumed responsibility for the Group Human Resources division. As Chief Human Resources Officer and Labour Relations Director she succeeded Sabine Schmittroth, who in line with her personal life planning left Commerzbank when her contract expired at the end of 2022. Sabine Mlnarsky has more than two decades of experience in human resources management. She comes to Commerzbank from the Austrian Erste Group Bank AG. She is a lawyer and had been Head of Human Resources at the central institution of the Austrian savings bank sector since 2016.

At the same meeting, Chief Risk Officer Marcus Chromik also informed the Supervisory Board that he intends to fulfil his management contract, which runs until the end of 2023, but in line with his personal life planning will not accept a possible offer of an extension to his contract. Informing the Supervisory Board at this early stage created clarity and planning security for an orderly transition in this important function.

Change in the chairmanship of the Supervisory Board of Commerzbank initiated

Helmut Gottschalk has decided that, given his age, he will not make himself available for a new term of office as a member of the Supervisory Board and Chairman of the Supervisory Board after the next Annual General Meeting. He has therefore initiated an orderly succession process at an early stage.

In mid-November 2022, Helmut Gottschalk informed the shareholder representatives on the Presiding and Nomination Committee and subsequently the entire Supervisory Board of his decision. He also proposed Dr. Jens Weidmann (54) as a new member of the Supervisory Board who, if elected, will also be available to take on the role of Chairman of the Supervisory Board. The shareholder representatives on the Presiding and Nomination Committee and on the Supervisory Board responded positively to the proposal. In its meeting on 15 February 2023 the Supervisory Board unanimously declared that it intends to appoint Dr. Jens Weidmann as its Chairman if Dr. Weidmann is elected to the Supervisory Board by shareholders at the Annual General Meeting on 31 May 2023 as planned. Helmut Gottschalk has chaired the Supervisory Board of Commerzbank since April 2021. During his tenure to date, the Bank has successfully implemented a comprehensive restructuring under its "Strategy 2024" programme, adapted its business model in line with altered conditions and significantly improved profitability in its core business, such that a renewed distribution from profits for the 2022 financial year can be put to the 2023 Annual General Meeting. Under his leadership, he also drove forward the realignment of the Board of Managing Directors with the appointment of four new members and established a new, performance-based remuneration system and a share ownership directive for the Board of Managing Directors.

Dr. Jens Weidmann was President of the Deutsche Bundesbank from 2011 to 2021. In this capacity, he was also a member of the Governing Council of the ECB. Previously, he was head of the economic and financial policy department in Germany's Federal Chancellery. He also served as Chairman of the Board of Directors of the Bank for International Settlements from 2015 to 2021.

Commerzbank establishes Sustainability Advisory Board and continues Sustainability Dialogue

In May 2022, Commerzbank set up a Sustainability Advisory Board made up of external experts. This makes it one of the first major banks in Germany to have such a body. The new advisory board will help advance sustainability topics at Commerzbank and deliver outside impetus for the sustainable alignment of the Bank's activities. The new body includes representatives from business, politics, academia and society. It met for the first time in Frankfurt am Main on 23 May 2022. Going forward, the Sustainability Advisory Board is due to meet twice a year.

On 4 July 2022, Commerzbank held a second public Sustainability Dialogue event to provide information on the progress it has made with its sustainability strategy. Commerzbank has defined concrete CO_2 reduction targets for half of the loans it has granted. These are to be achieved by 2030. The Bank's efforts to manage climate risk are initially focused on CO_2-intensive sectors. For example, we are seeking to achieve reduction targets of at least 73% by 2030 for the power generation sector, and at least 57% for the significantly larger retail mortgage financing portfolio. Achieving these targets is a key intermediate step for the Bank in its drive to reduce the CO_2 emissions of its entire lending and investment portfolio to net zero by 2050 at the latest. Further information can be found in the combined separate non-financial report on page 42 ff.

Commerzbank issues its third own green bond

Commerzbank successfully issued a green bond with an issuance volume of €500m at the beginning of June 2022. Commerzbank will use the proceeds to finance renewable energy projects. Thanks to the progress made with renewable energy projects, a third own green bond has now been issued to follow those from 2018 and 2020. We have therefore responded to the still growing demand for sustainable investments and are giving our investors the opportunity to participate in the transformation of the real economy towards greater sustainability.

Commerzbank allocated the non-preferred senior bond to loans for onshore and offshore wind projects and solar projects. The bond has a term of 5.25 years with a call date in September 2026 and a coupon of 3% per annum.

Commerzbank is an established player in the market for sustainable and green bonds. For years, the bank has been supporting its customers in preparing sustainable bond issues and placing them in the international capital market.

Realignment of the Main Incubator

Commerzbank realigned its Main Incubator at the end of April 2022: the early-stage investor will in future focus not only on fintechs but also on start-ups specialising in sustainability, known as greentechs. To accompany the shift in strategy, the new brand "neosfer" was created.

There has been no change to the unit's business principles: it will continue to monitor trends, invest venture capital and make new applications work for the Bank.

SREP capital requirements for Commerzbank unchanged for 2023

The ECB has left the bank-specific capital requirements for 2023 defined for the Commerzbank Group as part of the Supervisory Review and Evaluation Process (SREP) unchanged compared with 2022. The additional capital adequacy requirement under Pillar 2 (P2R) remains at 2% of total capital, of which at least 1.125% must be covered by Common Equity Tier 1 capital. The SREP decision replaces the previous SREP decision with effect from 1 January 2023.

The Common Equity Tier 1 capital requirement for Commerzbank at Group level remained unchanged at 9.44% of risk-weighted assets (MDA threshold) as at 30 September 2022, taking into account the requirements of the current SREP decision. It comprises the CET1 minimum of 4.5%, the P2R requirement of 1.125%, the capital conservation buffer of 2.5%, the DSIB capital buffer for other systemically important banks, which is unchanged at 1.25%, the countercyclical capital buffer, currently 0.04%, and an AT1 shortfall of 0.03%.

Commerzbank expects the MDA threshold to rise to around 10.1% in the first quarter of 2023 due to the industry-wide increase in countercyclical capital buffers and the activation of the sectoral systemic risk buffer in Germany.

A requirement to hold additional own funds for the risk of excessive leverage (Pillar 2 requirement for the risk of excessive leverage – P2RLR) has not been set for the Commerzbank Group.

With a CET1 ratio of 14.1% as at 31 December 2022, we are a comfortable distance from the MDA threshold and thus have sufficient scope for the planned distribution of 30% of consolidated profit after deduction of AT1 coupon payments.

Further strengthening of the compliance function

In 2022 the Bank continued its activities to further strengthen the compliance function. In addition to the structural changes, these also related to staff training and the successful recruitment of qualified compliance experts to work at head office and in foreign locations.

To further improve the management of compliance risks, the compliance function implemented various long-term measures in areas such as global financial crime and global markets compliance, further strengthening compliance both in Germany and abroad.

In the year under review, the Bank rigorously pressed ahead with the further development of the global compliance system landscape in line with the latest market standards. Significant steps were taken in the technical renewal of transaction-based sanctions screening. At the same time, the much more stringent sanctions requirements were implemented successfully while maintaining a consistently high level of quality. With the focus on the second line of defence tasks for compliance as a risk management and control function, the responsibilities and resources for the "Actimize Customer Due Diligence" (know-your-customer scoring) and "Watch List Filtering" (name screening) systems were transferred to the "client.data" unit, in which all processes and systems across the Bank relating to client master data, know-your-customer activities and document management are bundled.

In 2022, Global Markets Compliance completed the Global Surveillance Implementation Programme (GSIP) launched in 2018. The programme was aimed at expanding global surveillance of trade and communications. With the associated introduction of the SCILA trade monitoring software, monitoring was standardised across asset classes for all Commerzbank trading locations and a global minimum standard for trade monitoring established in line with regulatory requirements.

At the same time, Commerzbank further developed existing governance structures and further expanded the global compliance processes in the business units. This included updating and further developing the compliance sub-risk strategy as part of Commerzbank's overall risk strategy, which in particular defines the strategic fields of action and the risk appetite for compliance risks. We also further strengthened the governance processes for managing and monitoring compliance controls.

With regard to the German Corporate Due Diligence in Supply Chains Act that entered into force on 1 January 2023, Group Compliance fulfils the role of the second line of defence in its capacity as the global functional lead, and thus defines Group-wide minimum standards for the Bank in order to identify and prevent breaches of certain human rights and certain environmental obligations at (in)direct suppliers and in the Bank's own area of business. To ensure that the requirements are met, we have established a comprehensive compliance programme that has already been initialised and will be systematically extended in 2023. In 2022, a Human Rights Officer was appointed to assume the responsibilities arising from the German Corporate Due Diligence in Supply Chains Act. The Chief Compliance Officer performs this important and responsible role, in which capacity they report directly to the Chief Risk Officer. The Board of Managing Directors is also assisted by other units with a view to covering human rights standards as holistically as possible within Commerzbank.

For more information on compliance risks and on integrity and compliance at Commerzbank, please see page 142 f. of the Group Risk Report and page 67 f. of the combined separate non-financial report.

Economic report

Economic conditions

Economic environment

The global economy lost considerable momentum in 2022. Although the coronavirus situation eased noticeably and coronavirus restrictions were largely lifted in most economies, Russia's war against Ukraine triggered new shock waves. Fears of an energy crisis drove up energy prices worldwide. In addition, many companies continued to complain about a lack of upstream products.

In China, the government stuck to its zero-Covid policy for almost the whole of 2022. Time and again, entire cities with millions of inhabitants were locked down at the slightest outbreak of coronavirus. This, together with the problems in the real estate sector, meant that economic growth more than halved in 2022 compared with 2021.

In the USA, the economy contracted slightly in the first half of 2022 following the expiry of the coronavirus-related assistance programmes. Nevertheless, unemployment fell back to the very low level seen before the outbreak of the coronavirus pandemic, which is why wages rose more sharply. Together with the substantial rise in energy prices, this droves inflation to historic highs.

General economic conditions were difficult even in 2022

In the eurozone, the economy was affected not only by the weaker foreign trade environment but also the fear of gas rationing following the widespread cessation of Russian gas supplies. Prices for gas and electricity therefore increased considerably, placing a huge burden on both households and businesses. In the course of the year, higher production costs due to energy prices also caused prices of non-energy goods to rise ever more sharply. In addition, the production of some goods became unprofitable because manufacturers were only able to pass on higher energy costs to their customers to a limited extent. As a result, the eurozone economy lost significant momentum in the second half of the year.

In Germany, too, economic growth weakened noticeably in the course of the year. Weaker demand from abroad impacted on the export-oriented industry in particular.

At the same time, a lack of intermediate products prevented companies from working quickly through their large order backlogs. The boom in the construction industry also ended in the spring. Over the rest of the year, production in this sector followed a downward trend. By contrast, the services sector still benefited from the lifting of coronavirus restrictions, although this positive effect steadily weakened as the year progressed. The fall-off in economic activity was also reflected in the labour market. Employment growth stalled, and the number of unemployed has risen slightly since the summer.

Trends on the financial markets in 2022 were dominated by the change of course in monetary policy. Against a backdrop of high inflation, the US Federal Reserve heralded the turnaround in interest rates in March. By the beginning of February 2023, it had increased its policy rates by a total of 450 basis points. The ECB began its own cycle of interest rate increases at the end of July. Since then, it has raised its policy rates by a total of 300 basis points. The bond market reacted with a significant rise in yields. At times, ten-year US government bonds had yields of over 4%, having been below 2% at the beginning of the year. The yield on ten-year German government bonds rose from 0% to around 2%. Share prices fell substantially in 2022. The euro regained ground against the US dollar at the end of the year but was still around 10% below the level at the end of 2021.

Sector environment

The difficult economic situation – primarily in connection with the energy crisis, the sharp rise in inflation and the Russia-Ukraine war – meant that 2022 was another particularly challenging year for the banking sector. Although extensive government assistance programmes have so far prevented a more severe economic slump, the negative consequences for the economy and society are gradually beginning to show. In particular, the risks for the banking environment's short-term prospects are still considered to be very high. Nervousness has returned to the international capital markets with the geopolitical uncertainties. All over the world, the industrial sector is suffering from supply chain problems. These are primarily attributable to China's very strict zero-Covid strategy, which was applied for a long while, and to the sanctions imposed in response to Russia's invasion of Ukraine. China is now only able to fulfil its role as the engine of the global economy to a limited extent: its economic growth has slowed markedly due to high levels of corporate debt, a weaker labour market and turbulence on the real estate market.

According to the Ifo Business Climate Index, business expectations have recently improved in Germany, but remain at a low level. Energy and raw material prices as well as the cost of materials have tended to rise sharply, fuelling inflation worldwide. High inflation reduces purchasing power and thus acts as a drag on private consumption. At the same time, the gas supply issue is causing considerable uncertainty among companies and putting a damper on investment.

The impact on the lending business of European banks has been significantly mitigated to date, mainly through support measures implemented by governments and central banks. Income losses were limited for both companies and households; employment conditions were protected and the supply of credit to the economy was guaranteed. The financial markets are also still proving robust in the face of the challenging conditions, with price losses so far significantly lower than during the Lehman crisis and at the beginning of the coronavirus pandemic. As a result, European banks have so far been spared any major defaults despite uncertainty about their provisioning requirements and volatility in their trading income. However, receivables from consumer loans and from loans to companies and self-employed persons with energy-intensive production are subject to high risk. There are also fears of loan defaults on commercial property financing if recent changes to working and shopping habits are maintained over the long term and there is a further rise in debit interest rates.

The boom in the residential real estate market abated significantly in the course of 2022. While house prices still rose by more than 10% on average last year, price momentum has slowed significantly over the course of this year. The sharp rise in mortgage rates – from around 1.3% at the start of the year to around 3.4% at the end of 2022, while house prices are still rising on average – has significantly reduced the affordability of a property purchase for households. Many prospective buyers are unlikely to be able to afford initial financing at current prices, especially as the current high level of inflation continues to put a strain on the budgets of many households. However, a lot of households still have a certain financial buffer as a result of their increased propensity to save during the first phase of the coronavirus pandemic. Long fixed-interest periods on existing properties instead of variable-rate mortgage loans, as well as the preferred choice of annuity loans instead of bullet mortgage loans, also have the effect of reducing risk. As a result, when fixed-interest periods expire, follow-up financing costs are at present generally not much higher than in the previous period. More extensive defaults on existing mortgages are therefore not to be expected in Germany in the foreseeable future.

Any considerable fall in house prices is also rather improbable on a nationwide average. That is because the continuing shortage of affordable housing, the relatively low ownership rate compared with other countries, and the reallocation of assets against a backdrop of a high level of economic uncertainty and sharply increased inflation rates are bolstering the market for residential real estate.

According to official insolvency statistics for Germany, defaults in the servicing of loans have so far remained within limits. For example, the number of consumer insolvencies nationwide fell noticeably last year, although this is likely to be partly an after-effect of the law introduced in 2020 to gradually shorten residual debt discharge proceedings from six to three years. In contrast to the number of cases, the total amount of outstanding receivables increased more than fourfold. In corporate insolvencies, however, fewer major cases meant a reduction in expected creditor claims to less than a quarter. In terms of figures, corporate insolvencies declined only slightly as the SME construction sector in particular recorded increases. The change in the number of business closures was less favourable than for corporate insolvencies. For example, the number of companies discontinuing operations completely rose by 7% in the period from January to October 2022 compared with the corresponding prior-year period.

As a neighbour of Ukraine, Poland has been affected directly by the war, with the adverse economic effects also having a negative impact on its banking sector. Polish GDP has lost considerable momentum in recent quarters. Despite these unfavourable conditions, the Polish banking sector has so far proved robust in the assessment of financial stability. Risks come primarily from unsecured consumer loans and mortgage loans. There are currently numerous pending lawsuits from private customers relating to Swiss franc real estate loans with indexing clauses. “Credit holidays” under which payments can be temporarily suspended also have a negative impact on income in the Polish banking sector. All in all, its return on capital is currently only just in positive territory.

Financial performance, assets, liabilities and financial position

Commerzbank achieved its best result in more than a decade in the 2022 financial year. Double-digit income growth was recorded in 2022 despite substantial charges at our Polish subsidiary mBank. This exceptionally strong income momentum was driven by robust customer business in both segments and the boost provided by interest rate increases on the part of both the ECB and the Polish central bank.

The Commerzbank Group recorded an operating profit of €2,099m for the year under review, compared with €1,183m in the previous year. The consolidated profit attributable to Commerzbank shareholders and investors in additional equity components for the period under review was €1,435m.

Robust customer business in fiscal year 2022

Total assets of the Commerzbank Group as at 31 December 2022 were €477.4bn, compared with €467.4bn at the end of 2021. The slight increase of 2.1% resulted in particular from liquidity inflows.

The decline in risk-weighted assets (RWA) to €168.7bn was mainly due to lower risk-weighted assets relating to credit risk and market risk. Common Equity Tier 1 capital was €23.9bn and the corresponding Common Equity Tier 1 ratio 14.1%.

Explanations regarding changes or amendments to the accounting and measurement methods can be found in Notes 2 and 4 to the Group financial statements.

Income statement of the Commerzbank Group

The individual items in the income statement were as follows in 2022:

Net interest income was €6,459m in the period under review, compared with €4,849m in the previous year. The significant increase of 33.2% was attributable to a considerable rise in income from interest-bearing business in both customer segments. mBank was largely responsible for the increase in net interest income in the Private and Small-Business Customers segment. The significant rise in key interest rates in Poland since autumn 2021 had a particularly positive impact. As a result, the deposit business made a significant contribution to mBank's net interest income, which more than doubled. Rising lending and deposit volumes also led to corresponding income growth. Interest-bearing business in Germany also recorded a positive performance. Firstly, the further increase in total lending in the domestic market resulted in income growth, including in connection with retail mortgage financing and individual loans. Secondly, the turnaround in interest rates generated additional deposit income. In addition, the year-on-year increase in interest rates in the Private and Small-Business Customers segment was noticeably impacted by the income generated in the first half of the year in connection with special repayments of mortgage loans. Net interest income in the Corporate Clients segment was also higher than in the prior-year period, with the increase attributable in particular to a positive performance in SME business. The significant decrease in net interest income in the Others and Consolidation segment was attributable in particular to the fall in additional income from the fulfilment of the credit volume requirements in connection with targeted longer-term refinancing operations (TLTROs) with the ECB compared with the corresponding prior-year period. This fall was due in part to the fact that the previous year also included amounts relating to 2020, since the fulfilment of the credit volume requirement was not established until 2021, and also to internal fair value compensation payments for special repayments of mortgage loans to the Private and Small-Business Customers segment due to the rise in interest rates.

Net commission income was slightly lower than the prior-year figure at €3,519m. In the Private and Small-Business Customers segment, domestic securities volumes declined, mainly due to weak market developments in the period under review, which was reflected in declining commission income. By contrast, income from payment transactions increased. Higher commission income at mBank was due in particular to an increase in income from payment transactions. Net commission income in the Corporate Clients segment was higher than in the prior-year period, mainly due to an increase in foreign currency business and trade finance.

The net income from financial assets and liabilities measured at fair value through profit or loss was €451m in the period under review, after €980m in the prior-year period. The decline of 54.0% was primarily attributable to considerably higher positive remeasurement effects in the comparable prior-year period, for example in relation to investments.

Statement of comprehensive income I €m	2022	2021[1]	Change
Net interest income	6,459	4,849	1,610
Dividend income	32	22	10
Risk result	–876	–570	–306
Net commission income	3,519	3,607	–88
Gain or loss from financial assets and liabilities measured at fair value through profit and loss and net income from hedge accounting	338	884	–546
Other profit or loss from financial instruments, income from at-equity investments and other net income	–886	–911	25
Operating expenses	5,844	6,230	–386
Compulsory contributions	642	467	175
Operating profit/loss	**2,099**	**1,183**	**917**
Restructuring expenses	94	1,078	–983
Pre-tax profit or loss	**2,005**	**105**	**1,900**
Taxes on income	612	–248	860
Consolidated profit/loss	**1,393**	**354**	**1,040**
Consolidated profit or loss attributable to Commerzbank shareholders and investors in additional equity components	1,435	430	1,005

[1] Figures adjusted due to restatements (see Group financial statements, Note 4).

Other profit or loss from financial instruments was €–292m in the period under review. This includes charges against income of €278m relating to interest and repayment deferrals for private real estate financing at mBank.

Other net income of €–606m chiefly reflects provisions of €650m in connection with mortgage loans issued in Swiss francs at mBank, which were offset only to a small extent by reversals of provisions and write-ups on equity holdings.

The risk result of €–876m was significantly higher than the prior-year figure of €–570m, with the increase primarily attributable to effects in connection with the Russia-Ukraine war. The loan loss provisions required in the Private and Small-Business Customers segment for the period under review increased – particularly in Germany – by €73m compared with the prior-year period, while the risk result in the Corporate Clients segment rose sharply by €296m due in particular to the Russia-Ukraine war. The top-level adjustment (TLA) booked during the year in connection with the Russia-Ukraine war was no longer in place as at the end of the year, as the risk provisioning requirements remaining after the exposure reduction are now reflected in individual transactions. The direct effects of the coronavirus pandemic have abated to the point where no further charge is expected from it. The coronavirus TLA of €–523m was therefore fully reversed in the second quarter of 2022. As at 31 December 2022 the total for the TLA for secondary effects stood at €–482m. Further information on the TLA can be found on page 123 ff. of the Group risk report.

Operating expenses were reduced by 6.2% compared with the prior-year period to €5,844m. Personnel expenses were down by 1.4% on the prior-year level at €3,415m, with the elimination of full-time positions more than offsetting cost-generating effects including higher variable remuneration connected with profitability. Administrative expenses, including depreciation on fixed assets and amortisation of other intangible assets, were reduced by 12.2% to €2,429m. The decrease was primarily attributable to a fall in IT expenses and lower costs in connection with the streamlining of the branch network. In addition, the corresponding prior-year figure included a charge arising from the derecognition of an intangible asset in connection with the termination of the project to outsource securities settlement to HSBC Transaction Services GmbH, resulting in a significant decline in amortisation expense.

Compulsory contributions, which are reported separately, rose sharply by €175m compared with the prior-year period to €642m. The significant increase of 37.4% resulted in particular from a new mBank levy for an enhancement to Poland's deposit insurance scheme and the rise in the European banking levy due to higher contributions to the Single Resolution Fund of the Banking Union. In the period under review, Commerzbank made use of the opportunity to meet part of its annual contribution to the European banking levy in the form of irrevocable payment commitments.

Restructuring expenses of €94m during the period under review affected earnings performance. These mainly related to the implementation of the “Strategy 2024” programme and resulted in particular from the recognition of restructuring provisions in connection with property matters.

The pre-tax profit was €2,005m, compared with €105m in the prior-year period. Tax expenses of €612m were reported for the period under review. These resulted mainly from current tax expense and extraordinary charges in Poland that were not fully deductible for tax purposes, offset by tax income from the recognition of deferred tax assets on tax loss carryforwards.

The consolidated profit after tax was €1,393m, compared with €354m in the previous year.

Best Group result in more than a decade

Net of non-controlling interests, a consolidated profit of €1,435m was attributable to Commerzbank shareholders and investors in additional equity components for the 2022 financial year, compared with €430m in the previous year.

Against the backdrop of positive results for the 2022 financial year in accordance with the German Commercial Code (HGB), the plan is to service all capital instruments issued by Commerzbank Aktiengesellschaft for the 2022 financial year. We will propose to the Annual General Meeting that a dividend of €0.20 per share be distributed for 2022. Furthermore, in line with its policy on returning capital, Commerzbank has applied to the ECB and the Finance Agency for a share repurchase programme in the amount of €122m.

Total comprehensive income, which includes both consolidated profit/loss and other comprehensive income for the period, came to €1,263m in 2022, compared with €774m in the previous year.

Other comprehensive income of €–130m was comprised of the sum of changes in the revaluation reserve (FVOCImR) (€–364m), the cash flow hedge reserve (€–46m), the currency translation reserve (€48m), the change in companies accounted for using the equity method (€–1m), the change from the remeasurement of defined benefit plans not recognised in the income statement (€87m), the change in own credit spreads of liabilities FVO not recognised in the income statement (€147m), and the change in remeasurement effects from net investment hedges (€–1m). Further information on other comprehensive income can be found on page 156 of the Group financial statements.

Operating profit per share was €1.68 and earnings per share €0.99. The comparable figures in the prior-year period were €0.94 and €0.23 respectively.

Balance sheet of the Commerzbank Group

Total assets of the Commerzbank Group as at 31 December 2022 were €477.4bn, up 2.1% compared with year-end 2021.

Cash on hand and cash on demand rose by €25.7bn to €75.2bn. The strong growth on the 2021 year-end balance was attributable to an increase in deposits held with central banks due to inflows of liquidity.

Financial assets at amortised cost fell by €3.0bn to €296.2bn compared with the end of 2021. The overall increase of €4.1bn in loans and receivables in business with corporate and retail customers was more than offset by the interest rate-related decrease in securitised debt instruments, which fell by €5.4bn compared with the end of the previous year.

Financial assets in the fair value OCI category were €34.9bn, down €5.2bn compared with the end of 2021. The decrease of 13.0% resulted from a lower volume of debt securities in connection with liquidity management and from declines in holdings at mBank.

At €29.9bn, financial assets mandatorily measured at fair value through profit or loss were €1.5bn higher than at the end of the previous year. The increase was primarily attributable to an expansion of collateralised securities repurchase agreements. In this regard, loans and claims on banks and central banks rose by €2.7bn in total. By contrast, debt instruments fell by €1.2bn.

Financial assets held for trading were €33.6bn at the reporting date, €4.6bn lower than at the end of 2021. While positive fair values from interest-related products decreased by €8.2bn, positive fair values from currency-related products increased by €5.9bn. Securitised debt instruments rose slightly to €2.8bn compared with the end of 2021.

Non-current assets held for sale and disposal groups were €0.2bn, compared with €0.8bn at the end of 2021. The reduction resulted in particular from the sale of Commerzbank Zrt. to Erste Bank Hungary Zrt.

Assets | €m	31.12.2022	31.12.2021[1]	Change in %
Financial assets – Amortised cost	296,192	299,181	–1.0
Financial assets – Fair value OCI	34,887	40,115	–13.0
Financial assets – Mandatorily fair value P&L	29,912	28,432	5.2
Financial assets – Held for trading	33,573	38,155	–12.0
Other assets	82,873	61,525	34.7
Total	**477,438**	**467,409**	**2.1**

Liabilities and equity | €m	31.12.2022	31.12.2021[1]	Change in %
Financial liabilities – Amortised cost	390,385	373,976	4.4
Financial liabilities – Fair value option	25,018	19,735	26.8
Financial liabilities – Held for trading	24,759	27,323	–9.4
Other liabilities	6,371	16,549	–61.5
Equity	30,905	29,827	3.6
Total	**477,438**	**467,409**	**2.1**

[1] Figures adjusted due to restatements (see Group financial statements, Note 4).

On the liabilities side, financial liabilities at amortised cost were up €16.4bn to €390.4bn compared with the end of the previous year. The increase versus year-end 2021 was attributable to a marked rise of €17.8bn in deposits and other financial liabilities, especially from corporate and retail customers. Bonds and notes issued fell by €1.4bn compared with the end of the previous year.

Financial liabilities under the fair value option amounted to €25.0bn on the reporting date and were thus up €5.3bn compared with the end of 2021. The increase was primarily attributable to a seasonal expansion of securities repurchase agreements.

Financial liabilities held for trading were €24.8bn, down €2.6bn compared with the end of 2021. The decrease was due to the negative fair values of derivative financial instruments, especially interest-rate-related derivative transactions, which fell by €6.2bn. By contrast, negative fair values of currency-related derivative transactions increased by €5.0bn.

Provisions fell by €0.2bn compared with the end of the previous year to €3.5bn. The decline was mostly due to lower restructuring provisions under the "Strategy 2024" programme.

The elimination of the full €0.7bn of liabilities from disposal groups resulted in particular from the sale of Commerzbank Zrt. to Erste Bank Hungary Zrt.

Equity

The equity capital attributable to Commerzbank shareholders reported in the balance sheet on 31 December 2022 was €26.9bn, up 4.5% compared with year-end 2021. Further information on the change in equity can be found on page 159 ff. of the Group financial statements.

Risk-weighted assets were €168.7bn as at 31 December 2022 and thus €6.5bn lower than at year-end 2021. This change was attributable to a decrease in risk-weighted assets from credit and market risks. The decrease in credit risks mainly resulted from declines in securities positions and two new securitisation transactions at mBank. This was partly offset by increases from the anticipation of initial effects from model adjustments under the "IRB Repair" programme set up by the banking supervisory authorities. The decrease in risk-weighted assets from market risks was caused by improved regulatory requirements due to a reduction in the regulatory multiplier and by position changes. The inclusion of the increased income for 2022 due to the annual update of the three-year time series (standardised approach) led to an increase in risk-weighted assets from operational risks and thus had a slightly offsetting effect. The switch from the internal model to the standardised approach was made in the fourth quarter of 2021.

As at the reporting date, Common Equity Tier 1 capital was €23.9bn, compared with €23.8bn as at 31 December 2021. The positive impact of the net profit, actuarial gains and improved foreign currency reserve on Common Equity Tier 1 capital was partly offset by a negative development of the revaluation reserve and higher regulatory capital deductions. The Common Equity Tier 1 ratio was 14.1%, compared with 13.6% in the previous year. This increase in the ratio was mainly due to the decrease in risk-weighted assets. The Tier 1 ratio was 16.0% as at the reporting date, compared with 15.5% as at the end of 2021.

This improvement was also attributable to the decrease in risk-weighted assets, even though it was no longer possible to count AT1 instruments as core capital under the CRR provisional rules.

Hard core capital ratio at a comfortable 14.1%

Tier 2 capital was reduced due to the cancellation of a Tier 2 bond, the elimination of Tier 2 instruments from temporary grandfathering and amortisation effects (eligibility based on residual maturity). The new issues of two Tier 2 bonds increased Tier 2 capital by around €0.9bn. The total capital ratio (with transitional provisions) was 18.9% as at the reporting date, compared with 18.4% as at the end of 2021. Own funds decreased by €0.3bn year on year to €31.9bn as at 31 December 2022.

The leverage ratio, which is equal to Tier 1 capital divided by leverage ratio exposure, was 4.9%.

Funding and liquidity of the Commerzbank Group

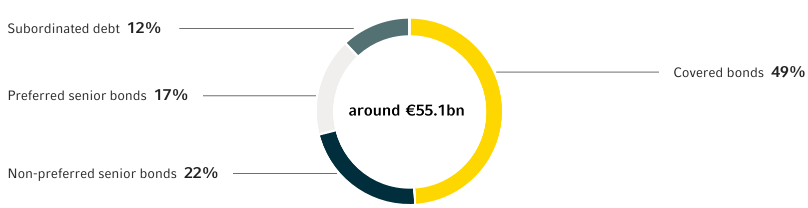
The liquidity management of the Commerzbank Group is the responsibility of Group Treasury, which is represented in all major Group locations in Germany and abroad and has reporting lines in all subsidiaries.

Liquidity management comprises both operational and strategic components. Operational liquidity management encompasses management of daily payment inflows and outflows, planning for payment flows expected in the short term and management of access to central banks. The division is also responsible for access to unsecured and secured sources of funding in the money and capital markets and the management of the liquidity reserve portfolio. Strategic liquidity management involves managing maturity profiles for liquidity-relevant assets and liabilities within specified limits and corridors. Additional information on this subject can be found in the “Liquidity risk” section of the Group risk report.

Guidelines for the funding profile and funds are derived from the business strategy and reflect risk tolerance. The Group’s funding is appropriately diversified in terms of investor groups, regions, products and currencies. Top-level decisions about liquidity management are taken by the Group Asset Liability Committee (ALCO), which meets at regular intervals.

The quantification and limitation of liquidity risks is carried out via an internal model in which expected cash inflows are compared against expected cash outflows. The limits set are monitored by the independent risk function. ALCO and the Board of Managing Directors receive regular reports on the liquidity risk situation.

Capital market funding structure[1]
As at 31 December 2022



[1] Based on reported figures.

In the 2022 reporting period, the money and capital markets were dominated by the Russia-Ukraine war, the energy crisis, inflation and the ECB’s interest rate increases. Commerzbank’s liquidity and solvency were assured at all times. Furthermore, the Bank’s liquidity management is always able to respond promptly to new market circumstances.

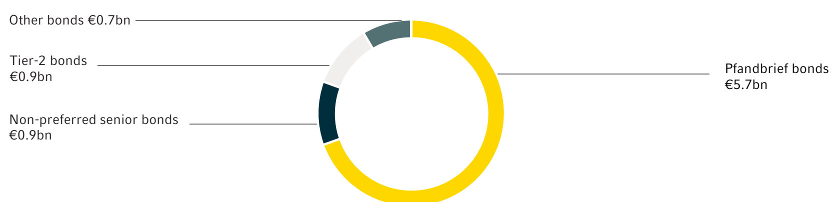
The Commerzbank Group raised a total of €8.2bn in long-term funding on the capital market in the 2022 reporting year. Of this, €5.7bn was attributable to Pfandbriefe and €2.4bn to unsecured issues. Commerzbank Aktiengesellschaft issued a total of five mortgage Pfandbriefe in benchmark format with a total volume of €5.25bn and maturities of between three and ten years. The average re-offer spread was around four basis points above the swap midpoint.

After issuing its third own green bond with a volume of €500m in June, Commerzbank issued a non-preferred senior bond with a volume of €600m and a term of five and a half years in September. The bond is callable after four and a half years, and the re-offer spread was 220 basis points above the swap midpoint. Another bond was issued with a volume of CHF 120m and a term of four years.

In addition, two subordinated Tier 2 bonds with volumes of €500m and GBP 350m respectively were placed on the capital market. The two bonds have a term of 10.25 years and a call option after 5 years. Secured and unsecured private placements with a combined volume of around €800m were also issued.

In the year under review, Commerzbank repaid the majority of the funds from the ECB's targeted longer-term refinancing operations III programme (TLTRO III) ahead of schedule. At year-end 2022, Commerzbank still had €9bn in TLTRO III funds.

Group capital market funding 2022
Volume €8.2bn



As at the reporting date, the Bank had a liquidity reserve of €104.7bn in the form of highly liquid assets. The liquidity reserve portfolio works as a buffer in stress situations. It is funded in line with the liquidity risk appetite to ensure that it is kept at the required size throughout the entire reserve period stipulated by the Board of Managing Directors. Part of this liquidity reserve is held in a separate stress liquidity reserve portfolio managed by Group Treasury to cover liquidity outflows should a stress event occur and ensure solvency at all times.

The Bank also holds an intraday liquidity reserve portfolio. As at the reporting date, the total value of this portfolio was €6.1bn.

At 141.1% (average of the last 12 month-end values), Commerzbank was well above the minimum 100% level required for the liquidity coverage ratio (LCR). Commerzbank's liquidity situation as at the end of the reporting period was therefore comfortable given its conservative and forward-looking funding strategy and complied with internal limits and applicable regulatory requirements.

Summary of 2022 business position

The difficult economic situation – primarily in connection with the energy crisis, the sharp rise in inflation and the Russia-Ukraine war – meant that the 2022 financial year was another particularly challenging one for the banking sector.

Despite these challenging conditions, Commerzbank can look back on a successful 2022 financial year. Major parts of the restructuring, which had a profound impact on the entire organisation and characterised large periods of the first two years of the implementation process, have now been largely completed. For example, we have already finalised most of the planned gross reduction of 10,000 full-time positions. The reduction of almost 9,000 positions was contracted by the end of 2022, the majority of them in Germany. A large part of the remaining reduction will come from the optimisation or closure of foreign locations, which can be achieved without major implementation risks. At the same time, we have rationalised our domestic branch network more quickly than we had planned two years ago. Of the original 1,000 branches, 450 remained by mid-2022, meaning that we achieved the reduction originally announced as part of our strategy ahead of schedule.

Successful fiscal year 2022

The progress that we have made is demonstrated in impressive fashion in the results for the 2022 financial year. The income performance in the first six months of the year under review was significantly better than planned and enabled us to adjust our expectations for operating income in 2022 as set out in the Annual Report 2021 to reflect the steadily successful business performance – despite the difficult underlying conditions and considerable policy-induced charges at our Polish subsidiary mBank. Whereas at the beginning of the year we were still anticipating that the total operating income achievable for the year under review would be roughly at the same level as the previous year, we raised our expectations with the publication of the 2022 half-year report. Our income grew at a double-digit rate in the 2022 financial year. This exceptionally strong income momentum was driven by robust customer business in both segments, while the ECB's interest rate increases obviously also gave us a boost.

Against the backdrop of continuing difficult conditions, the risk result was almost 54% higher than in the previous year at €–876m, but still in line with our expectations communicated during the second half of the year of around €–0.7bn – assuming the utilisation of TLAs.

We regularly reviewed existing TLAs during the year. As a result, we had a TLA balance of €–482m available as at 31 December 2022, compared with €–523m as at 31 December 2021, to cushion expected further crisis effects.

Despite growing inflationary pressures and further increases in compulsory contributions, especially at mBank, we maintained a high level of cost discipline in the year under review. We were able to reduce our operating expenses in the previous financial year despite continued high capital expenditure. Overall, operating expenses including compulsory contributions decreased by 3.2% in 2022. At just under €6.5bn, costs were only slightly above the target figure of €6.4bn. This also reflects the higher variable remuneration due to the very positive growth in operating profit. Excluding this effect and the higher compulsory contributions, we reduced the Bank's operating cost base by almost 10% overall last year.

Overall, despite exceptional charges at our Polish subsidiary mBank, we generated an operating profit of €2.1bn, significantly above the forecasts made at the beginning of 2022. The success of the past year was based on a sharp increase in income and the continuation of highly disciplined cost management. This enabled us to significantly exceed the consolidated profit forecast of more than €1bn for 2022.

In the Private and Small-Business Customers segment, the focus in the 2022 financial year was on implementing the central initiatives under the "Strategy 2024" programme. The main focal points were the expansion of the online and mobile banking channels, the digitalisation of processes and procedures, and the launch of the "advisory centre" distribution channel. The advisory centre has been progressively and successfully launched at all 12 locations since mid-September 2022. Skilled advisors are available to customers by telephone, e-mail or video, including in the evenings and at weekends, to discuss all financial matters such as accounts, cards, securities investments and real estate financing. On the income side, supported by the turnaround in interest rates we were again able to achieve tangible growth in the Private and Small-Business Customers segment in the past financial year. This was reflected in a significant increase in net interest income. As expected, net commission income failed to match the previous year's level. The decrease compared with 2021 reflects a €30bn drop in the volume of securities to €189bn as a result of the weaker stock markets. By contrast, the volume of loans further increased by around €3bn to €124bn. The volume of retail mortgage financing increased to €95bn, although new business cooled noticeably in the course of the year under review. The volume of deposits expanded by around €7bn to €155bn.

Overall, the Private and Small-Business Customers segment significantly increased its operating income compared with the previous year, in line with our expectations. It was also able to more than offset the high charges from the provisions for foreign currency loans at mBank. Against the backdrop of the difficult macroeconomic environment, the risk result increased significantly compared with the previous year. This was also in line with our expectations. Costs in Germany fell slightly as expected, but this was not fully reflected in total operating expenses for the segment as a whole due to an increase in costs at mBank. We were nevertheless able to keep operating expenses slightly below the prior-year level; given the significantly higher operating income recorded, this led to a tangible improvement in the cost/income ratio. Overall, the segment's operating profit increased as expected, while the operating return on equity also showed a pleasing year-on-year improvement, as anticipated.

The Corporate Clients segment focused on implementing strategy measures in the 2022 reporting year. The establishment of a business model offering differentiated and efficient relationship management, the creation of the technical infrastructure and further digitalisation projects were the focal points of capital expenditure in the Corporate Clients business. With our "Mittelstandsbank Direkt", we established the first genuine direct banking offering for companies in the German market. As at the end of the year, we were already servicing around 6,000 customers through this channel. Earnings in the individual areas showed a positive trend compared with the prior-year period. The Mittelstand division benefited in cash management from higher income in deposit business and higher payment transactions income. The division also generated higher income from currency and commodity trading in the capital market business, while the lending business posted a stable performance. In the International Corporates division, higher income from transaction banking and the capital markets business in particular contributed to higher profit. The Institutionals division also posted an extremely positive performance. Higher income – particularly from cash management – contrasted with somewhat lower income from bond issues. The Others division, which includes hedging and remeasurement effects, recorded a significant year-on-year rise in income that was primarily attributable to remeasurement effects. Contrary to our expectations, the segment recorded a pleasing increase in income overall compared with the previous year. As expected, the risk result was significantly higher than the previous year's figure, mainly due to individual cases connected with Russia. Also as expected, operating expenses fell year on year thanks to successful cost management. Overall, the higher income – despite an appreciable rise in the risk result – led to a significant increase in operating profit. Accordingly, the cost/income ratio improved as expected. Contrary to our expectations, the operating return on equity increased significantly compared with the previous year.

Customer segments with significant earnings growth

On the whole, Commerzbank can be more than satisfied with the 2022 financial year. Despite the difficult economic environment and the high exceptional charges in Poland, we more than tripled our consolidated profit, an even greater increase than expected. This was based on strong customer business and, with the tailwind of higher interest rates, income momentum accelerated over the course of the year. In addition, the Bank was able to reduce its operating expenses despite increasing inflationary pressure. The loan portfolio has also proven to be robust in view of the economic uncertainties and the consequences of Russia's invasion of Ukraine. As expected, the net return on tangible equity was significantly higher than in the previous year at 4.9%. At 68.6%, the improvement in the cost/income ratio including compulsory contributions compared with the previous year exceeded our expectations. The Common Equity Tier 1 ratio rose to a comfortable 14.1%. This figure already takes into account the amount set aside for the planned distribution of 30% of consolidated profit.

The business performance in 2022 thus offers a solid basis for further implementation of the "Strategy 2024" programme.

Segment performance

The comments on the segments' results are based on the segment structure described on pages 262 f. of the notes to the Group financial statements.

Further information can be found in Note 58 to the Group financial statements.

Private and Small-Business Customers

The Private and Small-Business Customers segment comprises Commerzbank's German business – online and mobile, in the advisory centre and in person at local level – along with the comdirect brand, Commerz Real and the mBank Group. With just under 11 million customers in Germany and roughly 5.7 million customers in Poland, the Czech Republic and Slovakia, Commerzbank is one of the leading banks for private and small-business customers in these markets.

Private and Small-Business Customers – earnings performance

€m	2022	2021[1]	Change in %/%-points
Income before risk result	5,269	4,685	12.5
Risk result	−392	−319	22.8
Operating expenses	3,417	3,473	−1.6
Compulsory contributions	460	318	44.5
Operating profit/loss	**1,000**	**574**	**74.2**
Average capital employed	6,724	6,175	8.9
Operating return on equity (%)	14.9	9.3	5.6
Cost/income ratio in operating business (%) – excl. compulsory contributions	64.9	74.1	−9.3
Cost/income ratio in operating business (%) – incl. compulsory contributions	73.6	80.9	−7.3

[1] Figures adjusted due to IFRS 8.29 (see Group financial statements, Note 4).

Despite the challenging operating environment, the Private and Small-Business Customers segment significantly improved both its profitability and its cost efficiency in 2022 compared with the previous year. In spite of considerable special charges at mBank and higher expenses in the risk result, the operating profit of €1,000m was significantly higher than the 2021 figure thanks to a marked increase in operating income and a decline in operating costs.

Total segment income before risk result increased by 12.5% to €5,269m in the period under review. The 51.9% increase in net interest income to €3,942m was largely driven by mBank. The significant rise in key interest rates in Poland since autumn 2021 had a particularly positive impact. As a result, the deposit business made a significant contribution to mBank's net interest income, which more than doubled. Rising lending and deposit volumes also led to corresponding income growth. Interest-bearing business in Germany also recorded a positive performance. Firstly, the further increase in total lending in the domestic market resulted in income growth, including in connection with retail mortgage financing and individual loans. Secondly, the turnaround in interest rates generated additional deposit income. In addition, the year-on-year increase in net interest income in the Private and Small-Business Customers segment was noticeably impacted by the income generated in the first half of the year in connection with special repayments of mortgage loans.

Net commission income was 6.9% below the prior-year level at €2,245m. Securities volumes declined in Germany, mainly due to weak market developments in the year under review, which was reflected in declining commission income. By contrast, income from payment transactions increased. Higher commission income at mBank was due in particular to an increase in income from payment transactions.

Other income items totalled €–918m, compared with €–324m in the prior-year period. The significantly negative amount reported in the period under review was primarily attributable to three factors: a considerable increase in provisions for legal risks in connection with mortgage financing in Swiss francs at mBank, charges against earnings due to deferrals of interest and repayment of private real estate financing at mBank, and lower fair value results.

The risk result was €–392m in the 2022 reporting period, compared with €–319m a year earlier. The increase was largely due to the posting of the secondary effects TLA. The secondary effects TLA is still necessary in view of the crisis-related economic uncertainty – increased energy costs, for example – and will therefore remain in place for 2023. Further information on the TLA can be found on page 126 of the Group risk report.

Operating expenses were slightly reduced by just under 2% in the period under review to €3,417m. Cost reductions of almost 3.1% in Germany, reflecting the progress made with the transformation process, were offset by significantly higher operating expenses at mBank, which resulted in particular from a rise in the number of employees and salary increases. The increase of €141m in compulsory contributions to €460m was largely due to a new mBank levy for an enhancement to Poland's deposit insurance scheme.

Overall, the Private and Small-Business Customers segment posted a pre-tax profit of €1,000m in the period under review, compared with €574m in the previous year.

Corporate Clients

The Corporate Clients segment comprises four reporting areas. The Mittelstand, International Corporates and Institutionals divisions are responsible for business with our core customers: the Mittelstand division covers Mittelstand (SME) customers and domestic large corporates with the relevant products they require. The International Corporates division looks after corporate clients headquartered abroad and large German multinational companies. The Institutionals division is responsible for managing relationships with banks in Germany and abroad, as well as those with central banks and selected non-bank financial institutions (NBFIs) such as insurance companies and pension funds.

The segment offers customers the complete range of products of an international full-service bank, from traditional credit products and individually tailored financing solutions to cash management and trade finance, investment and hedging products and customised capital market solutions. The Others division handles all business that either has a cross-segment risk management function or falls outside the strategic focus of the Corporate Clients segment. This mainly relates to assets transferred from the former run-off segments and effects from hedging positions.

Corporate Clients – earnings performance

€m	2022	2021	Change in %/%-points
Income before risk result	3,792	3,169	19.7
Risk result	–446	–149	.
Operating expenses	2,160	2,267	–4.7
Compulsory contributions	120	96	24.4
Operating profit/loss	**1,066**	**656**	**62.6**
Average capital employed	10,040	9,891	1.5
Operating return on equity (%)	10.6	6.6	4.0
Cost/income ratio in operating business (%) – excl. compulsory contributions	57.0	71.6	–14.6
Cost/income ratio in operating business (%) – incl. compulsory contributions	60.1	74.6	–14.5

The performance of the Corporate Clients segment in the 2022 reporting year was characterised by a high level of uncertainty and a persistently challenging operating environment. These challenges include, in particular, significant increases in raw material, energy and producer prices as well as ongoing supply chain problems. Despite a significant increase in the risk result compared with the previous year, due mainly to the Russia-Ukraine war, considerably higher income resulted in particular in an increase in operating profit to €1,066m, compared with €656m in the prior-year period.

Here, the Mittelstand division recorded positive income growth compared with the prior-year period. In particular, the division benefited in cash management from higher income in deposit business and higher payment transactions income. The division also generated higher income from currency and commodity trading in the capital market business, while the lending business posted a stable performance. In the International Corporates division, higher income from transaction banking and the capital markets business in particular contributed to higher profit. The Institutionals division also posted an extremely positive performance. Higher income – particularly from cash management – contrasted with slightly lower income in lending business and from bond issues. The Others division, which includes hedging and remeasurement effects, recorded a significant year-on-year rise in income that was primarily attributable to remeasurement effects.

In the year under review, income before risk result was €623m higher than in the prior-year period at €3,792m. At €2,076m, net interest income was a full €388m higher than the prior-year level, while net commission income of €1,321m exceeded the prior-year level by €72m, mainly due to an increase in foreign currency business and trade finance. Net income from financial assets and liabilities measured at fair value through profit or loss rose by €178m to €436m as a result of remeasurement effects.

The risk result in the period under review was €–446m, compared with €–149m in the prior-year period. The marked increase was primarily attributable to the Russia-Ukraine war. The share of the secondary effects TLA attributable to the segment amounted to €–284m as at 31 December 2022, which was fully recognised in the income statement in 2022. Further information on the TLA can be found on page 127 of the Group risk report.

Operating expenses were reduced by €107m compared with the prior-year period to €2,160m. The decline resulted from lower personnel and administrative expenses achieved through strict cost management. The reported compulsory contributions of €120m relate primarily to the European banking levy. Compulsory contributions of €96m were recorded in the previous year.

Overall, the segment posted a pre-tax profit of €1,066m, compared with €656m in the prior-year period.

Others and Consolidation

The Others and Consolidation segment contains the income and expenses which are not attributable to the two business segments. Others covers, for example, Group Treasury, equity holdings not allocated to the business segments and overarching matters such as expenditure on regulatory fees. Consolidation reconciles the figures shown in segment reporting with the Group financial statements in accordance with International Financial Reporting Standards (IFRS). Others and Consolidation also covers the costs of staff, management and support functions, which are then charged to the segments. In addition, restructuring expenses for the Group are reported centrally in this segment.

The Others and Consolidation segment reported an operating profit of €33m for 2022, compared with an operating loss of €–47m in the prior-year period. The positive change was primarily attributable to the elimination of the negative impact on earnings in the previous year resulting from the termination of the project to outsource securities settlement to HSBC Transaction Services GmbH, a net positive effect from the recognition and reversal of provisions, a lower negative impact on earnings from the residual portfolio of the dissolved Asset & Capital Recovery segment – mainly on account of lower net loan loss provisions – and higher income from real estate sales. These were offset by lower positive net remeasurement effects and by a reduction of €24m to €149m in additional income from the fulfilment of the conditions in connection with targeted longer-term refinancing operations (TLTROs) with the ECB (in part because the previous year also included amounts relating to 2020, since the fulfilment of the credit volume requirement was not established until 2021) and a lower positive Group Treasury result. The fall in the Group Treasury result was primarily attributable to internal fair value compensation payments to the Private and Small-Business Customers segment for special repayments of mortgage loans due to the rise in interest rates and was partially offset by higher income from the measurement of interest rate hedges in the commercial banking book compared with the previous year.

Others and Consolidation recorded a pre-tax loss of €–61m for the 2022 financial year. This figure included restructuring expenses of €94m relating primarily to property matters in connection with the implementation of the “Strategy 2024” programme.

Outlook and opportunities report

Future economic situation

The global tightening of monetary policy will markedly slow growth in the world economy. China is the only economy likely to experience stronger growth in 2023. Although the current wave of coronavirus infections is likely to still weigh on growth at the beginning of this year, the cancellation of the strict zero-Covid strategy means that economic activity should pick up again from the spring. This will also be helped by the fact that the government is to again place greater emphasis on promoting growth in its 2023 economic policy. For example, it has implemented far-reaching measures to support the ailing real estate sector.

In the USA, the Federal Reserve is likely to increase its policy rate corridor by a further 75 basis points to between 5.25% and 5.50% by the summer. That is because the labour market is still very tight and wage pressure is correspondingly high. The marked tightening of monetary policy suggests there may be a recession in the US economy in 2023. Higher financing costs have already put a significant damper on the real estate market.

A recession in the USA will weigh on the eurozone economy, as will high inflation and tighter monetary policy at the ECB. By the summer, the ECB is likely to have raised its deposit rate by a further 100 basis points to 3.50%. For a number of reasons, however, the economy is not expected to collapse in the way that it did during the financial crisis of 2008–2009 or after the outbreak of coronavirus. Firstly, gas rationing has become unlikely. Secondly, many governments have decided to provide assistance to their citizens and businesses. Thirdly, supply chain issues have now peaked. Many companies will now find it easier to work through their order backlogs, which are still at a very high level.

The suspension of the Stability and Growth Pact will continue into 2023, meaning that member states will still be allowed to have budget deficits that exceed 3% of GDP. EU member states will also continue to receive money from the EU Recovery and Resilience Facility in 2023. We are expecting the eurozone economy to stagnate on average over the year in 2023. We predict that the German economy will contract by 0.5%.

We are anticipating some easing on the financial markets in 2023. Though yields are likely to rise somewhat in the first few months of the new year, if the US Federal Reserve and the ECB respond to the decline in inflation by ending the cycle of interest rate increases in the summer, bond yields are likely to fall. That is particularly true for corporate bonds.

The euro has slipped below parity against the US dollar at times owing to fears of an energy crisis, which would have mainly affected the eurozone and less so the US with its own supplies. As the risk of gas rationing has now decreased, the euro/US dollar exchange rate has recovered. The alignment of ECB and US Federal Reserve monetary policy suggests that the euro/US dollar exchange rate will remain largely unchanged in 2023.

Shares rallied significantly in the autumn, due mainly to the prospect of falling inflation rates. Nevertheless, equity markets are likely to remain volatile in the first half of the year. This is mainly due to disappointing corporate earnings, which are likely to be impacted by rising interest rates, high input costs and the recession.

Exchange rates	**31.12.2022**	**31.12.2023**[1]
Euro/US dollar	1.07	1.08
Euro/Sterling	0.89	0.91
Euro/Zloty	4.68	4.65

[1] The figures for 2023 are Commerzbank forecasts.

Future situation in the banking sector

Our views regarding the expected development of the banking sector structurally and over the short and medium term are basically unchanged from the statements we published in recent reports. In the short term especially, the risks are still to be regarded as very challenging. Against the backdrop of the higher cost of debt and enormous increases in the cost of living, more corporate and personal insolvencies must be expected in the coming months.

The net debt of many borrowers has risen sharply in recent years due to very favourable financing conditions. The resulting need for value adjustments will affect both retail and corporate banking business.

Russia's war in Ukraine and the suspension of its gas supplies have exacerbated the economic situation, particularly in Europe, to such an extent that both industry and households are suffering as a result. Although the negative effects on the economy and society are being mitigated by the support packages that have been agreed, this means having to accept a significant increase in public debt everywhere in Europe.

For most European countries, Germany included, recession or at best economic stagnation therefore appears inevitable in the coming months, which will put pressure on the earnings situation in the banking sector. Because many companies have so far passed on only part of their additional costs to consumers, the core rate of inflation in particular is likely to remain high.

Added to this are ongoing risks associated with the coronavirus pandemic. Further waves of infection and the associated adverse effects on the economy – especially in China – are thus conceivable. German banks' net interest and commission income would be negatively affected by the feared weakness of the export industry, which is so important for the country's economy. Heightened volatilities on financial markets are also contributing to the noticeable burden in the form of increased loan loss provisions and financial requirements for banks. Business with corporate and small-business customers is therefore under considerable pressure. Business with retail customers is also being affected, as the sharp rise in inflation is having a negative impact on private consumption. The financial buffers built up during the coronavirus restrictions due to the increased propensity to save are now likely to be running out for many households. Demand for residential mortgages, which has so far been very robust owing to the lack of affordable housing, is also beginning to weaken markedly as mortgage interest rates continue to rise.

In the case of residential real estate, the first indications of a noticeable slowdown in the price momentum seen for many years are becoming increasingly apparent in Germany. The partly weak and uncertain prospects for income, coupled with the significant increase in interest rates since the beginning of 2022, are increasingly slowing the previous upswing in the residential real estate market. The sharp rise in interest rates has led to a marked decline in new mortgage business, both in Germany and in many other eurozone countries, even though mortgage volumes as a whole have continued to grow. Noticeable declines were recorded above all for loans with long fixed-interest periods of at least ten years. This is likely to lead to declining earnings. At the same time, however, margins on deposits are improving as a result of the general rise in interest rates, which may well more than offset the negative effect mentioned above. In this respect, the risks for the banking sector are more likely to result from a decline in the quality of the assets held. That is because long-term loans increase exposure to interest rate risks, payment delays and defaults. They also harbour the risk of losses in the value of property pledged as loan collateral.

According to the Deutsche Bundesbank's Financial Stability Report from the end of November 2022, this issue presents considerable downside risks for the banking sector in Germany. Above all, a further worsening of the energy crisis accompanied by a sharp economic slump represents a risk scenario for the German financial system. Vulnerabilities to adverse macroeconomic trends have increased over the years owing to the prolonged low interest rate environment and associated very cheap credit, along with considerable asset price growth. That applies both to the corporate sector – despite a significant increase in core capital ratios since the financial crisis – and to households. The sustainability of household debt still appears robust at present, but it is being undermined by the sharp decline in real income. The risk of contagion effects between the countries of the eurozone, which are closely interconnected in economic, political and financial terms, should also not be underestimated.

In 2023, the banking industry continues to face major challenges

To enhance the resilience of the German financial system, the German Federal Financial Supervisory Authority (BaFin) issued general rulings in 2022 to activate the countercyclical capital buffer of 0.75% and introduce a sectoral systemic risk buffer of 2% for residential real estate financing. Both buffers must be held since the beginning of February 2023. In addition, regulators are requiring lenders to be mindful of prudent lending standards for residential mortgages. At the European level, the European Union is carrying out a review of the macroprudential framework. In view of the high risks to financial stability, the European Systemic Risk Board advocates further enhancing resilience in the European financial system through higher capital buffers, or at least maintaining the existing capital buffers. To expand the scope for macroprudential policy action, additional income-related instruments are also being called for. There are concerns, however, that a constant expansion of regulatory requirements may well have a counterproductive effect in view of the financing efforts that banks need to make in connection with the digital and above all sustainable transformation of the economy.

The outlook with regard to banks' interest margins has brightened. For a long time, persistently low interest rates were considered one of the key challenges.

Central banks reacted to the far-reaching economic impact of the pandemic with bond purchase programmes, extensive liquidity provision and a zero interest rate policy. Government lending programmes also had a negative impact on banks' interest margins and profitability. Achievable net interest margins were therefore very low throughout Europe, but particularly in the German banking market. At the same time, refinancing costs rose due to the growth in customer deposits. The picture has now changed. In response to the rapid pace of inflation, central banks around the world have significantly tightened their monetary policy. A marked increase in credit interest rates, including in Germany, is enabling banks to improve their interest margins and thus also boosting the income trend across the entire financial sector. It remains to be seen, however, whether central banks, such as the Fed or the ECB in particular, will decide to change course in favour of an interest rate reduction policy given the heightened danger of a recession in their economic areas. In addition, the fierce national competition among German banks means that earnings potential in retail banking remains limited even with improved interest margins, especially as deposit rates are also likely to rise further over time.

As in the dominant interest-bearing business, the prospects in trading business can currently be regarded as positive as a result of the volatile market environment. However, many institutions have partially or even completely withdrawn from direct trading in the past. But the banking sector can also benefit indirectly: together with increasing trading volumes, higher market volatility means higher commission income in securities business. It is highly likely that the number of private shareholders in Germany will continue to increase over the next few years despite the growth in investment alternatives as interest rates continue to rise. As a consequence, and with the growing popularity of digital and mobile products, there will be greater demand for individual financial advice among bank customers who are less comfortable with technology and hugely unsettled by the economic turbulence. Given the existing demand for advice on complex banking transactions such as retail mortgage financing, branch business will therefore remain part of the basic service provided by banks, albeit in a pared back form.

In view of the income problems and ongoing competitive pressure, cost reduction remains the key issue both for German banks and for their European competitors. As a result, digitalisation of business processes and the utilisation of the data generated will advance rapidly. The pandemic has already massively accelerated the trend towards digital banking services.

The trends in customer behaviour that were pushed forward during the crisis – more online banking and new payment habits – are set to continue. This calls for highly automated IT processes and comprehensive data analytics methods that permit rapid adjustments in response to changing market conditions. This is encouraging the increasing shift away from branch-based retail banking, resulting in efficiency gains and a reduction in the range of products and services but also making it more difficult to generate commission income.

Consistent cost management continues to be a focus

The new digital business models, with their ever shorter innovation cycles and the need for faster product delivery, require the use of forward-looking technologies such as the cloud and artificial intelligence. A cloud-first strategy with corresponding migration of the IT systems also offers the advantage of driving forward the modernisation of the existing core systems. At the same time, despite the pressure to innovate and reduce costs many traditional banks are faced with the central challenge of ensuring the quality and stability of their IT systems, protecting themselves against the growing threat of cyber attacks and maintaining the integrity of their data.

Against the background of the technological transformation referred to, the German banking market in particular is on the brink of a major upheaval. Over the longer term there will be a drastic reduction in the number of institutions and even more intense competition. More and more global technology groups, fintech companies, foreign banks and market infrastructure providers such as stock exchanges, clearing houses and information service providers will start offering a selection of traditional banking products. It seems unlikely that competitors from the tech segment will provide a full range of banking services, however. A significantly stricter regulatory framework for financial market players outside of the traditional banking sector, as recently advocated by the Bank for International Settlements (BIS), is also likely to limit the current competitive advantages of young fintech companies in the foreseeable future. Overall, established banks must invest continuously in their digital competitiveness in order not to lose their direct customer access and the associated data advantage. Adequately positive returns can only be achieved through additional cost reductions and further expansion of commission-based business areas.

In the long term, the banking sector will be shaped by the further development of the European monetary union into an integrated financial market union. The aim of the European Commission's digital finance strategy is to establish a financial market that applies uniform EU-wide rules and thus ensures technology neutrality and sustainability as well as identical framework conditions for all providers. Many banking markets in Europe are still dominated by national legislation, with at times significant divergence in terms of regulations and customer requirements. There is also overcapacity almost everywhere, which reduces profitability. Although the market consolidation process is continuing, with the number of banks falling steadily both in Germany and in Europe over the past few years, this has mainly involved smaller banks being taken over or merged with one another. Greater consolidation is being prevented above all by the marked rise in the risks associated with takeovers and mergers, which is due to the increasing importance of technology for sales channels.

The European banking union is still a work in progress, leaving a great deal of leeway for individual member states in terms of banking regulation. Progress has been made, however, with the completion of the Basel 3 capital rules. Most recently, agreement was also reached on revising the rules for banks that get into difficulties. However, the lack of an acceptable EU-wide deposit insurance system (EDIS) in particular has thus far prevented further market integration. The EDIS is the third element in the European banking union, alongside the already active Single Supervisory Mechanism (SSM) and the existing Single Resolution Mechanism (SRM).

In addition to the planned introduction of a digital euro, another intended step towards greater harmonisation across Europe is the creation of a common payment system (EPI) that is set to become the new standard for payments by consumers and merchants. The EPI could provide European banks with greater lending volumes, as it would give them an entry into the business of payment card companies based outside the EU. In addition to the way in which we will use money in the future, and the role of central bank money in this, banking regulation is focusing increasingly on the management of ESG (environmental, social and governance) risks. According to the World Economic Forum (WEF), the three greatest challenges of our time in the coming years will be climate change, extreme weather events and the loss of biodiversity. With this in mind, the EBA intends to embed climate and environmental risks more firmly in banks' risk management processes, including mandatory disclosure of climate risks. For example, an initial climate stress test was carried out last year.

Climate risks are also set to be a focus of future ECB stress tests, enabling banks to better assess their consequences for their business environment.

According to the Bundesbank, the German financial system is well equipped to overcome the risks arising from higher taxes on fossil fuels. However, the financing requirements of the European Commission's planned green deal could lead to green quantitative easing. This is new, and moreover not uncontroversial, because to date none of the world's central banks have pursued a monetary policy that is explicitly oriented towards climate protection goals.

Climate-friendly project financing is entering a new phase. Initiatives targeted include increased electrification, expansion of energy transmission and distribution infrastructure including grid-scale storage, emissions reductions in energy-intensive industries such as steel and cement, and solutions for preserving natural biodiversity. The signs of this new era are already visible. In addition to continued investment in power generation, they include increased support for new technologies such as hydrogen generation and grid storage, as well as product innovations to finance CO_2 reduction.

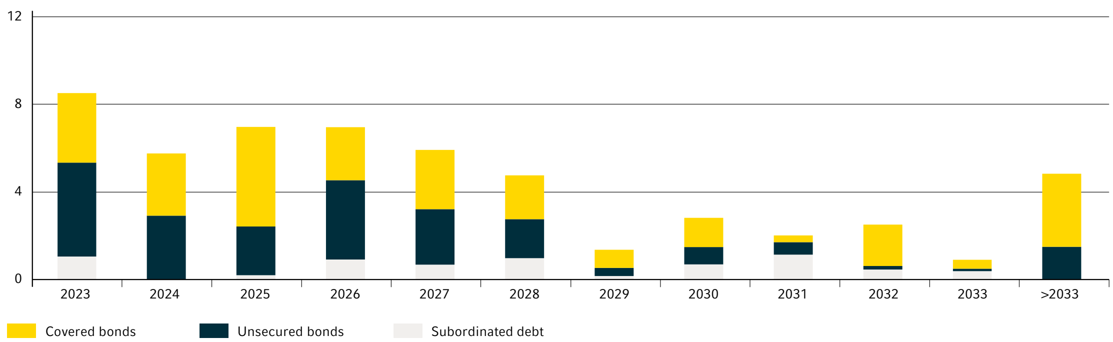
In Poland, the increasingly restrictive monetary policy pursued by the central bank NBP since October 2021 following the previous coronavirus-related cuts in the policy rate has ensured that interest margins for the Polish banking sector have tended to improve. It remains to be seen, however, whether a decline in the quality of the loan portfolio will lead to significantly higher risk costs and increased loan defaults. The economic environment is still extremely fragile, the effects of the Ukraine war are directly tangible, and sharp rises in consumer prices are impacting the real disposable income of private households. In addition, following the last rate move by the NBP in September 2022, policy rates are unlikely to be raised further in the foreseeable future due to a noticeable decline in Polish GDP growth. Inflation is likely to remain very high, with the increase in the minimum wage at the beginning of 2023 also contributing to this. The strained relations with the EU are also weighing on the economic outlook. Bank earnings are therefore likely to remain under pressure, while the trend towards consolidation in the Polish banking market is set to continue. Furthermore, legal developments and their potential impact on major market participants such as mBank regarding their portfolio of loans issued in Swiss francs and other foreign currencies must continue to be closely monitored. The "credit holidays" instrument introduced in this context will also weigh on the earnings of Polish banks. As a result, mBank has initiated a new settlement programme with a view to reaching individual agreements with customers in its Swiss franc loan portfolio.

Financial outlook for the Commerzbank Group

Planned funding measures

The funding plan for 2023 envisages a volume of around €5bn. Commerzbank's borrowing on the capital market is influenced by its business performance and planning as well as the evolution of risk-weighted assets. Commerzbank has access to the capital market through a broad range of products. In addition to unsecured funding instruments (preferred and non-preferred senior bonds, Tier 2 subordinated debt and Additional Tier 1 capital), when refinancing Commerzbank can also issue secured funding instruments, in particular mortgage Pfandbriefe and public-sector Pfandbriefe. As such, Pfandbriefe are a key element of Commerzbank's funding mix. These give Commerzbank stable access to long-term funding with cost advantages compared with unsecured sources of funding. Issuance formats range from large-volume benchmark bonds to private placements.

Group maturity profile of capital market issues as at 31 December 2022
€bn



By regularly reviewing and adjusting the assumptions used for liquidity management and the long-term funding requirement, Commerzbank will continue to respond actively to changes in the market environment and business performance in order to secure a comfortable liquidity cushion and an appropriate funding structure.

Planned investments

For the 2023 financial year, we have budgeted for €0.5bn in direct costs for IT investments. Around one-third of this investment will continue to be devoted to the restructuring of the business model and the digitalisation of retail banking business. We will invest the remaining funds in the further digitalisation of processes in corporate client business and in IT infrastructure/operations. Regulatory measures are included in the above areas.

Private and Small-Business Customers
The main investment targets in 2023 remain the central initiatives relating to the "Strategy 2024" programme.

In the Private and Small-Business Customers segment, Commerzbank is building on the milestones reached in 2022 to further develop the digital and personal business model. The main focus is on further developing the digital advisory bank – complete with comprehensive mobile offerings – and achieving greater penetration of the Wealth Management, Private Banking and premium Small-Business Customers segments through supplementary services and personal advice.

In digital banking, the focus of investments in 2023 will be on the continual expansion of online services. Building on the progress made last year, further steps in the onboarding process when opening accounts for small-business customers will be digitalised. Important foundations are also being laid for the further expansion of online banking. In addition to the ongoing improvement of operational stability, the focus here is on the establishment of daily banking services with transaction and financial overviews developed from scratch in both technical and functional terms, along with further modernisation of online payment services. Customers will also be provided with a new home page that they are able to personalise. The banking app will be expanded to include important features such as text chats with an integrated intelligent chat bot and will be progressively developed into an allround service and sales channel.

The data-based customer approach will be further expanded in 2023, and further progress will be made along the path to a cloud-based infrastructure.

In securities business, further investments will be made in the digitalisation of securities trading and securities service processes in all channels. Work will continue on optimising securities settlement systems and order functions. In addition, the functionalities of the money mate securities investment system will be further expanded.

In retail mortgage financing, most of the investment will be devoted to the further digitalisation of our new omnichannel lending platform in order to optimise customer service in loan applications and the loan decision process for customers. Following the successful launch of the retail mortgage financing application process stage, a modern and digital lending decision process stage will be developed next year, thus taking another important step towards enhancing quality and efficiency while consistently focusing on customer-specific requirements. Commerzbank is also planning further investments to digitalise manual processing steps in the process for existing loans.

In instalment loans business, the final step towards omnichannel capability is planned with the digital advisory process for the advisory centre and advisory branches. To this end, important functional enhancements will be made and the degree of automation of instalment loan processing will be significantly increased.

With regard to account products, one particular focus in 2023 will be on expanding the digital processes for concluding contracts with the various types of new customers. There will also be further digitalisation and automation of the necessary approval processes as required following the ruling by the German Federal Court of Justice on price adjustments for retail customers. To give due consideration to sustainability as a cornerstone of the Bank's strategy, investments will also be made in the development of a green deposit product.

Another focal point of investment is the expansion of the digitalised inbox system to improve process efficiency.

In the 2023 financial year, further investments will also be made in an efficient and modern set-up of the branch business. Around 50 more branches will be closed. At the same time, more than 100 branches will be modernised and digital contact points for customers expanded within them. Additional options for dispensing cash are being developed, for example through the use of third-party locations or collaborative arrangements.

For the advisory centre, the focus will be on further developing the range of services and driving forward process digitalisation in order to optimise the customer experience. In this context, the platform and technology are being built up on an ongoing basis.

In terms of regulation, alongside the implementation of the fully automated online KYC review process for natural persons, the focus in 2023 will be on working out the detail of the questions on PAIs (Principle Adverse Impact Indicators) in the investment advisory process as required by the guidelines of the European Securities and Markets Authority. The target market check for advisory orders will also be expanded to include additional details on sustainability preferences. Another focus of investment is on ensuring that the system complies with the requirements arising from the new provisions in the German Defence against Tax Havens Act for the opening of financial accounts.

Corporate Clients

Investments in the Corporate Clients segment in 2023 will continue to focus on the implementation of Commerzbank's strategic objectives. This takes account of the significant changes in customer expectations through digitalisation. The use of digital channels is increasing at all relevant customer interfaces. Furthermore, the integration of sustainability aspects must be taken into account in the context of investments.

Commerzbank continues to focus on German SMEs, large companies and institutional customers. Investments will be centred in particular on expanding digital services and on administrative matters to further improve the customer experience for our corporate clients. We also offer our international customers a global platform via which they can use applications such as real-time foreign exchange trading (FX Live Trader/Live Confirm), payment transactions (Global Payment Plus), self-service features (trade finance, master data management) and external digital services.

The global rollout of a uniform and efficient KYC workflow tool will also be completed worldwide, thereby providing technical support for and simplifying the process of ensuring compliance with legal requirements. In addition, the focus will be on further platform consolidation with a view to reducing costs over the long term.

In transaction banking, we will continue to invest in the renewal of payment transaction systems and take account of further customer requirements. The worldwide shift in payment transactions requires further investment in system adaptation both in Germany and abroad.

In order to further digitalise the trade finance product offering, investments are being made in products and collaborations based on distributed ledger technology (DLT).

In particular, further investment will be required to comply with regulatory requirements in the areas of payment transactions and capital markets. We will also press on with the digitalisation of sales and advisory processes and the automation of trading processes for capital market products.

Further improvements in communication between IT systems will enable us to work even more closely with our customers and partners.

IT & Operations
Commerzbank will continue the ongoing optimisation of its IT structure in 2023, with further significant investments in the expansion of cloud technology and the digitalisation of the workplace environment.

Commerzbank therefore remains on track with the digitalisation and streamlining of its business. On the IT side, the Bank will also focus on modernising the IT architecture and putting the technological base on a more professional footing. The digitalisation of the product range will also continue. In addition to digital account management and the expansion of functions in the online portals, the focus is on account access via APIs (application programming interfaces), virtual accounts and expanded SWIFT services. In the current financial year, we are also anticipating a growing need for investments in connection with the implementation of regulatory requirements.

In addition, investments will be made to further optimise costs and automate and enhance IT and operational stability, particularly with regard to cyber security.

Anticipated liquidity trends

The short-term repo market in high-quality securities (high-quality liquid assets or HQLA) such as government bonds, agency securities (issued by quasi-governmental US issuers) and Pfandbriefe continues to play an important role in servicing the bond markets and financing portfolios.

The Eurosystem and its securities lending programme for holdings under the asset purchase programme (APP) and pandemic emergency purchase programme (PEPP) are still important methods for meeting collateral requirements in trading activities, particularly with respect to German government bonds. Under these programmes, maturing securities continue to be reinvested in order to ensure that there is ample liquidity in the markets while also preventing any negative impact on the appropriate monetary policy stance. Taking into account the outstanding TLTRO volume as well as the large ECB securities holdings under the APP and the PEPP, central bank collateral remains highly sought after. We expect that repos in HQLA will continue to trade under the deposit facility for the foreseeable future, as this will continue to generate high demand.

This will also be supported by the reinvestment of maturing securities from the ECB's programmes. Investors are generally less willing to make their collateral available over the medium term (longer than three months), meaning that the market for term repos still offers only limited liquidity, especially across important reporting dates.

The situation on the bond markets is being influenced by high inflation, the ECB's increasingly restrictive monetary policy in this context, supply bottlenecks and high energy costs as well as weaker economic data and expectations. Therefore, even despite the generally rising level of government debt, we expect German government bond yields to remain relatively low – by historical standards – even in the long-term segment, including as a result of continuing reinvestments by the ECB. Demand for secure investments among financial investors will also continue to be very strong, causing credit spreads to be relatively stable. Overall, however, we do not anticipate any liquidity shortfalls in connection with the Russia-Ukraine war.

Managing opportunities at Commerzbank

The demands placed on modern, sustainable banking business and the overall framework conditions have changed markedly in the past few years. Whereas personal customer relationship management was formerly a key element, these days customers expect multi-channel advisory services, digital financial offerings and individual, tailor-made products that are available at any time. We have responded to this by continuously adapting our strategic direction over the past few years. We are undertaking a far-reaching restructuring under our "Strategy 2024" programme. The aim of the restructuring is to combine the benefits of a fully digitalised bank with personal advisory services, an unwavering customer focus and sustainability. Our goal is to be *the* digital advisory bank for Germany. With our new positioning, we want to become more efficient and create sustainable prospects for our workforce, customers and shareholders. Further information on our "Strategy 2024" programme can be found on page 75 f.

As part of its comprehensive digitalisation, the Bank is significantly streamlining its branch network and expanding its range of digital services. In our branches that remain in the target portfolio, we will offer advice on all aspects of accounts, cards and instalment loans and, at selected locations, additional comprehensive support on all matters relating to assets and financing.

The round-the-clock service is also being significantly expanded. This is being offered through our advisory centre, which will become the most important contact channel for personal service and for advising our customers. With the advisory centre we are creating something completely new, drawing on the expertise and experience of Commerz Direktservice, the comdirect brand and the branches. Whereas personal advice was previously only available in our branches, in future our customers will also be able to obtain advice through the new advisory centre. Advisory services can be obtained at home or while out and about, wholly in line with customer needs. This can be done by telephone, video or chat – including in the evening and at weekends. Going forward, therefore, we will be offering our customers three access routes: the advisory centre, our branches and the digital channel. Through this approach, we can offer them the appropriate services at a time that suits them and via their preferred access route. All 12 advisory centre locations are already up and running. Staffing and customer migration had been completed by the end of November. In addition to an already successful relaunch of the online customer portal, we have now also started the pilot project for small-business customers.

We will continue to automate our business processes consistently and across the board. Within the lending process for private customers, this includes, for example, standardised products such as instalment loans or increases in credit card limits. We are also taking advantage of the high growth potential in the German premium market to restructure our service model for high-net-worth private and small-business customers. In this way, we aim to become *the* bank for entrepreneurial wealth management. In the future, both generalists and specialists covering a diverse range of customer requirements will be represented in premium branches at a number of locations. By working closely with each other and with colleagues in the Corporate Clients segment, they will help the Bank ensure seamless customer service in both the private and the business sphere.

We intend to further enhance our strong positioning in serving German SMEs. As the leading trade finance bank in Germany, we ensure a presence along altered trade corridors. To this end, we are steadily simplifying the trading platform. In the Corporate Clients segment, we are focusing on clients with a clear connection to Germany. As such, we closed several international sites in the course of 2022. We are gradually introducing an innovative direct banking offering – Mittelstandsbank Direkt – for corporate clients that require standardised products and advisory services.

Corporate customers with complex advisory requirements will continue to benefit from personalised relationship management. Advice is being combined with innovative services such as the digital bank for companies and forward-looking, sustainable products.

Data-based solutions and sales analytics support sales and enable efficient relationship management. The employee migration in the Corporate Clients segment took place in mid-November 2022. This was the starting signal for the new target structure and the new service model. The full migration of 6,000 clients to Mittelstandsbank Direkt was completed by the end of 2022.

We will transform the Bank across all segments. This transformation affects our strategy, technology, skills and culture, while also taking into account the particular risk in the form of cyber attacks. Customer trust built up over years facilitates the use of smart data and is thus a competitive advantage in the digital age. When introducing new applications, the focus is on the customer perspective. For some time now, we have been supported in this by our subsidiaries CommerzVentures (venture capital fund for participation in fintechs, insurtechs and climate fintechs) and neosfer (formerly Main Incubator). As a research and development unit for future technologies, neosfer enables innovations and early-stage investments by Commerzbank. This is done by investing in early-stage start-ups (neosfer.invest), developing business models or ventures internally (neosfer.build), and building ecosystems around the sustainable and digital future of our society (neosfer.connect). With this realignment, neosfer is now consciously linking up its future-oriented skills in the area of digitalisation with those it possesses in the area of sustainability.

Commerzbank is driving its cultural change with the aim of strengthening a performance culture geared to success. We want to strengthen entrepreneurial thinking, as befits the start-up mentality, including among our own employees, applying modern forms of cooperation and agile methods to develop innovative products. To this end, we introduced the Delivery Organisation (DO) at head office back in 2019. Its overarching purpose is to modernise the IT architecture while maintaining operational stability, expand capabilities and capacities, and develop new professional functionalities for our customers. An innovative collaboration model was also launched within the DO to reduce complexity and create clear responsibilities. For this purpose, we have assigned clusters to different layers in order to simplify complex processes. In mid-2022, we entered the implementation phase of the structure set up as a project; the organisational target structure is to be put in place in the course of 2023.

Our transformation offers both potential cost savings and growth opportunities in future markets such as digital ecosystems, embedded finance, digital assets and sustainability. Our activities in the area of sustainability, one of the four cornerstones of our “Strategy 2024” programme, are based on ESG (environmental, social and governance) criteria. Given the clear evidence of the impact of climate change, we are currently focusing more heavily on climate protection. Further information on our sustainability strategy and on our sustainability goals and activities can be found in the combined separate non-financial report on page 42 ff.

Overall, we are convinced that rigorous implementation of the measures already initiated and those recently adopted will enable us to create added value for our customers, employees, investors and shareholders, and for society as a whole. We have a clear goal in mind: to create a strong Commerzbank that is fit for the future.

Anticipated performance of the Commerzbank Group

Commerzbank has successfully completed the first half of its four-year transformation programme “Strategy 2024”. While the focus in the past two years was on restructuring with the associated reduction in personnel, the emphasis is now on expanding profitable customer business.

The framework conditions for the Bank’s financial ambitions in 2024 have changed. While higher interest rates open up additional earnings potential, Commerzbank will not be able to fully escape the pressure on costs due to high inflation. With a slightly weaker forecast for the risk result, these factors mean that the Bank is targeting an operating profit of €3.2bn in 2024. We had previously been expecting an operating profit of €3.0bn for 2024. As a result, a higher net return on tangible equity of more than 7.3% is expected, while the target cost/income ratio is unchanged at an ambitious 60%.

The strategic priorities for 2023 are shaped in particular by the successful establishment of the new business model for both private and small-business customers and corporate clients. With a clear focus on profitable customer business, the speed of transformation is to be maintained unabated. Huge importance will be placed on continued strict cost discipline, with a focus on the cost/income ratio. At the same time, Commerzbank plans to make further progress in the area of ESG and sustainability. Finally, a high priority for Commerzbank is to increase its attractiveness as an employer so that it can successfully manage demographic change.

Commerzbank expects the environment for banking to remain challenging in 2023. A mild recession with continued high inflation and associated higher interest rates has a material impact on the expected financial results for 2023. Commerzbank bases its expectations on consensus macroeconomic data, which are collected at regular intervals by Consensus Economics. Germany’s gross domestic product is expected to experience a mild recession, reflected in negative growth of –0.5%. At the end of 2022 inflation of 7.0% was anticipated for Germany. The consensus for the ECB’s deposit rate based on the December survey is an average of 2.25% for 2023; this has been factored accordingly into Commerzbank’s planning. Furthermore, short-term interest rates for mBank’s business in the Polish market are expected to remain above 6%.

Anticipated performance of individual earnings components

Higher interest rates already had a positive impact on net interest income in 2022. For 2023, we expect a further slight increase in net interest income to over €6.5bn. In the event that the higher forward interest rates from January 2023 are realised on the market and the interest pass-through on deposit balances remains five percentage points below the expected 30%, net interest income is expected to total €7.1bn. The driver for this increase is wider margins in customer deposits. In particular, non-interest-bearing demand deposits from customers can be invested at higher interest rates than in the past. In 2023, this will more than offset the loss of €189m in extraordinary income received in 2022 from longer-term refinancing operations with the ECB (TLTRO). The slowdown in new retail mortgage business will not yet have a significant impact on net interest income in 2023. Instead, Commerzbank expects volumes and margins to remain largely stable across the entire loan book. mBank in Poland contributed in particular to the increase in net interest income for the Group last year. However, the Bank expects the trend to be largely flat in 2023, reflecting an increased pass-through of interest rates to mBank customers.

Net commission income for the current year is expected to be at the same level as in the previous year. Slightly weaker commission income in securities business with retail customers is likely to be offset by higher income in corporate client business, as are effects in private customer business from customer attrition due to branch closures.

Net income from financial assets and liabilities measured at fair value through profit or loss is generally subject to increased volatility, which can be influenced only to a limited extent. This is due in part to the fundamental uncertainty regarding developments on the global capital markets. Accounting rules are a factor too. Sometimes they may require similar items to be presented as fair value measurements in the fair value result in one time period, whereas the interest component dominates in another. Year-on-year shifts between the income items net interest income and fair value result – and vice versa – are therefore possible. A portion of this income component is therefore directly related to net interest income. With its risk-oriented and customer-focused approach, Commerzbank, like mBank, seeks to achieve income that is as high and stable as possible. After the fair value result made a clearly positive contribution of €451m to Group earnings in the 2022 financial year, a lower or even negative contribution cannot be ruled out for the current year.

Target 2023: Significant growth in both the operating result and the consolidated result

Experience has shown that the other income items, including realised profit or losses on financial instruments and other net income, are often affected to a large extent by one-off income and measurement effects that are usually impossible to predict. A largely break-even result is forecast for the 2023 financial year. Further charges cannot be ruled out in respect of the provisions for legal risks in connection with mortgage loans issued in foreign currencies at mBank, whose effects are reflected under other net income. After large provisions were recognised in 2022, however, no material expense is expected for the current year.

Following a figure of €–876m last year, Commerzbank also expects a charge from the risk result of less than €–900m for 2023. This expectation takes into account at least partial utilisation of the top-level adjustment (TLA) of €482m as at the end of 2022. This TLA reflects expected secondary effects in the loan book due to factors including global supply chain bottlenecks and the consequences of the war in Ukraine.

Operating expenses, including compulsory contributions, are to be further reduced to €6.3bn in the current year despite high inflation. However, the cost/income ratio is used as the core performance indicator for the Bank. This means that operating expenses reflect any deviations from budgeted income and, for example, determine whether funds for investment are released or withheld. The expenses for variable remuneration are also affected by deviations from budgeted income.

Overall, in addition to operating profit the consolidated profit attributable to Commerzbank shareholders and investors in additional equity components is also expected to increase significantly in 2023. This should be accompanied by an increase in the distribution ratio for shareholders from 30% to 50% for the 2023 financial year.

Anticipated segment performance

Private and Small-Business Customers

In the Private and Small-Business Customers (PSBC) segment, the focus in the current year will be on effectively adapting customer business to the new business model. With the branch network in Germany reduced to around 450 branches last year and expected to reach the target size of 400 branches this year, around 8 million branch customers will be served from the advisory centre with its 12 locations. The aim is to ensure that earnings potential is leveraged in line with the altered customer service situation and that potential customer attrition is effectively limited. At the same time, further investments will be made in digital applications and processes. This is intended to further strengthen comdirect's very good market position. In the current year, particular attention will be paid to personal service and business potential with high-net-worth private customers.

Net interest income should increase due to the rise in interest rates in the current year, when the prior-year figure is adjusted for the Group-neutral extraordinary income from fair value adjustments of around €90m in the second quarter of 2022. A similar position is excluded for 2023 as the underlying offsetting procedure in the Group has been adjusted.

Commerzbank is expecting a slight decline in net commission income for the PSBC segment. The reason for this forecast is the expectation of largely unchanged equity indices, particularly in Germany. As a result, both portfolio-related and transaction-related income from securities is likely to be lower than in the previous year, when stronger markets – particularly in the first quarter of 2022 – boosted income.

With regard to both net interest income and net commission income in the PSBC segment, mBank is expected to contribute at the same level as in the previous year.

Overall, we expect net income in the PSBC segment to be significantly higher than in the previous year, on the assumption that the high one-time charges at mBank in Poland resulting from the credit holidays and from provisions for legal risks in connection with mortgage loans issued in foreign currencies will not recur in the current year.

Operating expenses in the PSBC segment, including mandatory levies, are expected to be at the same level in 2023 as in 2022. While lower costs are expected for Germany owing to the advanced progress of the headcount reductions, the planning for mBank foresees higher costs in the current year because of inflation.

Despite expecting a higher charge for the risk result in the PSBC segment than in the previous year, we expect operating profit to increase year on year due to rising income. As such, the operating return on equity should increase significantly and the cost-income ratio in the PSBC segment should fall.

Corporate Clients

In the Corporate Clients (CC) segment, too, the focus in the current year will be on intensifying customer business. The overriding priority is to generate further earnings potential by providing effective support for German SMEs in their business activities. In so doing, Commerzbank is responding to altered global trade flows and will ensure that it supports its customers along the relevant trade corridors. For smaller SMEs, Commerzbank has established "Mittelstandsbank Direkt", which is already providing high-quality direct banking services for 6,000 customers nationwide from its Hamburg location. This model will be further expanded in the current year and is set to be opened up to new external customers in the second half of the year. Commerzbank will continue its efforts to improve the return on capital employed in the CC segment in 2023.

Commerzbank is expecting a further significant increase in net interest income in the CC segment due to higher market interest rates, which allow corporate client deposits to be reinvested at higher margins than in the past.

Net commission income is also expected to be slightly higher than in the previous year. In addition to hedging transactions, such as those carried out in connection with foreign currency transactions, cash management is also a driver of this increase.

As the quality of forecasting for all other income items in the Corporate Clients segment is subject to a high degree of uncertainty, the possibility that other income will not reach the 2022 level cannot be ruled out. Overall, therefore, the possibility that total income in the segment will be lower than in the previous year cannot be ruled out either.

In terms of operating expenses, Commerzbank expects costs in the Corporate Clients segment to be lower than in 2022. This will be driven by the advanced progress of the headcount reductions in the segment and in the back office units, which will then have a positive impact on the segment through lower cost allocations.

We are expecting slightly lower charges for the risk result in the Corporate Clients segment compared with the previous year. This is based on the assumption that the economic slowdown will only lead to a mild recession in Germany and that the expected negative effects have already been partially anticipated through the TLA in place at the end of 2022.

In summary, without the additional potential from higher forward interest rates materialising, we are expecting a slightly higher operating profit for the Corporate Clients segment in 2023. The operating return on equity should therefore remain stable with slightly higher risk-weighted assets, while there is likely to be a slight improvement in the cost-income ratio.

General statement on the outlook for the Group

For the 2023 financial year, Commerzbank expects to significantly exceed both the operating profit of the previous year and the consolidated profit attributable to Commerzbank shareholders and investors in additional equity components. The main reasons for the expected increase are higher net interest income, the elimination of high one-time charges at mBank in Poland and lower operating expenses in the Group. Accordingly, Commerzbank is expecting a further increase in the net return on tangible equity towards the target of more than 7.3% in 2024.

Commerzbank's target for its Common Equity Tier 1 capital ratio is based in part on the capital requirements resulting from the Supervisory Review and Evaluation Process (SREP). This minimum requirement culminates in the MDA threshold, which is approximately 10.1% for the first quarter of 2023. This compares with a CET1 ratio of 14.1% at year-end 2022. Commerzbank thus has a significant capital buffer above the regulatory minimum requirements. Commerzbank is still expecting a CET1 ratio of around 14% for 2023. This target already takes into account a planned distribution of 50% of net income after deduction of fully discretionary AT1 coupons for the 2023 financial year.

There are numerous risk factors that could nonetheless affect the 2023 profit forecast to a considerable, though not reliably quantifiable extent, should events take an unfavourable turn. These still include high global economic risks.

Geopolitical risks such as the Russia-Ukraine war, which could significantly accelerate existing inflationary trends through the massive increase in raw material prices, also have the potential to weaken the expected economic recovery and thus have an impact on our business performance. Moreover, trade disputes triggered by political tensions between the economic blocs of Europe, North America and Asia remain possible.

Other risk factors include unfavourable trends in the regulatory or legal environment and a further tightening of the competitive situation in Germany. Along with inflation-related cost increases, a fall in margins to levels that are unattractive from a risk-return perspective could also delay and/or limit the effectiveness of the expected positive effects of the measures to increase Commerzbank's profitability over the coming years. For further information on other risks, see page 139 ff. of the Group risk report.

In Poland, there is still no immediate prospect of a final supreme court ruling on the legal situation concerning lawsuits brought by private customers relating to Swiss franc real estate loans, meaning that further charges cannot be ruled out. Further information on the statement on this matter made in mid-February 2023 by the Advocate General of the European Court of Justice can be found in the report on the events after the reporting period in the Group financial statements on page 298.

Group risk report

The Group risk report is a separate reporting section in the Annual Report. It forms part of the Group management report.

Group risk report

› In the Group risk report, we give a comprehensive presentation of the risks we are exposed to. We provide a detailed insight into the organisation and key processes of our risk management. Our primary aim is to ensure that all risks in Commerzbank are fully identified, monitored and managed based on adequate procedures at all times.

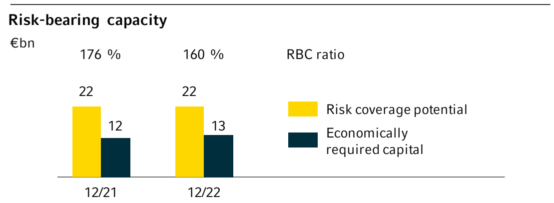
Contents

Executive summary 2022

Economic uncertainty and the consequences of the Russian invasion of Ukraine are still weighing heavily on the macroeconomic outlook. The model-based parameters used to establish loan loss provisions do not yet fully reflect these effects. The secondary effects TLA booked in this regard continues to reflect adequately the anticipated effects. In the remaining risk figures, the expected uncertain development is currently primarily perceptible in the figures for Central and Eastern Europe, where the current situation is reflected in an increased expected loss and thus a higher risk density.

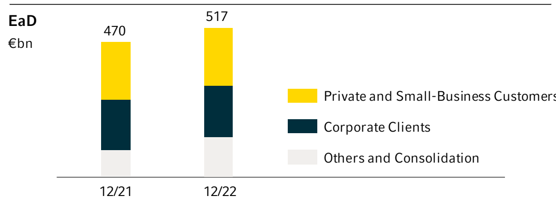
Risk-bearing capacity ratio stood at 160% as at 31 December 2022

- The risk-bearing capacity ratio remains well above the minimum requirement.
- The increase in economically required capital compared to December 2021 is mainly due to higher market and operational risks.



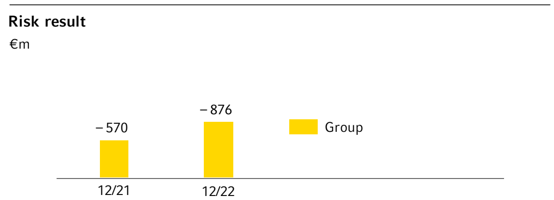
The Group's exposure at default increased

- The Group's exposure at default increased from €470bn to €517bn in 2022.
- The risk density declined from 18 basis points to 17 basis points over the same period.



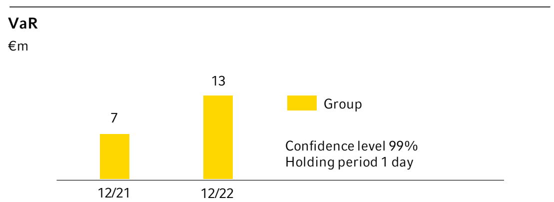
Risk result for the Group amounted to €–876m in 2022

- Compared to the previous year the risk result increased significantly and was impacted in particular by the Russia-Ukraine war.
- The direct effects of the coronavirus pandemic have abated to the point where no further charge is expected from it.



Market risk in the trading book increased in 2022

- Value at Risk (VaR) increased in 2022 from €7m to €13m.
- The reason for this is the increased market volatility resulting from the Russia-Ukraine war, which led to new crisis scenarios in the VaR calculation.



Operational risk increased year on year

- In 2022 risk-weighted assets from operational risks increased to €21.2bn.
- The total charge for OpRisk events fell from €1,136m in the previous year to €951m.

Risk-oriented overall bank management

Commerzbank defines risk as the danger of possible losses or profits foregone due to internal or external factors. In risk management, we normally distinguish between quantifiable and non-quantifiable types of risk. Quantifiable risks are those to which a value can normally be attached in financial statements or in regulatory capital requirements, while non-quantifiable risks include compliance and reputational risk.

Risk management organisation

Commerzbank regards risk management as a task for the whole Bank. The Chief Risk Officer (CRO) is responsible for developing and implementing the Group's risk policy guidelines for quantifiable risks, laid down by the Board of Managing Directors, as well as for measuring these risks. The CRO regularly reports to the Board of Managing Directors and the Supervisory Board's Risk Committee on the overall risk situation within the Group.

The risk management organisation comprises Group Credit Risk Management, Group Risk Control, Group Cyber Risk & Information Security as well as Group Big Data & Advanced Analytics.

The CRO also has responsibility for Group Compliance. It is Group Compliance's responsibility to establish appropriate governance, procedures and systems to allow the Bank to avoid unintentional endangerment as a consequence of compliance risks. Group Compliance is led by the Chief Compliance Officer.

All divisions have a direct reporting line to the CRO.

The Board of Managing Directors has exclusive responsibility for fundamental strategic decisions. The Board of Managing Directors has delegated operative risk management to committees. Under the relevant rules of procedure, these are: the Group Credit Committee, the Group Market Risk Committee, the Group OpRisk Committee, the Group Cyber Risk & Information Security Committee and the Group Strategic Risk Committee, which decides on risk issues of an overarching nature. The CRO chairs all these committees and has the right of veto. The CRO is also a member of the Group Asset Liability Committee. Here the CRO also has a right of veto on certain topics (e.g. liquidity risk issues).

The tasks and competencies of the respective committees are described below:

The **Supervisory Board's Risk Committee** is the Bank's highest risk committee. It comprises at least five Supervisory Board members. The Risk Committee's tasks include monitoring the risk management system and dealing with risks such as market, credit and operational risk, reputational risk and cyber risks (including information security at the Bank). The Risk Committee determines the type, scope, format and frequency of the information that must be presented to the Board of Managing Directors about strategy and risk.

The **Group Credit Committee** is the decision-making committee for operative credit risk management, comprising two representatives each from the back office and front office. The Group Credit Committee takes decisions in line with the competencies delegated to it by the Board of Managing Directors and is responsible for managing all credit risks. It acts on the basis of the prevailing Group credit risk strategy.

The **Group Market Risk Committee** monitors market risk in the interests of the Bank as a whole and manages limit requirements in line with risk-bearing capacity. To do this, all market risks from the trading and banking book are analysed to identify risks early and for active risk management purposes. The focus here is on optimising the risk/return profile.

The **Group OpRisk Committee** (OpRiskCo) is responsible for managing operational risks within the Group and in this regard acts as the highest escalation and decision-making committee below the Board of Managing Directors. The OpRiskCo also addresses all important regulatory issues that arise in connection with the management of operational risks within the Group. In addition, it deals with standards on governance and assessing the functioning of the Internal Control System (ICS) within the Commerzbank Group. Details about the ICS can be found in the section on operational risks.

The **Cyber Risk & Information Security Committee** (CRISCo) monitors and manages cyber and information security risks in the overall interests of the Bank. In this respect, it acts as the highest decision-making and escalation committee below the Board of Managing Directors. The CRISCo addresses all regulatory aspects relevant to cyber and information security issues and ensures appropriate risk management in this regard in accordance with internationally recognised standards.

The **Group Strategic Risk Committee** acts as the discussion and decision-making committee for all types of risk, and its main objective is to monitor and manage risks at portfolio level. This covers risk measurement, risk transparency and risk management.

The **Group Asset Liability Committee** (Group ALCO) is the Commerzbank Group committee responsible for the Group-wide and integrated management of financial resources, namely capital, liquidity and balance sheet structure as well as net interest income, in accordance with the regulatory framework. The Group ALCO monitors in particular the Group's risk-bearing capacity and as such plays an important part in the Internal Capital Adequacy Assessment Process (ICAAP). The Group ALCO resolves the recovery plan. Resolutions of the Group ALCO are presented to the Board of Managing Directors for confirmation. In case of violation of a recovery plan indicator, the Group ALCO plays a central role regarding the escalation, the estimation of the situation and the introduction of measures.

Moreover, risk issues are dealt with in other committees listed below:

The **Group Risk Management Executive Committee** acts as the discussion and decision-making committee within Group Risk Management and is responsible in particular for the organisation and strategic development of risk management as well as the creation and maintenance of a uniform risk culture. It also ensures that the Group risk strategy and the resolutions of the Board of Managing Directors are implemented in the risk function.

Compliance topics are dealt with in the **Global Compliance Board** (GCB). The GCB has been established as a forum to share updates on major compliance topics and supervisory actions regarding compliance in the Bank. Furthermore, the GCB serves as information platform for segments and functions about compliance culture, changes in compliance regulations, updates of compliance-related policies and their implications.

Risk strategy and risk management

The overall risk strategy, in line with the business strategy, governs the strategic risk focus of the Commerzbank Group. It sets the risk appetite as the maximum risk that the Bank is prepared and able to accept while following its business objectives without exposing itself to existential threats over and above the risks inherent in the business. The guiding idea is to ensure that the Group holds sufficient liquidity and capital. That also includes ensuring that the business strategy can be implemented through a risk profile that is commensurate with the leeway in the Group's capitalisation as determined by regulatory and capital market factors. Based on these requirements, suitable limits are defined for the risk resources of capital and liquidity available to the Group. The overarching limits of the overall risk strategy are consistent with the indicator thresholds of the recovery plan.

The core functions of banks as transformers of liquidity and risk give rise to inevitable threats that can in extreme cases endanger the continued existence of the institution. These depend on the bank's particular business model and are accepted in the pursuit of business objectives. The basis for Commerzbank's strategic alignment is its business strategy. In the event of a sustained change in the assessment of the inherent and existential threats to Commerzbank, the Board of Managing Directors may have to adjust the business model and thus the business and risk strategy in the medium and long term. A distinction can be made between the types of risk accepted on the basis of two fundamental threat scenarios. The occurrence of an inherent, existential threat jeopardises the continued existence of Commerzbank. In this case, rescuing Commerzbank would hardly be feasible without state measures or significant regulatory support measures (e.g. protective guarantees, tolerance of significant deviations from regulatory capital requirements, rescue merger) or activation of the Single Resolution Mechanism (SRM).

However, mitigation strategies are developed to counter these inherent existential threats in order as far as possible to reduce the probability of damage or the extent thereof. On the other hand, if a threat materialises that is inherent in the business model but not existential, there is always the possibility of mitigation through, among other things, capital measures available on the market or the use of appropriate capital buffers. It is therefore not necessary to activate the Single Resolution Mechanism (SRM) in this threat scenario. For Commerzbank, the existential threats inherent in its business model include, for example, the default of Germany, a tactical nuclear attack on Frankfurt/Main as Germany's financial nerve centre and Commerzbank's head office location, the disintegration of the eurozone and a default of one or more of the other major European countries or a default of the United States, a collapse of the financial markets in connection with the loss of the ECB's basic functionalities or a bank run, a collapse or a massive malfunction in global clearing houses, as well as extreme cyber attacks on states and institutions due to increasing digitalisation and geopolitical tensions.

The (non-existential) threats inherent in the business model include a default of one or more of the less important (peripheral) countries in the eurozone without significant systemic spread, and a deep recession lasting several years with severe effects on the German economy (e.g. triggered by a global pandemic, an extreme rise in energy prices or originating in the USA or China) and the resulting consequences such as huge loan defaults or a sharp outflow of customer deposits affecting the liquidity situation. Geopolitical crises, such as that currently resulting from Russia's war with Ukraine, or trade wars, for example between the USA and China, may have a huge impact on global markets and threaten Commerzbank's business model as an international institution. With the Russian army's invasion of Ukraine, Commerzbank quickly adapted to the new scenario and adjusted the management of market, liquidity, credit and operational risks in line with the specific requirements of the geopolitical crisis. The observable effects on value chains and commodity prices show, however, that the effects are also still ongoing and remain difficult to assess. In general, the geopolitical risk profile needs to be taken into account when defining the risk appetite in the sense of a forward-looking determination of the (country) risk disposition for possible geopolitical crises (e.g. with regard to China). As the digitalisation of the business environment continues to increase and Commerzbank undertakes its own digital transformation, cyber risk is an inherent threat that must be accepted. Depending on the severity and impact of a cyber attack, cyber risk can also be considered an existential threat, which is why Commerzbank is continuously working to improve its cyber resilience. The further evolution and possible consequences of mBank's situation in connection with the Swiss franc residential mortgage loan portfolio and with the additional credit holidays granted by the national regulator in combination with a default by Poland pose political risks. These may significantly threaten Commerzbank and could require special mitigating capital market measures.

Climate change – also associated with a rapid decline in biodiversity – may pose another inherent threat. Climate change may be reflected in physical and transition risks for Commerzbank. The transition aspects in particular harbour risks (as well as opportunities) in the short term that are difficult to assess. Identifying and mitigating this threat to Commerzbank is one of the objectives of risk strategy. Accordingly, Commerzbank has determined for each type of risk whether environmental risks are a key driver. All risk types that are material in relation to environmental risks were reflected in risk strategy and management in the context of current industry-wide standards, the degree of maturity of the methodology and the availability of data. Commerzbank has made substantial progress in this area in recent years. Nevertheless, environmental risk management remains a field of development, which is being expanded by the bank with a high risk strategic priority.

When pursuing its business targets, the Bank accepts these threats inherent in its business model. It may be necessary to adjust the business model and hence the business and risk strategies in the medium and long term if the Board of Managing Directors' assessment of these threats to Commerzbank changes substantially. To the extent that it is able to do so, Commerzbank makes early preparations in anticipation of forthcoming changes in regulatory requirements and accounting standards. Such changes and their (retrospective) interpretation may have lasting implications for – and even threaten the survival of – Commerzbank's business model. Commerzbank accepts these regulatory risks because there are many cases where there is no option to mitigate or manage them.

The overall risk strategy covers all material risks to which Commerzbank is exposed. It is updated annually or on an ad hoc basis as required and set out in further detail in the form of sub-risk strategies for the risk types which are material. These are then specified and made operational through policies, regulations and instructions/guidelines. By means of the upstream risk inventory process, Commerzbank ensures that all risk types of relevance to the Group are identified and their materiality assessed. The assessment of the materiality of a risk is based on whether its occurrence could have a major direct or indirect impact on the Bank's risk-bearing capacity.

As part of the planning process, the Board of Managing Directors decides how much of the risk coverage potential of the Group should be utilised. On that basis, individual types of quantifiable risk contributing to the capital requirements are limited in a second stage. A capital framework is allocated to the management-relevant units through the planning process. Compliance with limits and guidelines is monitored during the year, and management measures are put in place where required. In addition, further qualitative and quantitative early warning indicators are established in the overall risk strategy. Potential negative developments can be identified at an early stage with the help of these indicators.

One of the primary tasks of risk management is the avoidance of risk concentrations. These can arise from the synchronous movement of risk positions both within a single risk type (intra-risk concentrations) and across different risk types (inter-risk concentrations). The latter result from common risk drivers or from interactions between different risk drivers of different risk types.

By establishing risk management and controlling processes, Commerzbank provides for the identification, assessment, management, monitoring and communication of material risks and related risk concentrations. This ensures that all Commerzbank-specific risk concentrations are taken into account in its risk management. Scenario analyses are regularly used to ensure transparency regarding risk concentrations. The structure of the scenarios and the integrated approach ensure that the impact of adverse scenarios on portfolio priorities and risk concentrations are examined in a targeted manner. Management is regularly informed about the results of the analyses so that the potential risk of losses can be avoided in good time.

The Group Risk & Capital Monitor is the monthly risk report, designed for management purposes, on capital, credit risk, market risk, liquidity risk and OpRisk topics within Commerzbank risk management. It shows all the above risk types, including economic and regulatory risk-bearing capacity, for the Commerzbank Group. The report's aims include providing the Board of Managing Directors and the Supervisory Board's Risk Committee with transparent and comprehensive information, highlighting important developments from a risk perspective and setting management measures. The report is also used in particular to monitor limits and guidelines within the overall risk strategy. Responsibility for approving the overall risk strategy and the Group Risk & Capital Monitor lies with the Board of Managing Directors.

Commerzbank has adopted a code of conduct that defines binding minimum standards for Commerzbank's corporate responsibility, its dealings with customers, business partners and colleagues, and its day-to-day business. It goes without saying that the Bank complies with relevant laws, regulatory requirements, industry standards and internal rules, and this therefore forms a particularly important part of its risk culture. It actively requires employees to behave appropriately, courageously, with integrity and in compliance with rules, and any failure to comply with rules is penalised. Expanded procedures ensure that misconduct is evaluated in a uniform and fair manner, strengthening consequence management on a long-term basis.

The main pillar of the Bank's overall risk management and culture is the concept of three lines of defence, which is a core element of the Corporate Charter. Under the three lines of defence principle, protecting against undesirable risks is an activity that is not restricted to the risk function. Each unit (segment or function) forms the first line of defence within its area of operational responsibility and is directly responsible for identifying and managing risks within it while complying with the prescribed risk standards and policies. For example, the front office forms the first line of defence in all business decisions and has to take risk aspects into account in reaching them. The second line of defence for each type of risk lays down standards for appropriate management of risks of that type, monitors this and ensures the application of such standards, and analyses and evaluates the risks. The risk function forms the second line of defence against credit and market risks associated with business decisions. Particularly for credit risk, this includes involvement in the credit decision process by means of a second vote. Units outside the risk function (e.g. Group Finance) also operate as the second line of defence for certain risk types. The third line of defence is Internal Audit.

Risk ratios

Commerzbank uses a comprehensive system of ratios and procedures for measuring, managing and limiting various types of risk. The most important of these are listed below:

Economically required capital is the amount, corresponding to a high confidence level (currently 99.90% at Commerzbank), that will cover unexpected losses arising from risk positions.

The **risk-bearing capacity ratio (RBC ratio)** indicates the excess coverage of the economically required capital by the risk coverage potential. Risk-bearing capacity is deemed to be assured as long as the RBC ratio is higher than 100%.

Exposure at default (EaD) is the expected exposure amount taking into account a potential (partial) drawing of open lines and contingent liabilities that will adversely affect risk-bearing capacity in the event of default. EaD is hereinafter also referred to as "exposure".

Expected loss (EL) measures the potential loss on a loan portfolio that can be expected within one year on the basis of historical loss data.

Risk density is the ratio of expected loss to exposure at default and thus represents the relative risk content of an exposure or a portfolio.

Value at risk (VaR) is a methodology for quantifying risk. It involves setting a holding period (such as one day) and a confidence level (such as 97.5%). The VaR value then denotes the relevant loss threshold that will not be exceeded within the holding period with a probability in line with the confidence level.

Credit value at risk (CVaR) is the economic capital requirement for credit risk with a confidence level of 99.90%. The term results from the application of the value at risk concept to credit risk measurement. Credit VaR is an estimate of the amount by which losses from credit risks could potentially exceed the expected loss within a single year, i.e. unexpected loss. The idea behind this approach is that expected loss simply represents the long-term average of lending losses, but this may vary (positively or negatively) from actual credit losses for the current financial year.

Risk-bearing capacity and stress testing

Risk-bearing capacity analysis is a key part of overall bank management and Commerzbank's ICAAP. The purpose is to ensure that sufficient capital is held at all times. The risk-bearing capacity concept is reviewed and optimised annually.

When determining the economically required capital, allowance is made for potential unexpected fluctuations in value. Where such fluctuations exceed forecasts, they must be covered by the available economic capital to absorb unexpected losses (risk coverage potential). Only the economic value of equity components that absorb losses in the going concern approach is taken into account in determining the economic risk coverage potential.

The capital requirement for the risks taken is quantified using the internal economic capital model. All risk types of the Commerzbank Group classified as significant and quantifiable within the annual risk inventory are taken into account when determining the economically required capital. The economic risk approach therefore also comprises risk types that are not included in the regulatory requirements for banks' capital adequacy. The model also reflects diversification effects incorporating all types of risk. The confidence level for the calculation of economically required capital is 99.90% and is harmonised with the going concern approach. The quantifiable significant risks in the economic capital model are divided into default risk, market risk, operational risk and (not separately disclosed in the following table) business risk and property value change risk. Furthermore, reserve risk is included in the risk-bearing capacity calculation by means of a corresponding risk buffer. Business risk is the risk of a potential loss resulting from deviations in actual income and expense from the respective budgeted figures. Business risk is used to substantiate a higher-level management buffer that ensures the responsiveness of capital management. Physical asset risk is the risk of an unexpected fall in the value of owned property which is either already recognised as an asset in the Group's balance sheet or which can be recognised during the next 12 months under contractually assured obligations with option character (especially real estate). Climate and environmental risks are defined as horizontal risks within Commerzbank that are manifested in existing risk categories, with both transition and physical risks being considered. The annual materiality assessment of climate and environmental risks provides a holistic overview of the impact on existing material risk types identified in the risk inventory. Climate and environmental risks are reflected in Commerzbank's risk-bearing capacity analysis through a risk buffer for default and market risks that are materially influenced by climate and environmental risks. Further information on climate and environmental risks can be found in the "Environmental, social and governance (ESG) risks" section on page 144 ff.

The results of the risk-bearing capacity analysis are shown using the risk-bearing capacity ratio (RBC ratio), indicating the excess of the risk coverage potential in relation to the economically required capital. Risk-bearing capacity is monitored and managed monthly at Group level. Risk-bearing capacity is deemed to be assured as long as the RBC ratio is higher than 100%. In 2022, the RBC ratio was consistently above 100% and stood at 160% as at 31 December 2022. The increase in economically required capital compared to December 2021 is mainly due to higher market and operational risks. The increase in market risk reflects the heightened market volatility resulting from the war between Russia and Ukraine. The main drivers for the sharp increase in operational risk are changes in the Swiss franc complex, the inclusion of further risks in connection with the issue of consumer protection and the first-time inclusion of inflation in loss data. The decrease in credit risk is mainly explained by the annual update of the parameters in the credit risk model. The RBC ratio is still well above the minimum requirement.

Risk-bearing capacity Group | €bn	31.12.2022	31.12.2021
Economic risk coverage potential	**22**	**22**
Economically required capital[1]	**13**	**12**
thereof for default risk[2]	8	9
thereof for market risk[3]	4	3
thereof for operational risk	2	1
thereof diversification effects	−2	−2
RBC ratio (%)[4]	**160**	**176**

[1] Including physical asset risk, risk of unlisted investments and the risk buffer for reserve risk, for the quantification of potential fluctuations in value of intangibles, and for climate and environmental risks.
[2] Including buffer for planned parameter update and model change.
[3] Including deposit model risk.
[4] RBC ratio = economic risk coverage potential/economically required capital (including risk buffer).

Commerzbank uses macroeconomic stress tests to review the risk-bearing capacity in the event of assumed adverse changes in the economic environment. The underlying scenarios take into account the interdependence of the development of the real economy and the financial economy. They are updated quarterly and approved by the Group ALCO. The scenarios describe an extraordinary but plausible adverse development in the economy, focusing in particular on portfolio priorities (e.g. export-based sectors in Germany) and business strategies of relevance to Commerzbank. Current adverse developments (e.g. rising energy costs) are also taken into account when creating the scenarios. Stress tests in the economic perspective cover a time horizon of 12 months. The scenario simulation is run quarterly at Group level using the input parameters of the economic capital requirements calculation for all material and quantifiable risk types. In addition to the capital required, the income statement is also subjected to a stress test based on the macroeconomic scenarios. Based on this, changes in the risk coverage potential are simulated. Whereas the RBC ratio is embedded into Commerzbank's limit system, guidelines for risk-bearing capacity are set as an early warning system in the stressed environment. The ongoing monitoring of the limits and guidelines is a key part of internal reporting. Defined escalations are triggered if the limits are breached.

The risk-bearing capacity and stress testing concept is subject to an annual internal review and is refined on an ongoing basis. The development of the regulatory environment is also taken into account. In addition to the regular stress tests, reverse stress tests are implemented annually at Group level. Unlike regular stress testing, the result of the simulation – a sustained threat to the Bank – is determined in advance. The aim of the analysis process in the reverse stress test is to improve the transparency of Bank-specific risk potential and interactions of risk by identifying and assessing extreme scenarios and events. On this basis, for instance, action fields in risk management including the regular stress tests can be identified and taken into account in the ongoing development efforts. In 2022 Commerzbank participated in the ECB climate risk stress test. In addition to a qualitative analysis of the status of the internal climate risk stress test framework, both transition and physical climate risk factors were analysed in relation to counterparty and market risks on a scenario basis. In addition, Commerzbank conducted an internal reverse climate stress test for the first time as a strategic analysis of its own net zero targets for specific portfolios.

In 2022 the risk-weighted assets resulting from Commerzbank's business activities decreased from €175bn to €169bn.

The table below gives an overview of the distribution of risk-weighted assets, broken down by segment and risk type:

	31.12.2022				31.12.2021			
Risk-weighted assets €bn	**Default risk**	**Market risk**	**Operational risk**	**Total**	**Default risk**	**Market risk**	**Operational risk**	**Total**
Private and Small-Business Customers	40	1	13	54	42	1	10	53
Corporate Clients	73	4	5	82	70	6	5	81
Others and Consolidation	28	2	3	34	33	3	5	41
Group	**140**	**7**	**21**	**169**	**145**	**10**	**20**	**175**

The global economy lost considerable momentum in 2022. Although the coronavirus situation eased noticeably and coronavirus restrictions were largely lifted in most economies, Russia's war against Ukraine triggered new shock waves. Fears of an energy crisis drove up energy prices worldwide. In addition, many companies continued to complain about a lack of upstream products.

Russia's war in Ukraine and the suspension of its gas supplies have exacerbated the economic situation, particularly in Europe, to such an extent that both industry and households are suffering as a result. Although the negative effects on the economy and society are being mitigated by the support packages that have been agreed, this means having to accept a significant increase in public debt everywhere in Europe. For most European countries, Germany included, recession or at best economic stagnation therefore appears inevitable in the coming months.

Added to this are ongoing risks associated with the coronavirus pandemic. Further waves of infection and the associated adverse effects on the economy – especially in China – are thus conceivable.

Further information on the effects of the Russia-Ukraine war, the coronavirus pandemic and the inflation risks can be found in the economic report and in the outlook and opportunities report in the Group management report.

Regulatory environment

With Basel 3, the Basel Committee on Banking Supervision published among other things comprehensive rules on the components of equity and equity ratios as well as the management of liquidity risk. Since 1 January 2014, the associated Capital Requirements Regulation and Directive (CRR and CRD) have been in force as the European implementation of Basel 3, with some of the rollout taking place in stages up to 2019 ("phase-in"). Numerous supplementary regulations have since been published, in particular by the European Banking Authority (EBA), and these are now progressively entering into force; this will continue in the years to come.

With Basel 4 ("finalisation of Basel 3"), the next banking regulation package is currently being agreed in Europe. The entry into force of the corresponding CRR III and CRD VI is currently planned for 1 January 2025.

Commerzbank has analysed the effects of the increase in the countercyclical capital buffer in Germany, which will take effect from February 2023, and other currently foreseeable changes in the countercyclical capital buffer, as well as the introduction of a sectoral systemic risk buffer in Germany on loans secured by residential real estate, and reflects them in its internal capital planning.

Further information on the countercyclical capital buffer can be found in the outlook and opportunities report in the Group management report.

The ECB, in its capacity as the supervisory authority for the eurozone banks directly supervised by it, conducted the annual Supervisory Review and Evaluation Process (SREP). On 21 December 2022, in its final SREP decision for 2022, the ECB informed Commerzbank of the results of the SREP and the associated supervisory requirements. It did not change the bank-specific capital requirements for the Commerzbank Group, "P2R" and "P2G", set for 2023. With effect from 1 January 2023 the SREP decision replaces the previous SREP decision.

In 2022, the ECB progressed with the establishment of environmental risk management by supervised SSM banks through both a thematic review and a comprehensive ECB supervisory climate stress test. Commerzbank participated in both ECB initiatives with great success, especially in comparison with its peers. The ECB expects full compliance with the requirements set out in its "Guide on climate-related and environmental risks" by the end of 2024.

The EU Bank Recovery and Resolution Directive has been in force since mid-2014. Responsibility for the drafting of resolution plans and the resolution of at-risk banks supervised by the ECB was transferred to the Single Resolution Board (SRB) in Brussels with effect from 1 January 2016. At the same time, eurozone banks started to fund the Single Resolution Fund. The SRB defines the formal minimum requirement for own funds and eligible liabilities (MREL) for the banks under its responsibility on a consolidated and individual basis.

The legal basis for setting the Minimum Requirement for Own Funds and Eligible Liabilities (MREL) and Total Loss-Absorbing Capacity (TLAC) was revised at European level and published on 7 June 2019 as part of the Risk Reduction Package in the form of the Single Resolution Mechanism Regulation (SRMR II), the Bank Recovery and Resolution Directive II (BRRD II) and the CRR II. The BRRD II as a European directive requires implementation into national law within 18 months. The amendments included, among other things, adjustments to the calculation logic and, for certain banks, a statutory subordination requirement for parts of MREL. Most of the new provisions came into force in December 2020.

The Group-wide recovery plan was updated in the fourth quarter of 2022 to reflect the regulatory requirements. The recovery plan describes in detail for instance the courses of action and recovery potential available to the Bank in the event of a crisis and which specific recovery measures, in various stress scenarios, will enable the Bank to complete its recovery.

Commerzbank operates in markets subject to national and supranational regulation. In addition, it is subject to the overarching requirements imposed by accounting standards. Changes in regulatory requirements and accounting standards have significantly grown in frequency and materiality in recent years. They may have lasting implications for the financial industry in general and Commerzbank's business model in particular. Commerzbank continues to participate actively and at an early stage in the consultation processes aimed at preparing for the constant changes in the operating environment. It also monitors and evaluates current developments as regards future regulatory projects. Specific examples of these at global level are the final standards for revising capital requirements for market risk now published by the Basel Committee on Banking Supervision, and the revision of the framework for operational risk and credit risk, including the associated floor rules and disclosure requirements ("Basel 4"). At the European level, Commerzbank is following, among other things, the implementation of Basel 4, initiatives by the European Commission to introduce a European deposit insurance scheme and to create a capital markets union, the European Green Deal and the EBA initiative to revise the internal risk models.

The regulatory environment also remains challenging with regard to compliance risks. The focus here remains on the issues of anti-money laundering (including the implementation of the new BaFin administrative practice and the requirements of international standard-setters such as the EBA) and sanctions. In addition, anti-bribery and corruption (including the United Kingdom Bribery Act and the United States Foreign Corrupt Practices Act) and market compliance (among other things new EU requirements in sustainable finance, US requirements and CFTC regulations) are putting further risk types into the regulatory focus.

In response to Russia's war of aggression against Ukraine in violation of international law, the G7 states have adopted a large number of comprehensive and, in some cases, new sanctions. However, some of these differ in detail from each other. Furthermore, sanctions generally come into force immediately after publication, and no prior consultation is planned. Due to these peculiarities in the sanctions regulation, one of the Bank's compliance functions focuses on supporting the Bank's operating units in adapting their processes to new regulatory requirements at short notice, so that the applicable sanctions regulations are fully complied with both in domestic and foreign business.

Default risk

Default risk is defined as the risk of losses sustained or profits foregone due to the default of a counterparty. It is a quantifiable material risk and includes the sub-risk types of credit default risk, issuer risk, counterparty risk, country and transfer risk, dilution risk and reserve risk.

Strategy and organisation

The credit risk strategy is the sub-risk strategy for default risks and is derived from the overall risk strategy. It is embedded in the ICAAP process of the Commerzbank Group and forms a link between the Bank's overall risk management across all risk types and the operationalisation of default risk management. The overriding aim is to ensure the adequate quality of the credit portfolio. To this end, the credit risk strategy defines the credit risk tolerance, specifies risk strategy priorities, provides an overview of the material credit risk management concepts and thereby plays an integral part in maintaining the Group's risk-bearing capacity. The credit risk strategy makes use of quantitative and qualitative management tools that give decision-makers clear guidance on both portfolio management and decisions in specific cases.

Credit risk management is a joint task of the front office and the risk function, based on a standardised Group-wide credit risk culture. Impeccable moral and ethical conduct in compliance with the law and regulations is a key element of a culture of integrity and core to the credit risk culture. Default risks are assessed against uniform standards, regardless of segment limits. In line with the three lines of defence principle, the front office is the first line of defence and must take risk aspects into account when taking business decisions. The risk function (back office and Risk Controlling) is the second line of defence, its fundamental task being to manage, limit and monitor risks. The third line of defence is Internal Audit. It is tasked with independently auditing the Bank's processes and safeguards, and as such also assesses the activities of the first and second lines of defence.

The Group Credit Committee is the highest decision-making committee for operative credit risk management, comprising two representatives each from the back office and front office. It takes decisions in line with the competencies delegated to it by the Board of Managing Directors and is responsible for managing all credit risks. In so doing, the Group Credit Committee operates on the basis of the valid credit risk strategy. Reporting to the Group Credit Committee are sub-credit committees, which operate on the basis of their respective rules of procedure and within the competencies approved by the Board of Managing Directors. They comprise at least two representatives from the segments and two representatives from Group Risk Management. The sub-credit committees are responsible for managing all credit risks in the sub-portfolios within their respective remit and are entitled, in turn, to sub-delegate certain credit decisions within their prescribed competencies.

Discrete back-office areas are responsible for operational credit risk management at portfolio level and on a case-by-case basis. The responsibilities are separated between the performing loan area on the one hand and Intensive Care on the other. All credit decisions in the performing loan area are risk/return decisions. The front and back office take joint responsibility for risk and return from an exposure, with the front office having primary responsibility for the return, and the back office for the risk. Accordingly, neither office can be overruled in its primary responsibility in the credit decision process.

Higher-risk customers are handled by specialist Intensive Care areas. The customers are moved to these areas as soon as they meet defined criteria for assignment or mandatory transfer. The principal reasons for assignment to Intensive Care areas are criteria relating to number of days overdrawn, together with event-related criteria such as rating, third-party enforcement measures or credit fraud. The Intensive Care function decides on further action based on the circumstances of individual cases. Customers must be transferred to Intensive Care if they are in default (for example due to insolvency). This graduated approach ensures that higher-risk customers can continue to be managed promptly by specialists in a manner appropriate to the risks involved and in defined standardised processes.

Risk management

Commerzbank manages default risk using a comprehensive risk management system. The management framework comprises an organisational structure, methods and models, quantitative and qualitative management tools and regulations and processes. The risk management system ensures that the entire portfolio and the sub-portfolios, right down to individual exposure level, are managed consistently and thoroughly on a top-down basis.

The ratios and measures required for the operational process of risk management are based on the overarching Group objectives. The principle of seeking a low-risk profile in all business decisions is closely combined here with the risk function's aim of providing the front office with appropriate support. Preference is given to transactions and products with a low level of complexity. Another focus is on the responsiveness of a credit line or exposure.

Quantitative credit risk strategy guidelines limit risks with regard to poorer credit ratings and exposures with high loss-at-default contributions (concentration management) and for selected sub-portfolios with a high risk weight or regulatory importance, and, as applicable, for individual products with a high portfolio share.

Detailed arrangements for operationalising the guidelines for selected sub-portfolios are set out in separate portfolio policies. In addition, qualitative management guidelines in the form of credit policies define the target business of the Bank. At the level of individual transactions, they regulate the transaction type for which the available risk resources are to be used. These credit policies are firmly embedded in the credit process: transactions which do not meet the requirements are escalated through a fixed competence regulation.

Group-wide guiding principles are based on risk-oriented analyses of trends (e.g. of the development of weaker credit ratings over time) combined with an assessment of external framework conditions and internal rules. Risk-oriented analyses on key dates (e.g. rating profile of individual asset classes) are used in particular to derive portfolio guiding principles. Trend analyses of product-specific risk drivers are key factors for determining product guiding principles (e.g. loan-to-value of mortgage lending). In contrast, credit and portfolio policies are primarily produced through a multi-level coordination process involving the product and portfolio managers from the front and back offices, combined with an assessment of internal and external information sources.

To monitor compliance with credit risk strategic rules, continuous monitoring and reporting has also been set up at whole Group level and at segment or sub-portfolio level. Asset quality reviews by the risk function make an important contribution here to quality assurance and early risk detection. The focal points of the monitoring vary depending on the issue and target group. Ad hoc reporting processes have been established. In addition, crisis events may pose a risk to the Bank's capital and liquidity adequacy and thereby to its risk-bearing capacity. In a crisis, the Risk Mitigation Task Force will manage decisions flexibly in a coordinated, Group-wide process. For example, in the context of the Russia-Ukraine war the Task Force was established at the beginning of 2022 in order to identify effects on the Group portfolio as quickly as possible and to be able to take countermeasures. As part of the process, emergency action plans ensure that risk-mitigation measures are implemented quickly and efficiently.

The avoidance of risk concentrations is a core strategy of risk management. Risk concentrations are actively managed in order to identify at an early stage and contain the increased potential for loss from the synchronous movement of risk positions. In addition to exposure-related credit risk concentrations (bulk risks), default risk also includes country and sector concentrations. Segment-specific features are taken into account here.

Management and the Supervisory Board's Risk Committee are regularly informed about the results of the analyses.

Overview of management instruments and levels

Risk strategies and policies	**Limit and guideline systems**	**Portfolio monitoring and reporting**	**Structures of organisation and committees**
Group			
Overall risk strategy plus sub-risk strategies for significant risk types Establishment of a general risk understanding and creation of a uniform risk culture	Definition of Group limits (across all risk types) for capital and liquidity management Additional definition of guidelines as key points of the aspired target portfolio	Group Risk & Capital Monitor plus risk type specific Group formats (including flash reporting) Uniform, consolidated data repository as basis for Group reporting	Ensuring exchange of information and networking in committees that operate across all risk types Retaining qualified staff in line with progressive product innovation or regulatory adjustments
Sub-portfolios			
Clear formulation of risk policy in guidelines (portfolios, asset classes, etc.) Differenciated credit authorities based on compliance of transactions with the Bank's risk policy	Performance metrics on level of risk categories and sub-portfolios Expansion of Group-wide performance metrics using sub-portfolio-specific indicators	Portfolio batches as per established portfolio calendar* Asset quality review and analysis of High Attention Parts (HAP) Trigger monitoring with clear escalation and reporting lines	Interdisciplinary composition of segment committees Ensuring uniform economic opinions
Individual exposures			
Rating-dependent and bulk-sensitive credit authority regulations with clear escalation processes	Limitation of bulk risk	Limit monitoring at individual exposure level Monthly report to the Board of Managing Directors on the development of bulk risks Review of individual custom-ers/exposures resulting from asset quality review or HAP analyses	Deal team structures Institutionalized exchange within the risk function, also taking account of economic developments Sector-wise organization of domestic corporate business

The Task Force Corona established in 2020 as part of crisis management under the direction of the Chief Credit Risk Officer continued its work in 2022 to a reduced extent. The existing monthly reports were integrated into standard reporting so that the continuity of information transfer was ensured. The EBA reporting formats will end in the first quarter of 2023 with the last report as at 31 December 2022. The established exchange formats with the supervisory authorities focusing on the coronavirus continued to take place until the end of February 2022. After 24 February 2022, the focus of the weekly exchanges between the Joint Supervisory Team (JST) and Credit Risk and the quarterly JST meetings with senior management was on the Russia-Ukraine war.

Management of economic capital commitment

Economic capital commitment is managed in order to ensure that the Commerzbank Group holds sufficient capital. To this end, all relevant risk types in the overall risk strategy for economic risk capital are given limits on a Group-wide basis, with, in particular, a CVaR limit being specified. Due to the systematically restricted options for reducing default risk on a short-term basis, it is important to take account of expected trends (medium-term and long-term) in order to manage credit risk. For this reason, forecast values of credit risk parameters play a key role in ongoing management. At segment and business area level, changes to forecasts are monitored and adjustments made when necessary. There is no cascaded capital limit concept for credit risk below Group level.

Rating classification

The Commerzbank rating method comprises 25 rating classes for customers not in default (1.0 to 5.8) and 5 default classes (6.1 to 6.5). The Commerzbank master scale allocates precisely one rating class, stable over time, to each probability of default. The rating methods are validated annually and recalibrated where necessary so that they reflect the latest assessment based on all actual observed defaults.

The probability of default ranges assigned to the ratings are the same for all portfolios. This ensures internal comparability consistent with the master scale method. For guidance and indicative purposes, the Commerzbank master scale also shows external ratings as well as credit quality steps in accordance with Article 136 CRR. However, a direct reconciliation is not possible, because external ratings of different portfolios show fluctuating default rates from year to year.

In lending decisions, which are based among other things on the rating result, the credit approval authorities of both individual staff and the committees (Board of Managing Directors, Credit Committee, sub-credit committees) are graduated by a range of factors including size of exposure and rating class.

Commerzbank master scale

Commerzbank AG rating	PD and EL mid-point %	PD and EL range %	S&P scale		Credit quality steps in accordance with Article 136 CRR[1]	
1.0	0	0	AAA	AAA	I	Investment Grade
1.2	0.01	0 – 0.02				
1.4	0.02	0.02 – 0.03	AA+	AA	II	
1.6	0.04	0.03 – 0.05	AA, AA–			
1.8	0.07	0.05 – 0.08	A+, A	A		
2.0	0.11	0.08 – 0.13	A–			
2.2	0.17	0.13 – 0.21	BBB+	BBB	III	
2.4	0.26	0.21 – 0.31	BBB			
2.6	0.39	0.31 – 0.47				
2.8	0.57	0.47 – 0.68	BBB–			
3.0	0.81	0.68 – 0.96	BB+	BB	IV	Sub-investment grade
3.2	1.14	0.96 – 1.34	BB			
3.4	1.56	1.34 – 1.81				
3.6	2.10	1.81 – 2.40	BB–			
3.8	2.74	2.40 – 3.10				
4.0	3.50	3.10 – 3.90	B+	B	V	Non-investment grade
4.2	4.35	3.90 – 4.86	B			
4.4	5.42	4.86 – 6.04				
4.6	6.74	6.04 – 7.52				
4.8	8.39	7.52 – 9.35	B–			
5.0	10.43	9.35 – 11.64				
5.2	12.98	11.64 – 14.48	CCC+, CCC, CCC–, CC, C	CCC, CC, C	VI	
5.4	16.15	14.48 – 18.01				
5.6	20.09	18.01 – 22.41				
5.8	47.34	22.41 – 99.99				
6.1	100	> 90 days past due	D			Default
6.2		Imminent insolvency				
6.3		Restructuring with recapitalisation				
6.4		Termination without insolvency				
6.5		Insolvency				

[1] CRR = Capital Requirements Regulation (EU) No 575/2013.

Risk mitigation

The collateral taken into account in risk management changed in the period under review from €123.3bn to €126.4bn for positions in the Group's performing portfolio and from €1.1bn to €1.4bn for positions in the default portfolio.

Commerzbank mitigates credit risk through various measures including collateral and netting procedures.

Types of collateral include in particular land charges, financial collateral, guarantees, indemnities, credit derivatives, life insurance policies, other registered liens and other physical collateral.

The Bank takes account of credit risk mitigation effects from the acceptance of recognisable warranties (guarantees, comparable claims on third parties) by using the guarantor's risk parameters (PD and LGD) and/or the regulatory risk weightings.

As at the reporting date, no loan loss provisions were created for transactions in the performing portfolio with a total volume of €5.5bn (31 December 2021: €5.9bn), as these are entirely collateralised.

Where eligible from a regulatory point of view, guarantors are subject to a creditworthiness check and rating assignment based on their sector and business as part of the assessment of their declaration of liability. The aim of the creditworthiness check is to establish the guarantor's creditworthiness and maximum solvency.

The quality of the collateralisation recognised for regulatory purposes is rigorously checked and monitored on an ongoing basis. This includes in particular checks on legal enforceability and regular measurement of the collateral, carried out at appropriate intervals depending on the type of collateral, at least annually or on an event-driven basis. Positive correlations between the debtor's creditworthiness and the value of the collateral or guarantee are defined in the credit and collateral processing process; collateral instruments affected are not counted. Collateral is processed and evaluated primarily outside the front office.

The Bank analyses all credit collateral (physical and personal collateral) for evidence of collateral concentrations. The analysis includes checks on various dimensions such as collateral categories, the borrower's rating classes or regional allocations of collateral. The Board of Managing Directors receives regular information in respect of the above dimensions about changes in the collateral pool and possible issues/concentrations.

The measurement and processing of collateral is governed by generally applicable standards and collateral-specific instructions (guidelines, process descriptions, IT instructions). Collateral agreements are legally reviewed; standard agreements and templates are used where possible. The standards drawn up to hedge or mitigate the risk of loans, which also take into account the regulatory requirements of the CRR, include, among other things:

- Legal and operational standards for documentation and data collection and measurement standards.
- Standards to ensure the uniformity and timeliness of collateral measurement through the definition of measurement processes, uniform measurement methods, parameters and defined collateral discounts, clear definition of competences and responsibility for the processing and measurement process, and regular remeasurement frequencies.
- Other standards to take account of specific risks such as operational risk, correlation and concentration risk, market price change risk (e.g. due to currency fluctuations), country risk, legal and legal change risk and the risk of inadequate insurance coverage.

Commerzbank Group

Commerzbank focuses its business on two customer segments, Private and Small-Business Customers and Corporate Clients.

Economic uncertainty and the consequences of the Russian invasion of Ukraine are still weighing heavily on the macroeconomic outlook. The model-based parameters used to establish loan loss provisions do not yet fully reflect these effects. The secondary effects TLA booked in this regard continues to reflect adequately the anticipated effects. In the remaining risk figures, the expected uncertain development is currently primarily perceptible in the figures for Central and Eastern Europe, where the current situation is reflected in an increased expected loss and thus a higher risk density.

Credit risk parameters

The credit risk parameters in the Commerzbank Group are distributed in the rating classes 1.0 to 5.8 over the segments as follows:

	31.12.2022				31.12.2021			
Credit risk parameters	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**CVaR** €m	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**CVaR** €m
Private and Small-Business Customers	204	431	21	2,088	203	408	20	2,180
Corporate Clients	177	378	21	4,299	174	347	20	4,197
Others and Consolidation[1]	137	65	5	1,184	93[2]	114	12	2,141
Group	**517**	**874**	**17**	**7,571**	**470[2]**	**869**	**18**	**8,518**

[1] Mainly liquidity portfolios of Treasury.
[2] Excluding deposits with the Deutsche Bundesbank amounting to €28bn.

When broken down on the basis of PD ratings, 87% of the Group's portfolio is in the internal rating classes 1 and 2, which comprise investment grade.

	31.12.2022					31.12.2021				
Rating breakdown EaD | %	**1.0-1.8**	**2.0-2.8**	**3.0-3.8**	**4.0-4.8**	**5.0-5.8**	**1.0-1.8**	**2.0-2.8**	**3.0-3.8**	**4.0-4.8**	**5.0-5.8**
Private and Small-Business Customers	30	56	11	2	1	30	55	12	2	1
Corporate Clients	19	61	14	4	2	18	62	15	3	2
Others and Consolidation	77	22	2	0	0	49	47	3	0	0
Group	**38**	**49**	**10**	**2**	**1**	**29**	**56**	**11**	**2**	**1**

The Group's country risk assessment covers both transfer risks and event risks driven by political and economic events which impact on the individual economic entities of a country. Country risks are managed on the basis of transfer risk limits defined at country level. Country exposures which are significant for Commerzbank due to their size are handled by the Credit Committee on a separate basis.

The regional breakdown of the exposure corresponds to the Bank's strategic direction and reflects the main areas of its global business activities.

	31.12.2022			31.12.2021		
Group portfolio by region	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp
Germany	312	390	12	257	363	14
Western Europe	85	133	16	96	198	21
Central and Eastern Europe	53	261	49	55	222	40
North America	40	38	10	37	35	9
Asia	16	22	14	15	23	16
Other	11	30	27	11	28	27
Group	**517**	**874**	**17**	**470**	**869**	**18**

More than half of the Bank's exposure relates to Germany, just under one-third to other countries in Europe, 8% to North America and 3% to Asia. The rest is broadly diversified and is split among a large number of countries where we serve German exporters in particular or where Commerzbank has a local presence. The expected loss of the Group portfolio is mainly divided between Germany and the other European countries.

Risk result

The risk result relating to the Group's lending business in 2022 amounted to €–876m (prior-year period: €–570m).

The following table shows the breakdown of the risk result by stage according to IFRS 9. In Note (31) of the Group financial statements (credit risks and credit losses) details regarding the stages can be found; in Note (11) (risk result) the definition of the risk result can be found.

Any fluctuations in the market values of fair value loans are not recognised in the risk result. They are recognised in the net income from financial assets and liabilities measured at fair value through profit or loss.

	31.12.2022					31.12.2021				
Risk result | €m	**Stage 1**	**Stage 2**	**Stage 3**	**POCI**[1]	**Total**	**Stage 1**	**Stage 2**	**Stage 3**	**POCI**[1]	**Total**
Private and Small-Business Customers	–5	–122	–256	–8	–392	–23	–6	–287	–3	–319
Corporate Clients	–6	65	–480	–24	–446	6	15	–96	–75	–149
Others and Consolidation	0	53	–91	0	–38	6	–35	–65	–7	–101
Group	**–12**	**–5**	**–827**	**–32**	**–876**	**–11**	**–26**	**–448**	**–85**	**–570**

[1] POCI – Purchased or Originated Credit-impaired.

Compared to the previous year, the risk result increased and was impacted in particular by the Russian invasion of Ukraine. The top-level adjustment (TLA) booked during the year for this was no longer in place as at the end of the year, as the risk provisioning requirements remaining after the exposure reduction are now reflected in individual transactions. The direct effects of the coronavirus pandemic have abated to the point where no further charge is expected from it. The coronavirus TLA of €–523m was therefore fully reversed in the second quarter of 2022.

Economic uncertainty and the consequences of the Russian invasion of Ukraine are still weighing heavily on the macroeconomic outlook. The model-based parameters used to establish loan loss provisions do not yet fully reflect these effects. The secondary effects TLA booked in this regard in the second quarter was reviewed during the year at the quarterly reporting dates and continues to reflect adequately the anticipated effects. The scenario on which the TLA is based includes the following assumptions:

- Problems in supply chains and in the provision of raw materials continue to hamper industrial production and lead to rising procurement prices (for paper, wood, metals, oil, etc.).
- The US Federal Reserve's sharp interest rate hikes will lead to a decline in growth in early 2023.
- Although the Chinese government has eased its zero-Covid policy, growth remains below pre-pandemic levels because of the issues in the real estate sector and the high level of corporate debt.
- In Europe, the high cost of energy due to the war has a significant negative impact on GDP growth and continues to drive inflation.
- The German economy is burdened by rising inflation, shrinking export markets and the higher interest rate environment, while extensive state support programmes somewhat lessen the impact of higher energy costs.
- Rising consumer price inflation further increases consumer restraint across the eurozone or triggers a wage-price spiral. If cost increases can only be passed on to a limited extent, this will weigh heavily on corporate earnings.

As at 31 December 2022, the total for the TLA for secondary effects stood at €–482m. The adequacy of the TLA is continually reviewed. (Details on the background to and adjustment of the TLA can also be found in Note 31 of the Group financial statements (Credit risks and credit losses)).

Further drivers of the risk result in the reporting period are addressed in the following explanatory notes on the segments.

In the pessimistic scenario described in Note 31 of the Group financial statements (Credit risks and credit losses), Commerzbank, in addition to its current process for calculating its loan loss provisions, simulates the potential impact of deteriorating creditworthiness that could occur if the gas supply is rationed due to a material shortage in the supply of Russian gas (compared to 31 December 2022) along with the simultaneous assumption of direct or indirect government support measures to support any households and businesses impacted. The analysis shows an increased need for loan loss provisions in the amount of approximately €–600m in the event that this scenario, contrary to current expectations, should come to pass.

Default portfolio

The Group's default portfolio increased by €1,502m in 2022 and stood at €5,658m as at the end of the year. The additions in 2022 mainly comprised additions of individual exposures to the default portfolio as a result of the Russian invasion of Ukraine in the Corporate Clients segment and in the Others and Consolidation segment.

The following breakdown of the default portfolio shows the claims in the default portfolio in the amortised cost and fair value OCI (other comprehensive income) categories. The loans are almost exclusively assigned to the amortised cost category, of which by far the greatest share of €5.4bn (31 December 2021: €3.9bn) relates to the loans and receivables class and €249m (31 December 2021: €244m) to off-balance-sheet transactions. As at 31 December 2022, the volume of defaulted securities that can be assigned to the debt securities class was €0m (31 December 2021: €3m fair value OCI category). The collateral shown is liable to the full extent for loans in the amortised cost category, with €1,373m (31 December 2021: €1,087m) relating to loans and receivables and €16m (31 December 2021: €27m) to off-balance-sheet transactions.

As at 31 December 2022 there was €57m default volume to be reported for credit transactions in the fair value OCI category (31 December 2021: €0m).

	31.12.2022			31.12.2021		
Default portfolio Group | €m	**Loans**	**Securities**	**Total**	**Loans**	**Securities**	**Total**
Default portfolio	5,601	57	5,658	4,152	3	4,156
LLP[1]	2,247	9	2,256	2,055	0	2,055
Coverage ratio excluding collateral (%)[2]	40	16	40	49	–	49
Collateral	1,389	0	1,389	1,109	0	1,109
Coverage ratio including collateral (%)[2]	65	16	64	76	–	76
NPE ratio (%)[3]			1.1			0.9

[1] Loan loss provisions.
[2] Coverage ratio: LLP (and collateral) as a proportion of the default portfolio.
[3] NPE ratio: default portfolio (non-performing exposures – NPE) as a proportion of total exposures (EaD including NPE) according to EBA Risk Dashboard.

Commerzbank uses the definition in Article 178 CRR as the criterion for default. The EBA guidelines on the application of the definition of default referred to in Article 178 of Regulation (EU) No 575/2013 are taken into account. The default portfolio is divided into the following 5 classes based on the nature of the default:

- Rating class 6.1: Over 90 days past due;
- Rating class 6.2: Unlikely to pay;
- Rating class 6.3: The Bank is assisting in financial rescue or distressed restructuring at the customer by making concessions;
- Rating class 6.4: The Bank has demanded immediate repayment of its claims;
- Rating class 6.5: The customer is in insolvency.

The table below shows the breakdown of the default portfolio based on the 5 rating classes:

	31.12.2022				31.12.2021			
Group rating classification | €m	**6.1**	**6.2/6.3**	**6.4/6.5**	**Total**	**6.1**	**6.2/6.3**	**6.4/6.5**	**Total**
Default portfolio	739	3,295	1,624	5,658	668	1,722	1,766	4,156
LLP	259	1,094	902	2,256	274	690	1,090	2,055
Collateral	299	641	450	1,389	287	441	382	1,109
Coverage ratio including collateral (%)	76	53	83	64	84	66	83	76

Overdrafts in the performing loan book

In order to avoid an increase in the default portfolio, overdrafts are closely monitored at Commerzbank. In addition to the 90 days-past-due trigger event, IT-based management of overdrafts starts on the first day the account is overdrawn. The table below shows overdrafts outside the default portfolio based on the exposure at default as at the end of December 2022. The changes may also be due to short-term overdrafts:

	31.12.2022					31.12.2021				
EaD €m	**> 0 ≤ 30 days**	**> 30 ≤ 60 days**	**> 60 ≤ 90 days**	**> 90 days**	**Total**	**> 0 ≤ 30 days**	**> 30 ≤ 60 days**	**> 60 ≤ 90 days**	**> 90 days**	**Total**
Private and Small-Business Customers	724	90	45	1	861	568	80	38	0	686
Corporate Clients	2,752	41	25	0	2,819	1,553	62	0	0	1,615
Group[1]	**3,476**	**131**	**70**	**1**	**3,680**	**2,121**	**142**	**38**	**0**	**2,301**

[1] Including Others and Consolidation.

Private and Small-Business Customers segment

The Private and Small-Business Customers (PSBC) segment includes activities with private and small-business customers, in private banking and in wealth management, and with customers of the comdirect and Commerz Real brands. mBank is also shown in the Private and Small-Business Customers segment.

The focus of the portfolio is on traditional owner-occupied home financing and the financing of real estate capital investments (residential mortgage loans and investment properties with a total EaD of €103bn). We provide our small-business customers with credit mainly in the form of individual loans with a volume of €29bn. In addition, we meet our customers' day-to-day demand for credit with consumer loans (overdrafts, instalment loans and credit cards, to a total of €15bn).

The realignment in the front office as of October 2022 resulting from Strategy 2024 led to shifts in credit risk metrics in the sub-segments, in particular from Private Customers to Private Banking.

Compared with the previous year, the risk density of the portfolio rose to 21 basis points.

	31.12.2022			31.12.2021		
Credit risk parameters	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp
Private Customers	64	91	14	83	108	13
Small-Business Customers	30	53	18	35	54	15
comdirect	2	6	28	2	5	24
Commerz Real	0	0	5	0	0	10
Private Banking	35	31	9	11	9	8
Wealth Management	27	29	11	26	25	10
mBank	46	221	49	45	207	46
PSBC	**204**	**431**	**21**	**203**	**408**	**20**

The risk result in the Private and Small-Business Customers segment was €–392m in the 2022 financial year (previous year: €–319m). The increase was largely due to the posting of the secondary effects TLA. The secondary effects TLA is still necessary in view of the crisis-related economic uncertainty – increased energy costs, for example – and will therefore remain in place for 2023. The TLA amounted to €–189m as at 31 December 2022 and was fully recognised in the income statement in 2022. Of this amount, €–70m was attributable to the Private Customers portfolio and €–112m to the Small-Business Customers portfolio. The utilisation and reversal of the coronavirus TLA removed €126m from the overall adjustment.

mBank's loan loss provisions are driven by the difficult economic and geopolitical situation and amounted to €–174m as at 31 December 2022 (previous year: €–187m). Portfolio sales and economic recovery after the coronavirus pandemic in some areas have provided some relief.

The default portfolio in the segment stood at €1,842m as at the reporting date (31 December 2021: €1,846m), which was almost on a level with the previous year.

	31.12.2022			31.12.2021		
Default portfolio PSBC | €m	**Loans**	**Securities**	**Total**	**Loans**	**Securities**	**Total**
Default portfolio	1,842	0	1,842	1,846	0	1,846
LLP	841	0	841	826	0	826
Coverage ratio excluding collateral (%)	46	–	46	45	–	45
Collateral	707	0	707	717	0	717
Coverage ratio including collateral (%)	84	–	84	84	–	84

Corporate Clients segment

The Corporate Clients segment (CC) comprises the Group's activities with mid-size corporate clients, the public sector, institutional customers and multinational corporates. The segment is also responsible for the Group's relationships with banks and financial institutions in Germany and abroad, as well as with central banks. The regional focus of our activities is on Germany and Western Europe. The Group's customer-oriented capital markets activities are also bundled in this segment.

The EaD of the Corporate Clients segment increased from €174bn to €177bn compared with 31 December of the previous year. Risk density increased from 20 basis points to 21 basis points.

For details of developments in the Financial Institutions portfolio, please see page 128 f.

Credit risk parameters	31.12.2022 Exposure at default €bn	31.12.2022 Expected loss €m	31.12.2022 Risk density bp	31.12.2021 Exposure at default €bn	31.12.2021 Expected loss €m	31.12.2021 Risk density bp
Mittelstand	77	175	23	77	158	20
International Corporates	64	126	20	60	120	20
Financial Institutions	22	61	28	21	47	23
Other	14	16	12	16	23	14
CC	**177**	**378**	**21**	**174**	**347**	**20**

The risk result for the Corporate Clients segment in the 2022 financial year was €–446m (previous year: €–149m). Compared with the previous year, the segment was impacted in particular by the effects of the Russian invasion of Ukraine. The share of the secondary effects TLA attributable to the segment amounted to €–284m as at 31 December 2022, which was fully recognised in the income statement in 2022.

The need for the TLA resulted from the assumptions for sectors/sub-portfolios, which were checked and in part adjusted on the basis of the macroeconomic scenario, for which indirect effects are to be expected. Relevant examples include the automotive industry with a high degree of vulnerability in its supply chains as well as the availability and costs of resources. The metals industry is confronted with high prices for resources and energy, while demand is falling. In the mechanical engineering sector, price increases can only be passed on to customers with a time lag. In the retail sector, declining consumer purchasing power is leading to lower sales. Resulting rating migrations and defaults are expected for 2023, which are currently not yet reflected in the model-based calculation of loan loss provisions and are therefore covered by the TLA.

The utilisation and reversal of the coronavirus TLA removed €392m from the adjustment in the 2022 financial year.

The default portfolio in the segment stood at €2,811m as at the end of 2022 (31 December 2021: €2,096m). The expansion in 2022 resulted mainly from additions of individual exposures to the default portfolio as a consequence of the Russian invasion of Ukraine in the International Corporates portfolio.

Default portfolio CC | €m	31.12.2022 Loans	31.12.2022 Securities	31.12.2022 Total	31.12.2021 Loans	31.12.2021 Securities	31.12.2021 Total
Default portfolio	2,811	0	2,811	2,092	3	2,096
LLP	1,174	0	1,174	1,076	0	1,076
Coverage ratio excluding collateral (%)	42	–	42	51	–	51
Collateral	681	0	681	387	0	387
Coverage ratio including collateral (%)	66	–	66	70	–	70

The risk result in the Others and Consolidation segment was €–38m in the 2022 financial year (previous year: €–101m). The driver for the risk provisioning in 2022 was the negative development of an individual exposure, which required an increase in existing risk provisioning. The secondary effects TLA for the segment was €–9m.

Further portfolio analyses

The analyses below are independent of the existing segment allocation. The positions shown are already contained in full in the Group and segment presentations above.

Corporates portfolio by sector

On the whole, the German industrial sectors coped well with the strains of the coronavirus pandemic and the immediate effects of the Russian war of aggression on Ukraine, assisted by government lending and support programmes. However, the recovery is patchy and not all sectors have returned to pre-pandemic levels of revenue and income.

At present, the indirect consequences of the war in Ukraine, in particular higher prices, continue to have a negative impact. Energy and raw material prices have risen significantly, while inflation has reached a level that few would have expected. As a result, an appreciable increase in interest rates has also been recorded. With continuing robust demand and incipient catch-up effects as a result of the easing in supply chain issues, companies are mostly able to pass on the increased costs to a broad extent. However, disposable household income will shrink, depending partly on wage growth and energy prices, and this will dampen demand, with corresponding effects on corporate earnings.

Investments in environmental protection and CO_2-neutral production will require considerable capital expenditure. Reducing dependencies and ensuring a stable supply chain will also create a cost burden. However, we regard our clients as being broadly well positioned in these respects.

A key factor for the medium-term performance of the German economy will be the stabilisation of energy prices in Germany and Europe and the establishment of a competitive price level in Germany in particular. Furthermore, it must be ensured that the country's gas requirements are met. A shortage of gas supplies could have a considerable impact and bring major upheaval. The coronavirus has become widespread in China, and supply chain disruptions could result. Potential mutations would again pose great challenges to the world.

A breakdown of the corporates exposure by sector is shown below:

	31.12.2022[1]			31.12.2021		
Corporates portfolio by sector	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp
Consumption	14	39	27	16	38	24
Technology/Electrical industry	14	29	20	15	27	18
Wholesale	12	28	24	13	37	27
Energy supply/Waste management	12	28	24	22	51	23
Automotive	10	24	25	10	30	30
Transport/Tourism	9	27	30	13	46	37
Basic materials/Metals	8	15	18	10	25	24
Services/Media	8	17	21	10	28	28
Chemicals/Plastics	8	19	23	8	26	31
Mechanical engineering	8	15	20	7	19	25
Construction	4	8	18	5	12	22
Pharma/Healthcare	4	8	20	6	25	42
Other	30	78	26	5	3	6
Total	**142**	**335**	**24**	**141**	**367**	**26**

[1] The definition of the sectors was adjusted in January 2022, and the figures as at 31 December 2022 are therefore only to a limited extent comparable to those as at 31 December 2021.

Financial Institutions portfolio

Our network of correspondent banks continued to focus on trade finance activities on behalf of our corporate customers and on capital market activities. In derivatives, we enter into trades with selected counterparties under the European Market Infrastructure Regulation (EMIR) standards.

We continue to keep a close watch on the impact of regulatory requirements on banks. In this context, we continue to pursue our strategy of holding as few exposures as possible which might absorb losses in the event of a bail-in of an affected institution.

We are keeping a close eye on developments in various countries affected by specific issues such as recessions, embargoes and economic uncertainty caused by political events (at present in particular Russia's invasion of Ukraine) and are responding with flexible portfolio management that is tailored to the individual situation of each country. That also applies to disruption that may still be caused by the coronavirus pandemic, changes in energy prices and energy supply, and the effects of rising inflation. All this impacts heavily on the operational environment of our correspondent banks, both in industrialised countries and in developing countries. Overall, our risk appetite is geared to keeping the portfolio as responsive as possible.

	31.12.2022			31.12.2021		
FI portfolio by region	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp
Germany	61	6	1	5	4	9
Western Europe	17	7	4	15	10	7
Central and Eastern Europe	13	41	30	2	9	44
North America	12	0	0	2	1	2
Asia	8	14	17	5	15	28
Other	7	22	30	6	18	31
Total	**119**	**90**	**8**	**35**	**56**	**16**

Non-Bank Financial Institutions portfolio

The Non-Bank Financial Institutions (NBFI) portfolio mainly comprises insurance companies, asset managers, regulated funds and central counterparties. Business activities are focused on Germany, Western Europe, the United States and Asia.

Commerzbank conducts new business with NBFIs partly in consideration of regulatory requirements (clearing via central counterparties) and partly in the interests of our institutional customers, with a focus on attractive opportunities with customers with good credit ratings and valuable security. We manage our portfolios with the aim of ensuring their high quality and responsiveness. We are keeping a close eye on risks arising from global events such as recessions, embargoes and economic uncertainty caused by political events (at present in particular Russia's invasion of Ukraine) and are responding with flexible portfolio management that is tailored to the individual situation. That also applies to current issues such as changes in the level of interest rates and energy prices as well as the effects of rising inflation.

	31.12.2022			31.12.2021		
NBFI portfolio by region	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp	**Exposure at default** €bn	**Expected loss** €m	**Risk density** bp
Germany	19	20	11	18	18	10
Western Europe	15	20	13	13	18	14
Central and Eastern Europe	2	12	70	2	14	75
North America	8	8	10	9	5	6
Asia	2	3	18	1	1	11
Other	1	2	22	1	3	39
Total	**46**	**65**	**14**	**44**	**60**	**14**

Originator positions

Commerzbank has in recent years securitised receivables from loans to the Bank's customers with a current volume of €10.3bn for capital management purposes (31 December 2021: €11.5bn). As at the reporting date 31 December 2022, risk exposures with a value of €8.8bn were retained (31 December 2021: €9.8bn). By far the largest share of all positions was accounted for by €8.7bn (31 December 2021: €9.6bn) on senior tranches, which are almost entirely rated good to very good. In the first quarter of 2023 Commerzbank is planning to launch a synthetic transaction with a volume of €3.2bn based on corporate receivables.

		Commerzbank volume[1]			
Securitisation pool | €bn	**Maturity**	**Senior**	**Mezzanine**	**First loss piece**	**Total volume[1]**
Corporates	2025 – 2036	8.7	<0.1	0.1	10.3
Total 31.12.2022		**8.7**	**<0.1**	**0.1**	**10.3**
Total 31.12.2021		9.6	<0.1	0.2	11.5

[1] Tranches/retentions (nominal): banking and trading book.

Conduit exposure and other asset-backed exposures

The Bank provides financing to securitise receivables, in particular trade and leasing receivables, from customers in the Corporate Clients segment. In this context, Commerzbank acts mainly as an arranger of asset-backed securities transactions via the Commerzbank-sponsored multi-seller conduit Silver Tower. The volume and risk values for the securitisation of receivables in the Corporate Clients segment were stable at €3.9bn in 2022.

Liquidity risk subsumes the risk that Commerzbank will be unable to meet its payment obligations on a day-to-day basis. Liquidity risks from securitisations are modelled in the internal liquidity risk model on a risk-adjusted basis. In the case of transactions subject to variable utilisation, it is assumed that the purchase facilities provided to the special-purpose companies must be refinanced almost in full by Commerzbank for the duration of their term and until the maturity of the last financed receivable. Securitisations only qualify as liquid assets if they are eligible for rediscount at the European Central Bank. These positions are only included in the liquidity risk calculation after risk-adjusted discounts are applied.

The other asset-backed exposures mainly comprise government-guaranteed asset-backed securities (ABS) held by Commerzbank Finance & Covered Bond S.A. and Commerzbank AG in Germany. In 2022 the volume declined to €3.4bn (December 2021: €3.9bn), as did the risk values[1] at €3.4bn (December 2021: €3.9bn).

There are also investments in the Structured Credit area. The volume of new investments entered into since 2014 stood at €7.1bn (December 2021: €6.9bn). We have invested in bonds of senior tranches of securitisation transactions in the consumer (auto) ABS, UK RMBS and CLO asset classes, which have a robust structure and a moderate risk profile. At 31 December 2022, this portfolio solely contained AAA-rated CLO positions (also the case at the end of 2021). Remaining structured credit positions with a volume of €0.2bn were already in the portfolio prior to 2014 (December 2021: €0.2bn), while risk values stood at €0.1bn (December 2021: €0.2bn).

Forbearance portfolio

The EBA's definition of forbearance comprises two requirements, which have to be met concurrently: the debtor is in financial difficulties and the measures of the bank to help the debtor include concessions to the debtor that the bank would not have agreed to under different circumstances. Examples of concessions include deferrals, increases in limits or loans and waivers in connection with restructuring. The definition of forbearance applies independently of whether the debtor is in the performing or the non-performing portfolio.

[1] Risk value is the balance sheet value of cash instruments. For long CDS positions, it comprises the nominal value of the reference instrument less the net present value of the credit derivative.

The following tables show Commerzbank's total forbearance portfolio on the basis of the EBA definition as well as the loan loss provisions for these positions:

	31.12.2022			31.12.2021		
Forbearance portfolio by segment	**Forborne exposure** €m	**LLP** €m	**LLP coverage ratio** %	**Forborne exposure** €m	**LLP** €m	**LLP coverage ratio** %
Private and Small-Business Customers	1,064	195	18	920	140	15
Corporate Clients	1,951	503	26	2,240	413	18
Others and Consolidation	213	212	100	207	142	69
Group	**3,228**	**909**	**28**	**3,367**	**695**	**21**

The forbearance portfolio by region is as follows:

	31.12.2022			31.12.2021		
Forbearance portfolio by region	**Forborne exposure** €m	**LLP** €m	**LLP coverage ratio** %	**Forborne exposure** €m	**LLP** €m	**LLP coverage ratio** %
Germany	2,045	489	24	1,744	390	22
Western Europe	412	261	63	858	183	21
Central and Eastern Europe	623	148	24	472	112	24
North America	11	0	1	8	1	7
Asia	90	5	6	220	1	1
Other	46	7	15	65	8	13
Group	**3,228**	**909**	**28**	**3,367**	**695**	**21**

The decline in forbearance exposure in 2022 stems primarily from Corporate Customers. The LLP coverage ratio at Group level increased to 28%.

In addition to the LLP of €909m (31 December 2021: €695m), the risks in the forbearance portfolio are covered by collateral totalling €1,067m (31 December 2021: €1,179m).

Market risk

Market risk is the risk of potential financial losses due to changes in market prices (interest rates, commodities, credit spreads, exchange rates and equity prices) or in parameters that affect prices such as volatilities and correlations. Losses may impact profit or loss directly, e.g. in the case of trading book positions. However, for banking book positions they are reflected generally in the revaluation reserve or in hidden liabilities/reserves.

Strategy and organisation

Commerzbank's market risk strategy is derived from its overall risk strategy and the business strategies of the individual segments. It sets targets for market risk management in relation to Commerzbank's main business activities. The core market risk management tasks are the identification of all material market risks and drivers of market risk and the independent measurement and evaluation of these. The results and estimates serve as the basis for risk/return-oriented management.

The Board of Managing Directors of Commerzbank is responsible for ensuring the effective management of market risk throughout the Commerzbank Group. Specific levels of authority and responsibility in relation to market risk management have been assigned to the appropriate market risk committee.

In the Group Market Risk Committee, segment representatives, along with representatives from the risk function and finance area, discuss current risk positioning issues and decide on appropriate action. Chaired by the risk function, the Group Market Risk Committee, which meets monthly, deals with the Commerzbank Group's market risk position. Discussions centre on the monthly market risk report, which is also presented to the Board of Managing Directors for their consideration. The report summarises the latest developments on financial markets, the Bank's positioning and related risk ratios.

The risk management process involves the identification, measurement, management and monitoring of risks and reporting on them. It is the responsibility in functional terms of market risk management, which is independent of trading activities. Central market risk management is complemented by decentralised market risk management units at segment level and for regional units and subsidiaries. The close integration of central and local risk management with the business units means that the risk management process starts in the trading areas themselves. The trading units are responsible in particular for the active management of market risk positions, e.g. reduction measures or hedging.

Risk management

Commerzbank uses a wide range of quantitative and qualitative tools to manage and monitor market risk. Quantitative limits for sensitivities, value at risk, stress tests, scenario analyses and ratios on economic capital limit the market risk. Our comprehensive rulebook, in the form of market risk policies and guidelines as well as restrictions on portfolio structure, new products, maturities and minimum ratings, establishes the qualitative framework for market risk management. The market risk strategy lays down the weighting of figures in each segment by reference to their relevance. Thereby allowance is made for the varying impact of the parameters for the management of the segments in line with the business strategy.

Market risk is managed internally at Group level, segment level and in each segment's reporting units. A comprehensive internal limit system broken down to portfolio level is implemented and forms a core part of internal market risk management.

The quantitative and qualitative factors limiting market risk are determined by the market risk committees by reference to the Group's management of economic capital. The utilisation of these limits, together with the relevant net income figures, is reported daily to the Board of Managing Directors and the responsible heads of the Group divisions. Based on qualitative analyses and quantitative ratios, the market risk function identifies potential future risks, anticipates potential financial losses in collaboration with the finance function, and draws up proposals for further action, which are discussed with the front office units. Voting on the proposed measures or risk positions takes place in the above-mentioned market risk committee and is subsequently submitted to the Board of Managing Directors for approval.

Risk concentrations are restricted directly using specific limits or are indirectly avoided, for example, using stress test limits. In addition, the combination of various conventional risk measures (e.g. VaR, sensitivities) ensures the appropriate management of concentration risks. Furthermore, risk drivers are analysed on a regular basis in order to identify concentrations. The risk management of existing concentrations is also reviewed using situation-driven analyses and, where necessary, supplemented by targeted measures such as limits.

Any limits that are breached are handled in a separate escalation procedure. After a limit breach has been identified, the front office and risk units design adequate countermeasures. If the limit breach cannot be remedied within a reasonable period, it will be escalated by the market risk function to the next hierarchical level.

Regulatory risk measures that are not included in economic risk-bearing capacity are limited and managed separately. These include, for example, stressed VaR and incremental risk charge.

In internal management, all positions relevant to market risk are covered, and trading and banking book positions are jointly managed. In addition, for regulatory purposes the trading book is managed separately (in accordance with regulatory requirements, including currency and commodity risks in the banking book) and interest rate risks in the banking book are managed on a stand-alone basis. In order to provide a consistent presentation in this report, all figures relating to VaR are based on a confidence level of 99%, a holding period of one day, equally weighted market data and a 254-day history.

Trading book

Below, we show how the regulatory market risk ratios of the trading book portfolio developed. Most of Commerzbank's trading book positions derive from the Corporate Clients segment and Group Treasury division. The VaR figures comprise all risks in the internal VaR model. Commerzbank subsidiaries use standardised approaches for their regulatory capital calculation under partial use rules. They are not included in the regulatory VaR figures presented.

The VaR rose from €7m to €13m in 2022. The reason for this is the increased market volatility resulting from the Russia-Ukraine war, which led to new crisis scenarios in the VaR calculation.

VaR of portfolios in the trading book | €m	31.12.2022	31.12.2021
Minimum	6	3
Mean	9	7
Maximum	14	20
VaR at end of reporting period	**13**	**7**

The market risk profile is diversified across all asset classes and across interest rates, currencies, credit spreads, commodities and inflation risks. The asset classes that dominate at the end of 2022 are interest rates and currency rate changes.

VaR contribution by risk type in the trading book | €m	31.12.2022	31.12.2021
Credit spreads	2	1
Interest rates	6	2
Equities	0	0
FX	4	2
Commodities	2	2
Total	**13**	**7**

Further risk ratios are calculated for regulatory capital adequacy. This includes the calculation of stressed VaR. Stressed VaR is calculated using the internal model on the basis of the VaR method described above. The main difference lies in the market data used to value the assets. Stressed VaR measures the risk in the present position in the trading book by reference to market movements from a specified crisis period in the past. The crisis observation period used for this is checked regularly through model validation and approval processes and adjusted where necessary. The crisis observation period remained the same during the year.

The market risk profile in stressed VaR is also diversified across all asset classes. The dominant asset classes are interest rates, currencies and commodities. The decrease in the commodities asset class results in particular from trading in emissions certificates.

Stressed VaR contribution by risk type in the trading book | €m	31.12.2022	31.12.2021
Credit spreads	4	7
Interest rates	8	10
Equities	0	1
FX	6	5
Commodities	6	16
Total	**25**	**39**

In addition, the incremental risk charge and the equity event VaR figures quantify the risk of deterioration in creditworthiness and event risks in trading book positions. The incremental risk charge rose from €31m to €39m in the course of 2022.

The reliability of the internal model (historical simulation) is monitored in various ways, including backtesting on a daily basis. The VaR calculated is set against actually occurring changes in the portfolio value (profits and losses). In the process, a distinction is made between the variants backtesting of the hypothetical change in portfolio value (clean P&L) and backtesting of the actual change in portfolio value (dirty P&L). In the former, exactly the same positions in the income statement are used as were used for calculating the VaR. This means that the profits and losses result only from changes in market prices (hypothetical changes in the portfolio value). In dirty P&L backtesting, by contrast, profits and losses from newly concluded and expired transactions from the day under consideration are also included (actual profits and losses induced by portfolio value changes). Profits and losses from valuation adjustments and model reserves are factored into dirty and clean P&L according to the regulatory requirements.

If the actual loss exceeds the VaR, it is described as a negative backtesting outlier. Analysing the results of backtesting provides an informative basis for checking parameters and for potential improvement to the market risk model. In 2022 three negative clean P&L outliers/dirty P&L outliers were measured. The clean P&L/dirty P&L outliers are mainly due to market movements in interest rates, foreign currencies and commodities, against the backdrop of the Ukraine war.

Backtesting is also used by the supervisory authorities for evaluating internal risk models. Negative outliers are classified by means of a traffic-light system laid down by the supervisory authorities. All negative backtesting outliers at Group level (from both clean P&L and dirty P&L) must be reported to the supervisory authorities, citing their extent and cause.

As the VaR concept gives a prediction of potential losses assuming normal market conditions, it is supplemented by stress tests. These stress tests measure the risk to which Commerzbank is exposed, based on unlikely but still plausible events. These events may be simulated using extreme movements on various financial markets. The key scenarios relate to major changes in credit spreads, interest rates and yield curves, exchange rates, share prices and commodities prices. Events simulated in stress tests include all stock prices falling by 15%, a parallel shift in the yield curve or changes to the curve's gradient.

Extensive Group-wide stress tests and scenario analyses are carried out as part of risk monitoring.

The internal model's individual components are validated at regular intervals to assess their appropriateness for risk measurement. The identification and elimination of model weaknesses are of particular importance in this.

Banking book

The key drivers of market risk in the banking book are the Group Treasury portfolios, with their credit spread, interest rate and basis risks.

In market risk management, credit spread sensitivities in the banking and trading books are considered together. Credit spread sensitivities (downshift of 1 basis point) for all securities and derivative positions (excluding loans) were at €30m as at the end of fiscal year 2022 (31 December 2021: €50m). The main reason for the decrease was the rise in the level of interest rates.

Most credit spread sensitivities related to securities positions measured at amortised cost. Changes in market price have no impact on the revaluation reserve or the income statement for these positions. The impact of an interest rate shock on the economic value of the Group's banking book is simulated monthly in compliance with regulatory requirements. In accordance with the EU Banking Directive, the German Federal Financial Supervisory Authority and the European Central Bank have prescribed two scenarios of uniform, sudden and unexpected changes in interest rates (+/–200 basis points) to be used by all banks, which have to report on the results of this stress test every quarter. In the scenario –200 basis points, the yield curve is floored at 0 (negative sections of the yield curve are left unchanged).

As a result of the scenario +200 basis points, a potential economic loss of €2,062m as at 31 December 2022 (31 December 2021: €2,523m potential economic loss) was determined, and in the scenario −200 basis points a potential economic profit of €1,133m (31 December 2021: €746m potential economic profit). Commerzbank does not, therefore, need to be classified as a bank with elevated interest rate risk, as the decline in net present value represents less than 20% of its regulatory capital.

The interest rate sensitivity of the overall banking book (excluding pension funds) fell to €2.4m as at 31 December 2022 (31 December 2021: €7.3m) per basis point of falling interest rates mainly due to increased interest rate levels and position changes in the treasury.

Pension fund risk is also part of market risk in the banking book. Our pension fund portfolio comprises a well-diversified investment section and the insurance-related liabilities. The duration of the liabilities is extremely long (cash outflows modelled over almost 90 years), and the main portion of the overall portfolio's present value risk is in maturities of 15 years and over. The main risk drivers are long-term euro interest rates, credit spreads and expected euro inflation due to anticipated pension dynamics. Equity, volatility and foreign exchange risk also need to be taken into consideration. Diversification effects between individual risks reduce the overall risk. The extremely long maturities of these liabilities represent the greatest challenge, particularly for hedging credit spread risk. This is because there is insufficient liquidity in the market for corresponding hedging products.

Market liquidity risk

Market liquidity risk is the risk of the Bank not being able to liquidate or hedge risky positions in a timely manner, to the desired extent and on acceptable terms as a result of insufficient liquidity in the market.

Market liquidity risk is taken into account in Commerzbank's risk-bearing capacity concept by scaling the value at risk to one year, i.e. the implicitly recognised liquidation period. Additional valuation adjustments for market liquidity risk are also reflected in the calculation of the risk coverage capital.

Liquidity risk

We define liquidity risk in the narrower sense as the risk that Commerzbank will be unable to meet its payment obligations on a day-to-day basis. In a broader sense, liquidity risk describes the risk that future payments cannot be funded for the full amount, in the required currency or at standard market conditions, as and when they are due.

Strategy and organisation

The Board of Managing Directors adopts the business strategy and the Bank's risk tolerance, which is associated with it. Liquidity risk tolerance is then operationalised by defining the liquidity reserve period and the limit framework. In order to ensure an appropriate liquidity risk management process, the Board of Managing Directors delegates certain competences and responsibilities in connection with the Group-wide liquidity risk strategy to the Risk and Treasury functions.

The Group Asset Liability Committee (Group ALCO) is responsible for limiting, analysing and monitoring liquidity risk and for strategic liquidity positioning. The Group ALCO is supported by various sub-committees in this.

Risk management

Commerzbank uses a wide range of tools to manage and monitor liquidity risks on the basis of its own liquidity risk model. The stress scenario within the Bank that underlies the model and is relevant for management purposes allows for the impact of both a bank-specific stress event and a broader market crisis. Binding regulatory requirements are an integral component of the management mechanism.

Group Treasury is responsible for the Group's liquidity management operations. Group Treasury is represented in all major locations of the Group in Germany and abroad and has reporting lines into all subsidiaries. Commerzbank manages its global liquidity centrally using cash pooling. This approach ensures that liquidity resources are used efficiently and that this occurs across all time zones, as Group Treasury units are located in Frankfurt, London, New York and Singapore. Additional information on this subject can be found in the "Funding and liquidity of the Commerzbank Group" section of the Group management report.

Liquidity risk is monitored on the basis of the Bank's own liquidity risk model by the independent risk function.

The Bank has established early warning indicators for the purpose of managing liquidity risk. These ensure that appropriate steps can be taken in good time to secure long-term financial solidity.

Risk concentrations can lead to increased outflows of liquidity, particularly in a stress situation, and thus to increased liquidity risk. They can, for example, occur with regard to maturities, large individual creditors or currencies. By means of ongoing monitoring and reporting, emerging risk concentrations in funding can be recognised in a timely manner and mitigated through suitable measures.

This also applies to payment obligations in foreign currencies. The Bank also mitigates concentration by continuously using its access to broadly diversified sources of funding, in particular diverse customer deposits and capital market instruments.

Commerzbank also ensures that it limits and monitors foreign exchange risks.

In the event of a market-driven and/or idiosyncratic liquidity crisis, the liquidity contingency plan provides for certain measures which, depending on the nature of the crisis, can be initiated either through Treasury's extended authority to act or through the recovery process of the recovery plan. The liquidity contingency plan is an independent part of emergency planning and upstream of the recovery plan. Both the liquidity contingency plan and the recovery plan at Commerzbank are updated at least once a year; the individual measures of the recovery plan are checked regularly during the year for plausibility. The liquidity contingency plan also defines a clear allocation of responsibilities for the processes to be followed in emergency situations and gives details of any action that may need to be taken.

The internal rules and the models used are reviewed at least annually and regularly audited by Internal Audit, the auditor and the supervisory authority (ECB).

Liquidity risk model

A key component of liquidity risk management is the daily calculation of the liquidity gap profile. The liquidity gap profile shows the deterministic or stochastic inflows and outflows expected in the future on a given reporting date and across all portfolios. This forms the basis for calculating liquidity requirements or excess liquidity per maturity band. This also includes modelling the proportion of customer deposits that will be permanently available, known as the core deposit base.

The liquidity gap profile is also used to set the issuance strategy of the Commerzbank Group, which is operationalised by the Group Treasury division. The Group Finance division is responsible for calculating and allocating liquidity costs on the basis of the liquidity gap profile, which are then incorporated in the management of the segments' business activities.

Based on the liquidity gap profile, management mechanisms such as recovery and early warning indicators are limited and monitored accordingly. The liquidity gap profile is limited in the maturity bands up to 1 year. The Group limits are broken down into individual Group units and currencies. The internal liquidity risk model is complemented by the regular analysis of additional adverse, reverse and historical stress scenarios.

Quantification and stress testing

Commerzbank uses a wide range of tools to manage and monitor liquidity risks on the basis of its own liquidity risk model. In addition to internal economic considerations, liquidity risk modelling also factors in the binding regulatory requirements under the Capital Requirements Regulation (CRR) and the requirements of the Minimum Requirements for Risk Management (MaRisk). Commerzbank incorporates this within its liquidity risk framework, thereby quantifying the liquidity risk appetite established by the Board of Managing Directors.

The stress scenarios within the Bank that underlie the model and are relevant for management purposes allow for the impact of both a bank-specific stress event and a broader market crisis. The Commerzbank-specific idiosyncratic scenario simulates a stress situation arising from a rating downgrade of two notches, whereas the market-wide scenario is derived from experience of the subprime crisis and simulates an external market-wide shock. The main liquidity risk drivers of both scenarios are a markedly increased outflow of short-term customer deposits, above-average drawdown of credit lines, prolongations of lending business regarded as commercially necessary, the need to provide additional collateral for secured transactions and the application of higher risk discounts to the liquidation values of assets.

As a complement to the individual scenarios, the Bank also simulates the impact on the liquidity gap profile (net liquidity position) of a scenario that combines idiosyncratic and market-specific effects. The liquidity gap profile is shown for the whole of the modelling horizon across the full spectrum of maturities and follows a multi-level concept. This allows for a nuanced presentation – deterministic and modelled cash flows in existing business on the one hand and the inclusion of prolongations on the other.

The table below shows the liquidity gap profile values after application of the respective stress scenarios for periods of one and three months as at the end of the year. Significantly more liquidity flows out in a combined scenario compared with the individual scenarios. As at the end of 2022, in the one-month and three-month periods, the combined stress scenario leaves net liquidity of €21.2bn and €20.9bn respectively.

Net liquidity in the stress scenario | €m		31.12.2022	31.12.2021
Idiosyncratic scenario	1 month	30.0	20.8
	3 months	31.4	24.1
Market-wide scenario	1 month	30.0	24.1
	3 months	29.6	26.0
Combined scenario	1 month	21.2	12.8
	3 months	20.9	14.7

Liquidity reserves

Significant factors in the liquidity risk appetite include the reserve period, the size of the liquidity reserve portfolio held to compensate for unexpected short-term liquidity outflows, and the limits in the various maturity bands. As the liquidity reserve portfolio consists of highly liquid assets, it functions as a buffer in stress situations. The liquidity reserve portfolio is funded in line with the liquidity risk appetite to ensure that it is kept at the required size throughout the entire reserve period stipulated by the Board of Managing Directors.

As at the end of 2022, the Bank had highly liquid assets of €104.7bn. This liquidity reserve is funded in line with the liquidity risk appetite to ensure that it is kept at the required size throughout the entire reserve period stipulated by the Board of Managing Directors.

Part of this liquidity reserve is held in a separate stress liquidity reserve portfolio managed by Group Treasury to cover liquidity outflows should a stress event occur and always ensure solvency. The amount of the stress liquidity reserve portfolio is checked and, if necessary, adjusted as part of the daily liquidity risk calculation.

The Bank also holds an intraday liquidity reserve portfolio. As at the 2022 reporting date, the total value of this portfolio was €6.1bn (31 December 2021: €6.1bn).

The liquidity reserves in the form of highly liquid assets consisted of the following three components:

Liquidity reserves from highly liquid assets | €bn	31.12.2022	31.12.2021
Highly liquid assets	104.7	60.0
of which level 1	97.5	56.3
of which level 2A	6.8	3.4
of which level 2B	0.4	0.3

Liquidity ratios

Throughout the 2022 financial year, Commerzbank's internal liquidity ratios, including the regulatory liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR), were above the limits set at least annually by the Board of Managing Directors.

The LCR is calculated as the ratio of liquid assets to net liquidity outflows under stressed conditions. It is used to measure whether a bank has a large enough liquidity buffer to independently withstand any potential imbalance between inflows and outflows of liquidity under stressed conditions over a period of 30 calendar days.

In 2022, Commerzbank significantly exceeded the minimum ratio of 100% stipulated for that year on every reporting date. As at the end of 2022, the average month-end value of the LCR over the last 12 months was 141.1% (as at the end of 2021: 145.1%).

The Bank has established corresponding limits and early warning indicators to ensure the LCR minimum requirements are met.

The NSFR sets the requirement of stable refinancing as a ratio of the amount of the available stable refinancing and the amount of the required stable refinancing over a one-year horizon.

The quota itself is defined as the ratio of the weighted available stable refinancing and the necessary weighted stable refinancing. The minimum quota is 100%.

As at 31 December 2022 the NSFR stood at 128.3% (31 December 2021: 128.8%) and underlines the sound financial situation of Commerzbank.

Operational risk

Based on the Capital Requirements Regulation (CRR), Commerzbank defines operational risk (OpRisk) as the risk of loss resulting from the inadequacy or failure of internal processes, people and systems or from external events. This definition includes, among other things, legal risk, human resources risk, IT risk, outsourcing risk or tax risk, as well as product risk, conduct risk and risks from the area of environmental, social, governance (ESG). In this definition the focus is not on strategic or reputational risk. In view of their increased economic significance, compliance risk and cyber risk are managed as separate risk types. However, losses from compliance risks and cyber risks are incorporated into the model for determining the economic capital required for operational risks.

Strategy and organisation

Within Commerzbank, OpRisk and governance issues of the Internal Control System (ICS) are closely connected in terms of both organisational structure and methodology and are continuously being enhanced. This is because many OpRisk cases are closely linked with failures in the control mechanisms. A properly functioning ICS thereby helps to reduce or avoid losses from operational risks and thus to lower the amount of economic capital required to cover operational risks in the medium to long term. Conversely, the operational risk management systems enable the ICS to adapt itself consistently to them. The further development of the ICS structure is an essential aspect of the proactive reduction or prevention of operational risks.

Chaired by the CRO, the Group OpRisk Committee meets at least four times a year and deals with the management of operational risks within the Commerzbank Group. It also acts as the escalation and decision-making committee for key OpRisk topics that span all areas. The Management Boards and/or the Segment Committees with responsibility for operational risk deal with the management of operational risk in the relevant units. They analyse OpRisk issues that affect them, such as loss events, and define subsequent measures or recommend action.

Commerzbank's OpRisk strategy is approved on an annual basis by the Board of Managing Directors after it has been discussed and voted upon in the Group OpRisk Committee. The OpRisk strategy describes the risk profile, key elements of the desired risk culture, its management framework and measures to be taken by Commerzbank to manage operational risk. OpRisk management is based on three consecutive levels (three lines of defence) which, when taken together, are crucial for reaching the given strategic aims.

Risk management

Commerzbank takes an active approach to managing operational risk, aiming to systematically identify OpRisk profiles and risk concentrations and to define, prioritise and implement risk mitigation measures.

Operational risks are characterised by asymmetric distribution of losses. This means that most of the losses are relatively small, while isolated losses with a very low probability of occurrence have the potential to be large and devastating. This makes it necessary not only to limit high loss potential but also to proactively manage losses that can be expected to occur frequently.

To do this, Commerzbank has set up a multi-stage system that brings together the defined limits on economic capital (risk capacity) and those set for operative risk management during the year (risk appetite/tolerance), complemented by rules on the transparent and conscious acceptance and approval of individual risks (risk acceptance).

OpRisk management includes an annual evaluation of the Bank's ICS key controls and a risk scenario assessment. OpRisk loss events are also subject to ongoing analysis and ICS backtesting on an event-driven basis. Lessons learned activities are carried out after all material loss events.

Since the fourth quarter of 2021 Commerzbank has measured regulatory capital using the standardised approach (SA), while economic capital for operational risks continues to be measured using a dedicated internal model (OpRisk ErC model). Risk-weighted assets for operational risks on this basis at the end of the fourth quarter of 2022 amounted to €21.2bn (31 December 2021: €19.8bn). Main driver of the rise compared to the previous year were the revenues in 2022. The economically required capital was €2.3bn. The internal model used for this corresponds to the advanced measurement approach (AMA) previously in use. A comparison with the previous year (31 December 2021: €1.5bn) shows a sharp increase.

The following table gives an overview of risk-weighted assets and the economically required capital (ErC) by segment:

	31.12.2022		31.12.2021	
€bn	RWA	ErC	RWA	ErC
Private and Small-Business Customers	13.3	1.6	10.3	0.8
Corporate Clients	4.5	0.3	4.9	0.3
Others and Consolidation	3.3	0.5	4.6	0.4
Group	**21.2**	**2.3**	**19.8**	**1.5**

The total charge for OpRisk events as at the end of the fourth quarter of 2022 was approximately €951 (full-year 2021: €1,136m). The events mainly related to losses in the "Products and business practices" category. The provisions of mBank for legal risks in connection with Swiss franc credit agreements and the Polish amendment to the law "Credit Vacation" are to be mentioned in the first place. The amendment grants mortgage loan borrowers the right to request a temporary suspension of interest and repayment payments.

OpRisk events[1] | €m	31.12.2022	31.12.2021
Internal fraud	0	−1
External fraud	1	35
Damage and IT failure	4	2
Products and business practices	936	738
Process related	13	352
HR related	−3	9
Group	**951**	**1,136**

[1] Losses incurred and provisions, less OpRisk-based income and repayments.

A structured, centralised and decentralised reporting system ensures that the management of the Bank and its segments, members of the OpRisk Committee and the supervisory bodies are informed regularly, promptly and fully about operational risk. Detailed and extensive OpRisk reports are prepared on a quarterly basis. They contain changes in OpRisk losses, the segments' main loss events, current risk analyses, changes in the capital requirement and the status of measures implemented.

Operational risks are also part of the regular risk reporting process to the Board of Managing Directors and to the Supervisory Board's Risk Committee.

Other risks

To meet the requirements of the Basel framework, MaRisk requires an integrated approach to risk that also includes unquantifiable risk categories. At Commerzbank, these are subjected to a qualitative management and control process. The following risk types except compliance risk, model risk and cyber risk are outside the responsibility of the CRO.

Legal risk

According to the CRR, legal risk falls within the definition of operational risk. It primarily arises for the Commerzbank Group when the Bank's claims cannot be enforced for legal reasons or when claims can be made against the Bank because the underlying law was not observed or has changed since a transaction was concluded.

The operation of banking and financial services transactions that are subject to regulatory provisions may also result in legal risk. This risk may also take the form of orders or sanctions issued or imposed by one or more authorities whose supervision Commerzbank is subject to anywhere in the world. Legal risk also arises in realised losses or provisions due to or in connection with court cases brought against Commerzbank (passive proceedings). Cases brought by Commerzbank (active proceedings) generally represent a credit risk rather than an operational risk, so the risk of loss is already taken into account through write-downs. However, the costs of legal action (court and lawyers' costs) for active proceedings are classified as legal risk.

Organisation
Within Commerzbank, the functional management of legal risk throughout the Group is the responsibility of Group Legal. All legal staff at the various Group Legal locations including the foreign branches as well as the legal staff of the legal departments of the domestic and foreign subsidiaries are as legal risk managers operationally responsible for the identification and management of the Group-wide legal risk within Commerzbank.

Risk management

The task of the Group's legal risk managers is to detect legal risks and all losses potentially resulting from them at an early stage, to highlight possible solutions that might avoid or minimise such losses, and to play an active part in reaching decisions concerning legal risks. They must ensure that they are always up to date with all legal changes or new findings within their area of responsibility and inform the business units affected about the impact on legal risk and any action that needs to be taken as a result.

The legal risk managers are responsible for arranging or adjusting legal provisions and look after and monitor new and ongoing court proceedings.

In the case of passive proceedings, provisions are recognised on the basis of the risk assessment carried out by the responsible legal risk manager. The expected risk of loss for proceedings generally corresponds to the size of the provisions to be recognised. To estimate the expected loss, the amount that the Bank would reasonably have to pay to settle the dispute at the current point in time is calculated after each significant stage in the proceedings. In the case of active proceedings, provisions are usually only recognised for the expected court and lawyers' costs.

Group Legal provides information about all major court proceedings and risk trends in a quarterly litigation report. This report is sent to the Bank's management and Supervisory Board, the supervisory authority and the OpRisk Committee.

Current developments

Commerzbank and its subsidiaries are involved in a variety of court and arbitration cases, claims and official investigations (legal proceedings) in connection with a broad range of issues. They include, for example, allegations of defective advice, disputes in connection with credit finance or payment transactions, entitlements to occupational pensions, allegedly false accounting and incorrect financial statements, enforcement of claims due to tax issues, allegedly incorrect prospectuses in connection with underwriting transactions, alleged violations of competition laws, and cases brought by shareholders and other investors as well as investigations by supervisory authorities. In addition, changes to rulings by supreme courts, which may render them more restrictive, as well as to legal conditions, e.g. in the private customer business, may result in more claims being brought against Commerzbank or its subsidiaries. In these court cases, claimants are mostly asking for the payment of compensation, claims on account of unjust enrichment or the reversal of agreements already entered into. If the courts were to find in favour of one or more of the claimants in these cases, Commerzbank could be liable to pay compensation, which could in some cases be substantial, or could incur the expense of reversing agreements or of other cost-intensive measures.

Regulatory authorities and governmental institutions in various countries in which Commerzbank and its subsidiaries are or have been active have for some years been investigating irregularities in connection with the fixing of foreign exchange rates and with foreign exchange business in general. In the course of these investigations, regulatory authorities and governmental institutions have also sought checks on Commerzbank or have approached the Bank with requests for information. Commerzbank has cooperated fully with these bodies and also looked into the relevant matters on the basis of its own comprehensive investigations. The cases are no longer active with the exception of one case in which the investigating authority transferred the matter to the national competition tribunal. Financial consequences cannot be ruled out.

The public prosecutor's office in Frankfurt is investigating equity transactions conducted by Commerzbank and the former Dresdner Bank around the dividend record date (cum-ex transactions). Commerzbank had already initiated a forensic analysis of cum-ex transactions at the end of 2015, which was concluded at the start of 2018 in respect of Commerzbank's equity transactions and in September 2019 in respect of the equity transactions of the former Dresdner Bank. All back taxes demanded by the tax authorities have been paid.

The public prosecutor's office in Cologne has been conducting investigations at Commerzbank since September 2019 in connection with a separate case concerning cum-ex transactions. It is investigating on suspicion that the Bank (including Dresdner Bank) was involved in cum-ex transactions in various roles, including by supplying shares to third parties who were allegedly acting as short sellers. According to the current understanding, these proceedings do not involve Commerzbank's own tax credit claims with regard to capital gains tax and the solidarity surcharge on dividends.

The Bank is cooperating fully with authorities conducting investigations into cum-ex transactions. It is currently not possible to predict whether this will result in a burden, whether it will occur, or the amount of any resulting burden.

Based on the circular on cum/cum transactions published by the Federal Ministry of Finance (BMF) in 2017, the tax auditors commented on the treatment of these transactions in the form of audit notes. The tax office reduced the credit for capital gains taxes accordingly. In response, Commerzbank AG made value adjustments to tax credits shown in the balance sheet and set up additional provisions for possible repayment claims in order to reflect the changed risk situation fully and appropriately. The BMF published a revised version of its circular on cum/cum transactions on 9 July 2021. In view of the potential impact of the BMF circular, the provision was adjusted in the second quarter of 2021. Based on current knowledge, the tax risks arising from this issue have thereby been adequately covered. The possibility of further charges over and above the provisions recognised by the Bank cannot be completely ruled out.

With respect to securities lending transactions, Commerzbank is exposed to compensation claims (including in court) from third parties for crediting entitlements that have been denied. In the context of these securities lending transactions, the contracting parties were obliged to reimburse Commerzbank for dividends and retained capital gains taxes. However, the tax offices of various contracting parties partially refused or subsequently disallowed subsequent crediting against corporate income tax.

In May 2017, a Polish court admitted a class action lawsuit against mBank alleging the ineffectiveness of index clauses in loan agreements denominated in Swiss francs. A total of 1,731 plaintiffs have joined the class action. The plaintiffs have lodged an appeal against the ruling of the court of first instance rejecting their claims.

Independently of this, numerous borrowers have also filed individual lawsuits for the same reasons. In addition to the class action, 17,627 other individual proceedings were pending as at 31 December 2022 (31 December 2021: 13,036). mBank has contested these claims.

As at 31 December 2022, there were 1,941 final rulings in individual proceedings against mBank, of which 97 were decided in favour of mBank and 1,844 were decided against mBank. A total of 33 proceedings before courts of second instance are suspended because of legal issues that are being considered by the Polish Supreme Court and the European Court of Justice (ECJ).

The questions submitted to the ECJ by the Polish Supreme Court on the legality of the process for appointing new judges to the Polish Supreme Court are still unanswered and the further course of the proceedings and the outcome remain to be seen.

New requests for preliminary rulings sent to the ECJ by Polish courts in proceedings concerning mBank raise key issues about how to deal with indexed loans, such as the declaration of such loan agreements as null and void, the statute of limitations for repayment claims and the compensation for use owed to the banks (C138/22, C139/22 and C140/22). A date for the hearing or pronouncement of a decision has not yet been set.

A referral proceeding of another bank at the ECJ (C520/21) mainly addresses issues regarding compensation for use and other benefits for funds that are to be returned under a void loan agreement. Representatives of the plaintiffs, the defendant, the supervisory authorities and the European Commission presented their positions at a hearing in October 2022. The court did not comment specifically on the matter. Once implemented by the Polish courts, a decision in favour of the plaintiffs could result in considerable economic burdens for mBank. A decision by the court is expected in mid-2023.

mBank established a settlement programme beginning in the fourth quarter of 2022 that is aimed at all customers with active loans, including those who already have lawsuits against the bank. Customers will be offered the option of having their loans converted into zloty loans with a fixed or variable interest rate as well as the cancellation of an individually negotiated part of the outstanding loan value. As at the reporting date, mBank had accounted for risks in connection with future settlement payments in the amount of €122.1m.

In the third quarter of 2022, the Group changed the methodology used to calculate the risk provisions for loan agreements indexed to Swiss francs. The methodology is now based on historical data, supplemented by expert assessments. The main assumptions are: The expected number of borrowers who will still sue, the nature of the expected court judgments, the amount of the Bank's loss in the event of a judgment, and the acceptance rate for settlements. The methodology used to calculate the provision is based on parameters that are varied, discretionary and in some cases associated with considerable uncertainty. Fluctuations in the parameters as well as their interdependencies and rulings of the Polish courts and the ECJ may mean that the amount of the provision has to be adjusted significantly in the future.

As at 31 December 2022, the portfolio of loans denominated in Swiss francs that have not been fully repaid had a carrying amount of 6.1bn Polish zloty; the portfolio that had already been repaid amounted to 7.5bn Polish zloty when it was disbursed. Overall, the Group recognised a provision of €1.4bn for the risks arising from the matter, including potential settlement payments and the class action lawsuit (31 December 2021: €899m).

New legal provisions in Poland permit consumers, irrespective of their financial position, to defer their monthly payments for current mortgage loans up to eight times until the end of 2023. In calculating the impact of these provisions, mBank is expecting borrowers accounting for 82.5% of the eligible mortgage loan portfolio to exercise this right and to request deferrals averaging 7.7 months. As at 31 December 2022, customers accounting for 81.8% of the portfolio had requested deferrals averaging 6.8 months.

In April 2021, the German Federal Court of Justice ruled on the mechanism for changes to banks' general terms and conditions (AGB Banken) in a case against another bank and declared the relevant clauses of the general terms and conditions to be void. This mechanism stipulated that the customer's consent to certain changes in the contract was given after a certain period of time if the customer had not objected. The Bank has examined the impact of this case law on its business units and products, as the charges introduced or increased for consumers as a result of the mechanism for changes to banks' general terms and conditions may be void.

Some of these cases could also have an impact on the reputation of Commerzbank and its subsidiaries. The Group recognises provisions for such proceedings if liabilities are likely to result from them and the amounts to which the Group is likely to be liable can be determined with sufficient accuracy. Since there are considerable uncertainties as to how such proceedings will develop, the possibility cannot be ruled out that some of the provisions recognised for them may prove to be inadequate once the courts' final rulings are known. As a result, substantial additional expense may be incurred. This is also true in the case of legal proceedings for which the Group did not consider it necessary to recognise provisions. The eventual outcome of some legal proceedings might have an impact on Commerzbank's results and cash flow in a given reporting period; in the worst case, it cannot be fully ruled out that the liabilities which might result from them may also have a significant impact on Commerzbank's earnings performance, assets and financial position.

Further information on legal proceedings may be found in Note 55 regarding provisions and Note 57 regarding contingent liabilities and lending commitments in the Group financial statements.

Compliance risk

Compliance risk falls within the definition of operational risk according to the Capital Requirements Regulation (CRR). Commerzbank acknowledges and understands the existence of inherent compliance risk in its areas of business, which are subject to the risk of abuse in general and in particular by financial crime. Compliance risk in this context comprises risks relating to money laundering, terrorist financing, sanctions/embargoes, markets compliance, fraud, bribery and corruption, as well as consideration of human rights and environmental risks in accordance with the German Supply Chain Due Diligence Act (LkSG).

In order to actively promote a compliance culture in the Bank, the Board of Managing Directors of Commerzbank has laid down and communicated corresponding values in the Code of Conduct.

Organisation

Group Compliance is led by the Divisional Board member for Group Compliance, who reports directly to the Board of Managing Directors. Pursuant to Art. 87 (5) of the German Securities Trading Act (WpHG) and BT 1.1 MaComp (minimum requirements of the compliance function), the division head of Group Compliance is both the Group's Compliance Officer and, under Art. 25 h (7) of the German Banking Act (KWG) and Arts. 7 and 9 of the German Anti-Money Laundering Act (GwG), the Anti-Money Laundering Officer; this person is supervised as such by the Federal Financial Supervisory Authority (BaFin).

The Group Compliance division head also assumes the role as human rights officer according to the German Supply Chain Due Diligence Act (LkSG). The human rights officer shall have a deputy human rights officer who shall have the rights and powers of the human rights officer.

Group Compliance is responsible for:

A. The five types/areas of compliance risk:

1) anti money laundering / fighting terrorist financing
2) sanctions and embargoes
3) combating fraud, bribery and corruption
4) markets compliance
5) consideration of human rights and environmental risks in accordance with the LkSG

as well as

B. Further responsibilities:

1) coordination of the requirements under MaRisk section 4.4.2 ("MaRisk compliance function"),
2) independent implementation of internal special investigations with compliance relevance.

In the third quarter of 2022, the Bank decided to implement in Compliance the requirements set out in the LkSG.

The responsibilities based on the obligations under the QI (Qualified Intermediary), FATCA (Foreign Account Tax Compliance Act) and CRS (Common Reporting Standard) regimes as well as in relation to the prevention of the aiding and abetting of tax evasion (Anti-Tax Evasion Facilitation – ATEF) have been bundled within the Group Tax function; the corresponding role of the QI and FATCA Responsible Officer was transferred to Group Tax in July 2022. In the foreign locations, the roles and responsibilities with regard to ATEF-related tasks under the overall responsibility of Group Tax remain unaffected by this structural change and will continue to be carried out there by the local compliance function.

Risk management

To prevent compliance risks, Commerzbank has implemented security systems and controls for its transactions, customers, products and processes. These procedures for ensuring compliance with material legal provisions and requirements are referred to in their entirety as a compliance management system. Commerzbank's compliance management system is based on international market standards and the regulatory requirements in the various countries which are relevant for Commerzbank's business activities. Commerzbank is constantly developing its compliance management system in order to meet its responsibilities and address the growing complexity and increasing regulatory requirements. Under the three lines of defence principle, protecting against undesirable compliance risks is an activity that is not restricted to the compliance function (Group Compliance). Instead, the organisational control and monitoring elements are aligned in three sequential levels. The units in the first line of defence (1st LoD) assume responsibility as part of their operational activities for identifying and managing risks and for complying with their own business rules; they are also responsible for setting up process-oriented control mechanisms. Group Compliance, the second line of defence (2nd LoD), sets standards for appropriate risk management, oversees the appropriateness and effectiveness of the procedures and controls in the first line of defence, and assesses and communicates any deficiencies found. In addition, Group Compliance carries out analyses and assessments of compliance risks and ensures that the risk management framework is implemented. Internal Audit, the third line of defence (3rd LoD), uses regular and independent audits to check that compliance in both the 1st LoD and 2nd LoD is appropriate and effective.

Compliance risks are managed in a control circuit with interacting elements. Commerzbank constantly monitors relevant regulatory requirements and ensures the definition and/or adjustment of corresponding internal standards intended to make sure it complies with the requirements. Regular internal training measures and consulting services from the compliance function support the effective implementation of these standards in the Group. Implementation encompasses setting up and carrying out suitable processes and controls in daily work, assuring their quality and testing their effectiveness in the 1st and 2nd LoD. Compliance risks are monitored and are the subject of regular internal reporting. Where necessary, matters are escalated according to their urgency and severity.

The compliance sub-risk strategy, as part of the overall risk strategy of Commerzbank, sets the risk strategy framework for dealing with compliance risks and contains a detailed description of compliance risk management in addition to strategic and organisational elements. In particular, the risk appetite per compliance risk type is specified and the strategic fields of action are defined.

Risk analysis (compliance risk analysis) is one of the core elements of risk management. It assesses the inherent risk arising from doing business with different customer groups and products and compares this in the Control Assessment with an evaluation of the corresponding control environment for mitigating the inherent risk. A residual risk is determined as the outcome. The Bank defines measures to further enhance risk management (e.g. introducing additional controls) as necessary and tracks implementation closely.

Current developments

In recent years, Commerzbank has worked through all the findings from the settlements with various US authorities regarding violations of US sanctions and money laundering prevention regulations. Commerzbank last reported to the DFS (Department of Financial Services) for the fourth quarter of 2022.

On 13 April 2022 Commerzbank London received confirmation from the UK financial services supervisory authority, the Prudential Regulation Authority (PRA), that its application to be recognised as a "third-country branch" had been approved. This approval allows the Bank to continue operating as a branch of Commerzbank AG in the UK; it had been operating under the Temporary Permissions Regime (TPR) since 1 January 2021. The approval also means discontinuation of all voluntary restrictions on business, which were put in place during the review carried out in the branch by the "skilled person" appointed by the UK Financial Conduct Authority (FCA).

In August 2022 Commerzbank reached an agreement with the Hong Kong Monetary Authority (HKMA) to pay a fine of HKD 6m. The fine is due to breaches of the Money Laundering Ordinance in the area of KYC for the period April 2012 to June 2016. Following the report from the HKMA, an immediate programme to work through the infringements was launched, and this has already been completed.

Reputational risk

Reputational risk is the risk that stakeholders may lose confidence in Commerzbank or that its reputation may be damaged as a result of negative events in its business activities. Commerzbank's stakeholder groups include in particular the public and the media, non-governmental organisations and its customers. In the present-day competitive environment, a company's reputation is becoming more and more important. The main factor determining this is how companies handle sustainability considerations (environmental or social risks) in the market segments' customer business (intrinsic reputational risks). Companies are judged not only on the basis of people's personal experiences of them, but also on reports reaching the public, especially through the media. Reputational risk therefore goes hand in hand with communication risk.

Strategy and organisation

All employees and managers have a fundamental duty to protect and reinforce Commerzbank's good reputation as a significant element of its enterprise value. The segments and significant subsidiaries bear direct responsibility for reputational risk resulting from their particular business activity. The Reputational Risk Management department is part of the central Group Communications division of the Commerzbank Group and focuses on intrinsic reputational risk that may directly lead to reputational damage among stakeholder groups. The department maintains close links with the relevant front office units. Management of intrinsic reputational risk is the responsibility of the Chairman of the Board of Managing Directors. It is a component of Commerzbank's overall risk strategy. Reputational Risk Management's tasks include identifying, evaluating and addressing intrinsic reputational risk in systematic processes at an early stage and suggesting or implementing appropriate measures (early warning function).

Risk management

Managing intrinsic reputational risk means identifying and reacting to potential environmental and social risks at an early stage, thereby reducing any potential communication risk or even preventing it completely. Intrinsic reputational risk is managed by means of a qualitative approach. As part of a structured process, transactions, products and customer relationships in connection with sensitive areas are assessed with reference to environmental and social risks on a qualitative five-point scale. This assessment can contain conditions and in some cases a negative verdict, which could lead to a rejection. In addition to the qualitative assessment of intrinsic reputational risks, an annual scenario-based ICAAP materiality analysis is used to quantitatively assess the impact of climate and environmental risks on reputational risks and to ensure appropriate ICAAP consideration via business risk.

The sensitive areas regularly and comprehensively analysed in Reputational Risk Management include armaments exports and transactions, products and customer relationships relating to power generation and commodities extraction. Commerzbank's attitude towards these areas is laid down in positions and guidelines that are binding for all employees. Commerzbank's Reputational Risk Management department regularly observes and analyses new environmental and social issues and informs the relevant parts of the Bank about these. The reputational risks identified and addressed by the department are incorporated into the quarterly reputational risk report – part 1: non-quantifiable risks; part 2: high and major intrinsic reputational risks (sustainability issues) – which is prepared for the Board of Managing Directors and the Risk Committee of the Supervisory Board.

Environmental, social and governance (ESG) risks

The integration of ESG aspects into the Bank's risk management processes is hugely important for sustainable finance.

The three lines of defence concept for ESG risks was refined during 2022. ESG risks are considered a type of horizontal risk and as such are managed by various control units across the Bank. Group Sustainability Management also acts the second line of defence for social (S) and governance (G) risks, serving as a central point of oversight. Environmental (E) risks are dealt with within the risk control function. A Chief Environmental Risk Officer (CERO) has also been appointed and tasked with bringing the Environmental Risk Control unit into operation.

Through the ESG framework published in July 2022 we have made our understanding of and commitment to sustainability transparent for all stakeholders. The framework creates a Bank-wide standard that enables stringent management of all relevant products, processes and activities and ensures the sustainable transformation of Commerzbank. The focus of the ESG framework is on our core business. We distinguish between "transformation finance" and "sustainable finance". We are convinced that the entire economy has a role to play in sustainable transformation and must act accordingly. Therefore, we classify all portfolio components that are not affected by our exclusion criteria as transformation finance. Sustainable finance, on the other hand, describes that part of our portfolio that we classify as explicitly sustainable. This includes financial products and services that serve positive environmental and/or social purposes and thus contribute, for example, to achieving the goals of the Paris Agreement or the UN Sustainable Development Goals. In order to determine which exposures meet our sustainability requirements and are thus part of sustainable finance, we have developed a transparent review system and our own criteria, which are disclosed in the ESG framework. The ESG framework also provides an overview of our sustainability directives and exclusion criteria.

To this end, we have formulated sector-specific requirements, for example for mining, energy and fossil fuels, including oil and gas. Cross-sector requirements relate to human rights and indigenous peoples. Exclusion criteria were defined for particularly critical products, transactions or business relationships. This includes, for example, financing for oil and gas production projects (conventional and unconventional production methods), as well as the Group-wide decision not to finance new construction or expansion for coal mines, coal infrastructure or coal-fired power plants. Financing of such projects is excluded under our Fossil Fuels Policy. In this way, we ensure that even existing customers are not supported by any business that is prohibited under the Fossil Fuels Policy. For years now, environmental and biodiversity aspects have been integrated into the core business by means of minimum environmental standards and corresponding exclusion criteria, and compliance with these standards has been monitored.

Sustainability in the core business is assessed by the Reputational Risk Management department at Commerzbank Aktiengesellschaft. We do not limit ourselves to what is legally required; instead, we consider the legitimacy of all transactions. In view of the special risks associated with fossil fuels and armaments, the Board of Managing Directors of Commerzbank Aktiengesellschaft has passed its own binding directives on these matters that define many of the relevant transactions and business relationships in these areas as being subject to assessment, and encompass exclusion criteria. The fossil fuels directive was revised at the beginning of 2022 and includes Commerzbank Aktiengesellschaft's requirements for customers in the coal, oil and gas sectors.

Adjustments were also made in relation to arms during the year under review. What has not changed is that we recognise the basic right of states to defend themselves and do not question the need for the German armed forces to exist or to be adequately equipped. We therefore continue to finance arms manufacturers who produce weapons and armament systems for the Federal Republic of Germany and its allies. Nevertheless, we have tightened and expanded the requirements and criteria for the arms industry applying to Commerzbank Aktiengesellschaft, which have been in place since 2008. The Board of Managing Directors approved the new Arms and Surveillance Technology Policy in January 2023. It preserves the fundamental parameters of the old policy, which means that Commerzbank will not fund arms business in conflict zones or areas of tension, or business relating to what are termed "controversial weapons". In addition, the new policy now also governs the approach in relation to autonomous weapons and surveillance technology.

In the Reputational Risk Management department, business transactions and business relationships in sectors in which human rights play a significant role, such as mining, raw materials extraction or the cotton sector, are intensively researched, analysed and assessed in detail. In addition, Commerzbank Aktiengesellschaft worked intensively in the reporting year to implement the LkSG, which has come into force on 1 January 2023.

Commerzbank Aktiengesellschaft's Reputational Risk Management department thus defines the criteria for and limits of business operations and assesses transactions, products and customer relationships after careful analysis. The assessment process starts in the front office: as soon as an issue defined as sensitive by the Bank is affected, Reputational Risk Management must be brought in. The assessment uses a five-point scale and can result in a rejection of the product, the transaction or the business relationship.

mBank in Poland operates its own Reputational Risk Management department based on its commitment to the United Nations Global Compact. mBank's risk management strategy is based on three pillars: supporting sustainable growth, striving for prudent and stable risk management, and strengthening its skills in managing ESG and cyber risks. mBank has formulated its own exclusion criteria for various sectors based on the EU's climate and energy policies. These include the mining and energy sectors, among others: for example, financing for the construction or expansion of hard coal and lignite mines is excluded. mBank's reputational risk strategy is reviewed annually and coordinated with the parent company.

In order to lay the foundation for future management of biodiversity, in 2022 we conducted an impact analysis for the first time using the "Encore" tool. Encore provides a science-based link between economic activities and biodiversity-damaging impacts. In our analysis, we compared the business volume of the sectors we finance with the tool's external data and then weighted them. We identified potential areas of action and strategic priorities and will develop further analyses and measures to protect biodiversity.

We are pursuing the strategic goal of reducing the CO_2 emissions of our entire loan and investment portfolio to net zero by 2050. For this purpose, in 2022 we analysed the CO_2 intensity of the loan portfolio of Commerzbank Aktiengesellschaft using sector-specific target values in accordance with the Paris Agreement. In terms of methodology, we are guided by the Science Based Targets Initiative (SBTi), which advocates the reduction of greenhouse gases on the basis of scientifically calculated targets. This enables companies to align their climate policy with the goals of the Paris Agreement and effectively counteract climate change. Using the SBTi method we have set specific sector-specific goals with a view to reducing the CO_2 emissions associated with our loan portfolio (what are called "financed emissions") and ultimately to meet our net zero commitment.

We aim to manage all portfolios highlighted as requiring attention in the SBTi method, with a particular focus on emissions-intensive sectors. These include power generation, fossil fuels, automotive manufacturing, as well as the production of cement, iron and steel. We will likewise consider the private residential mortgage loan portfolio, which is deemed optional in the SBTi analysis. In the 2022 reporting year, corresponding emissions intensity reduction targets were formulated for all these portfolios and validated under the SBTi. The portfolio targets according to the SBTi are published in the ESG framework, and the status of target achievement is regularly updated there. Our ambition is to support companies in the real economy in their transition process and to sustainably reduce emissions.

At Commerzbank, we do not consider climate risks as a separate type of risk, but as a horizontal risk. This can materialise across the different known types of risk. In 2022, we again carried out a comprehensive materiality analysis for climate risks across all risk types for the Commerzbank Group, in particular with regard to the expectations set out in the ECB's guidance on climate and environmental risks. In this process, all risk types assessed as material in the risk inventory are evaluated in terms of their materiality in relation to climate risks, and both transition and physical risks are taken into consideration. Transition risks arise for companies, for example, as a result of regulatory or legal changes in energy policy, changes in market sentiment and preferences, or technological innovations. Physical risks, on the other hand, develop as a result of changing climatic conditions and the associated more extreme and more frequent acute weather events, such as floods, or chronic effects, such as rising sea levels.

Depending on the risk type, the assessment was made on a qualitative and/or quantitative basis. As a result of the analysis, the influence of climate and environmental risks for the risk types credit risk, market risk, operational risk (including compliance and cyber risk), reputational risk and business risk was confirmed as material. The findings of the materiality analysis feed into the creation of the business strategy, the overall risk strategy and the sub-risk strategies as well as into other core elements of the Bank's internal process to ensure an adequate capital position, such as the internal stress test framework and the risk-bearing capacity concept.

With regard to credit risk, relevant parameters of various climate scenarios were holistically translated into economic effects. For transition risks, changes in regulation, price changes, changes in supply or demand, and the effects of technological changes are considered, among other things; to assess physical risks, climate scenarios involving acute flooding and heat events are used and analysed. This is followed by a statement on the impact of climate risks in the short, medium and long term up to 2050.

Transition risks are industry-specific, with sometimes significant differences in the sub-sectors within an industry (e.g. mechanical engineering). We look at the impact on an industry from both a macroeconomic and an internal Bank perspective. Potential impacts of physical climate risks vary, in some cases significantly, by geographic location and circumstances, and must be considered when taking a portfolio perspective.

As a major financier of the German economy, we are also active in sectors that are particularly exposed to climate-related physical or transition risks. However, we have little exposure to some of the hardest-hit sectors (agriculture, for example). Sectors that could potentially be more heavily affected by climate risks and that have a sufficiently large exposure are, for example, the energy sector, the automotive sector and mechanical engineering. Owing to the geographical focus of our portfolio in Germany and Europe, we are less affected by physical climate risks, such as hurricanes and rising sea levels, than other regions in the world. Overall, both climate-related transition and physical risks are considered material to credit risk over a long-term time horizon.

In order to proactively manage the effects of climate risks in Commerzbank Aktiengesellschaft's lending business, we are systematically optimising our processes and methods. Lending decisions for companies and institutional customers therefore take into account not only an individual risk assessment but also – where relevant – the extent to which they involve climate risks and the level of resilience to them.

In this, we are progressively combining the specific findings from the scenario analyses with the individual risk analysis at customer level. We take a portfolio-specific approach and thus take appropriate account of the differences in terms of affectedness and the risk drivers. In the particularly relevant portfolios, such as large, international companies, special financing and commercial real estate finance, we have supplemented the qualitative risk analysis in the individual loan decisions with specific aspects for the analysis of climate risks.

The results of the analyses are aggregated into a structured assessment that is incorporated into the decision-making processes. We take this score into account in individual lending decisions, but we also use it as part of portfolio analysis and management. We will progressively extend this approach to other relevant portfolios and include smaller companies, for example. In our target state, we want to integrate climate risks – as far as possible – into the quantitative credit risk analysis and thus fully reflect them across the process chain, including in pricing and reporting.

Climate risks also play a major role in Commerz Real's asset management, both physical and transition risks. The Bank uses the future scenarios based on the representative CO_2 concentration pathways set out by the Intergovernmental Panel on Climate Change to determine an accurate exposure of assets and the portfolio. In its risk assessment, including scenario analyses, Commerz Real relies on tools such as the Carbon Risk Real Estate Monitor (CRREM) and the PwC Climate Excellence Tool. The CRREM tool shows climate pathways using asset class and country-specific CO_2 and final energy target values for a 1.5° and a 2.0° scenario. The Climate Excellence Tool, on the other hand, allows for a site-specific evaluation of physical climate risks for different scenarios. In this way, Commerz Real tries to perform a risk analysis that is as accurate as possible for the location on the basis of existing data and to derive specific measures to prevent damage at an early stage. The results feed into the risk assessment and the sustainability assessment of all real estate transactions and are taken into account accordingly in the management phase. The basis of climate risk management is collecting all consumption and emissions data and location data in a way that is as reliable as possible. To this end, Commerz Real has implemented a sustainability data management system and also uses external partners to collect data on a global level.

In addition to climate risks, risks from the loss of biodiversity are also among the relevant environmental risks. In 2022 the materiality analysis examined for the first time the extent to which biodiversity is material as a risk driver for the Commerzbank Group. As with climate risks, biodiversity risks can be divided into physical and transition risks. While physical biodiversity risks arise from a loss or degradation of things provided by the ecosystem on which the economic system depends (e.g. pollination or genetic diversity), transition risks in this context refer to risks that arise from the transformation process towards a more sustainable and environmentally friendly economy.

The physical risk analysis focused on an assessment of the dependence on the ecosystem of sectors in which Commerzbank is represented through credit exposures. To do this, we used external data that classify the degree of dependence of sectors on the ecosystem, and we considered these data in conjunction with the volume of business in each sector.

In the case of transition biodiversity risks for credit risk, the negative impact of business activities on the environment and the consequences due to anticipated future regulatory changes to protect biodiversity were included. As a result, we currently assess physical biodiversity risks as not material, but consider transition risks to be material risk drivers for credit risk in the medium and long term. It can be assumed that biodiversity risks will tend to increase with time. In the future, a more in-depth analysis is planned, supported by corresponding scenarios – where available – and more advanced evaluation methods in this context.

IT risk

IT risk is a form of operational risk. In our internal definition, we define IT risk as risks to the security of information processed in our systems in terms of meeting the four IT security objectives set out below:

Confidentiality: Information is confidential if it is not accessible to, or capable of being reconstructed by, unauthorised persons, business processes or IT systems.

Integrity: Information possesses integrity if it has not been modified or destroyed by any unauthorised means. An information-processing system (IT system) possesses integrity if it can perform its intended functions without hindrance and free of unauthorised manipulations, whether deliberate or accidental.

Traceability: Actions and technologies applied to information are traceable if they themselves and their source can be traced back without any ambiguity.

Availability: Information is available if it is always capable of being used to a predefined extent by authorised persons, business processes and IT systems when it is required.

Commerzbank attaches great importance to the protection and security of its own information, of that entrusted to it by customers, and of the business processes and IT products used to process it. They form a permanent core element in our IT strategy. IT security requirements are based on the IT security objectives referred to above and are set down in policies and procedural instructions.

IT risks are identified, evaluated and regularly reviewed as part of IT governance processes. IT risk is covered in the quarterly IT risk report. Information security is also established as a principal objective for our Internal Control System. As a result of altered conditions, more attention has been given to consideration of the four IT security objectives for home office technologies.

Relevant IT risks are also evaluated as part of operational risk management through risk scenarios and considered in the Bank's RWA calculation. This includes the risk of a breakdown of critical IT, the risk of external attack on the Bank's systems or data and, since 2021, the risks of modern cloud sourcing (cyber crime, advanced persistent threat (APT)[1] and cloud scenarios), the theft of corporate data or the default of service providers and vendors. See also the description of cyber risk.

Given the major importance of IT security to Commerzbank, it is further developed and improved on an ongoing basis by means of strategic initiatives. We have taken into account the significance of the "human" factor in IT security and cyber security by introducing additional training and awareness-raising measures.

[1] An advanced persistent threat is a special form of cyber attack. The intention of an APT attack is to remain undetected for as long as possible in order to steal sensitive information (internet espionage) or cause other types of damage over a longer period.

Cyber risk

Cyber risk comprises risks with direct relevance to security and risks that lead to relevance to security (with respect to cyber space). The part of cyber space of relevance to Commerzbank is all connected IT environments within the Bank and those outside the Bank that lead to customers, business partners and service providers. Cyber risk is therefore concerned with the digital representation of the Bank's assets (data, information) within cyber space.

The strategic guidelines from the Group risk strategy and the cyber and information security strategy apply without limitation to cyber risk.

Commerzbank manages cyber and information security risks via the Group division "Group Risk Management – Cyber Risk & Information Security" (GRM-CRIS), which reports to the Group Chief Information Security Officer (CISO). In addition to established security functions such as the ISO 27001 certified Information Security Management System (ISMS) as well as risk reporting on key risk indicators, GRM-CRIS focuses on managing cyber risk appropriately and on strengthening Commerzbank's cyber-resilience (including its information security incident management capabilities). It also addresses the interaction between cyber and information security risks and other types of material risk relating to areas such as operational risk.

The main factor in the current cyber risk situation is the geopolitical tension surrounding the Ukraine war. The actual threat situation has so far been limited to cross-sector attacks by pro-Russian and pro-Ukrainian activists. Cyber attacks and sabotage campaigns by state actors have thus far been focused on Ukraine. Developments in the cyber context are observed on an ongoing basis at Commerzbank by an interdisciplinary task force (top management and specialists from GRM-CRIS and Group Technology Foundations – GS-TF).

In connection with the increased remote use of Bank resources, for example in connection with split operations or working from home, there are still no new or expanded methods of attack against the Bank and its employees.

In the last two years the increasing spread of ransomware in cyber crime has to be emphasised, even if Commerzbank has not been affected by this so far. Ransomware is a special type of malware that blocks access to or encrypts data on IT devices and then requires the victim to pay a ransom for its recovery. The significant damage potential of such attacks is illustrated by a number of recent incidents in which supply chains were disrupted. By closely interlinking the 1st and 2nd line of defence (LoD) activities in the field of cyber threat analysis, including corresponding protective measures and incident management processes, the Bank shall continue to be adequately protected against ransomware attacks.

Human resources risk

Human resources risk falls within the definition of operational risk referred to in the Capital Requirements Regulation (CRR). The internal, management-oriented interpretation of this definition at Commerzbank includes the following elements in human resources risk:

Adjustment risk: Adjustment risk results when organisational and operational circumstances change (for example, restructuring, changes in management culture, qualification needs), these changes impact employees' scope of responsibilities and therefore require a greater willingness to change on the part of the staff. We offer selected internal and external training, continuing education and change programmes to ensure that the qualification levels of our employees keep pace with the current requirements, guidance is provided for structural changes and our employees can fulfil their duties and responsibilities.

Motivation risk: Motivation risk arises when demotivating factors are not eliminated and employees do not adequately perceive motivating factors such as management or remuneration. The effects (such as withheld performance by employees) can have a direct impact on the working environment and the organisation's productivity. Employee surveys enable us to respond as quickly as possible to potential changes in our employees' level of corporate loyalty and to initiate adequate measures.

Departure risk: Departure risk takes into account the consequences of undesired employee departures (for example, if an employee resigns voluntarily), particularly when high performers are involved. We take great care to ensure that the absence or departure of employees does not result in long-term disruptions to our operations. We also monitor staff turnover on a regular basis from both a quantitative and a qualitative perspective.

Supply risk: Supply risk reflects the consequences of insufficient staffing (for example, inadequate development of young staff) and the resulting consequences (operating bottlenecks, increased workload, lower productivity and illness). Appropriate quantitative and qualitative staffing aims to ensure that internal operating requirements, business activities and Commerzbank's strategy can be implemented.

Employees are a key resource for Commerzbank. Human resources risk is systematically managed by Group Human Resources with the aim of identifying, assessing and managing risks, for instance by applying selected personnel tools. The Board of Managing Directors is regularly informed about human resources risk.

Overall, the Bank will continue to monitor human resources risk. There is a risk that the human resources risk situation will deteriorate as a result of frequent structural changes due to a change in Group strategy. Change and organisational measures have already been initiated to counter human resources risk.

Business strategy risk

Business strategy risk is the medium- to long-term risk of negative influences on the achievement of Commerzbank's strategic goals, for example as a result of changes in the market or competitive environment, capital market requirements, regulatory/political factors or the inadequate implementation of the Group strategy (primary risk drivers).

Group strategy is developed further in a process that takes both external and internal factors into account. On the basis of these factors, the Board of Managing Directors sets out a sustainable business strategy describing the major business activities and steps required to meet the targets. To ensure proper implementation of the Group strategy to achieve the business targets, strategic controls are carried out through regular monitoring of quantitative and qualitative targets in the Group and the segments.

Responsibility for strategic corporate management lies with the Board of Managing Directors. Specific business policy decisions (acquisition and sale of equity holdings > €300m) also require the authorisation of the Supervisory Board's Risk Committee. In addition, all major initiatives and projects are decided by the Board of Managing Directors.

Model risk

Model risk is the risk of incorrect management decisions based on an inaccurate depiction of reality by the models used. With regard to the causes of model risk we distinguish between model risk from exceeding model boundaries and model risk from model errors (manual errors in model development/implementation). In line with the focus of the Group risk strategy, namely to ensure that the Bank has adequate capital and liquidity, the models for assessing risk-bearing capacity (capital requirements under the Basel framework and economic capital requirements, respectively) and liquidity resources are central for risk management.

The basic principles of model risk management are the identification and avoidance of model risks and appropriate consideration of known model risks (e.g. through conservative calibration or consideration of margins of conservatism or model reserves). Model risks that are unknown and hence cannot be mitigated are accepted as an inherent risk in the complexity of the Commerzbank business model. In respect of the governance of model risk management, requirements relating to model validation and model changes are established.

The war in the Ukraine and its geopolitical impact as well as the economic secondary effects from the Corona pandemic pose challenges for the risk models used. Commerzbank has introduced measures to counter the increased model risk and to ensure appropriate management even in the current phase.

The initiative from 2022 to strengthen management of model risks will further continue. This concerns both aspects of governance and the scope of monitoring and validation activities. In addition, strategically relevant models are currently being revised fundamenttally (various credit risk models). In this context, high standards in model development and initial validation play a major role.

Further development

In May 2017, a Polish court admitted a class action lawsuit against a subsidiary of Commerzbank alleging the ineffectiveness of index clauses in loan agreements denominated in Swiss francs (CHF). Since then, various legal issues have come before the Polish courts and the ECJ. On 16 February 2023, the opinion of the Advocate General of the ECJ in case C520/21, in proceedings against another bank, was presented, the subject of which is whether, in the event a mortgage loan agreement is void in its entirety, the contracting parties can assert claims from a contracting party beyond reimbursement of the monetary consideration, in particular to remuneration.

The Advocate General points out that "it is a matter for the national court to determine, by reference to national law, whether consumers have the right to assert such claims and, if so, to rule on their merits." If the referring court takes the view that national law entitles the consumer to claim additional benefits from the bank, Directive 93/13 does not preclude this. National courts may also have the power to dismiss such actions if they are abusive.

With regard to the bank's claims against the consumer, the Advocate General also notes that "it is, in principle, a matter for the national court to determine, by reference to domestic law, whether (...) a bank is entitled to assert against a consumer claims that go beyond reimbursement of the loan capital transferred and payment of default interest at a statutory rate."

However, the Advocate General considers that Directive 93/13, even if this were permissible under national law, excludes those claims, since it is clear from its general notion that, rather than seeking to ensure a contractual balance between the rights and obligations of the parties to the contract, it seeks to avoid an imbalance between those rights and obligations to the detriment of consumers. In addition, a bank cannot derive any economic benefit created by its own unlawful behaviour. The sanction of free credit is the normal consequence of the ex tunc annulment of the loan agreement upon the removal of its unfair terms.

The Advocate General's opinion is not binding on the ECJ, nor is it binding in the national courts and the Polish Supreme Court. The ECJ can share the position of the Advocate General's, but it may also rule otherwise, interpreting Directive 93/13 differently.

Taking into account the opinion of the Advocate General at the ECJ in case C520/21 against another bank, the subsidiary has performed a reassessment of the assumptions of the model applied as at the balance sheet date in order to assess the impact on the claims and the settlement programme. In the opinion of the subsidiary, given the lack of binding force of the opinion, as at the balance sheet date, there is no need to change the assumptions applied. The subsidiary will await the ECJ's ruling and the subsequent development of Polish jurisprudence. The ruling will be of significant importance for the shaping of case law in matters of foreign currency indexed loans. It will also be reflected in the parameters of the model, such as the distribution of expected court rulings or scenarios, and will affect the behaviour of borrowers in terms of willingness to accept settlements or to file lawsuits. It cannot be ruled out that such future events may have a significant negative impact on the estimation of the legal risk associated with mortgage loans in Swiss francs in the future. If the periodic monitoring of the parameters and assumptions of the model necessitates changes, they will be implemented.

This has no effect on Commerzbank's Group financial statements as at 31 December 2022.

Disclaimer

Commerzbank's internal risk measurement methods and models which form the basis for the calculation of the figures shown in this report are state-of-the-art and based on banking sector practice. The risk models produce results appropriate to the management of the Bank. The measurement approaches are regularly reviewed by Risk Controlling and Internal Audit as well as by German and European supervisory authorities. Despite being carefully developed and regularly checked, models cannot cover all the influencing factors that have an impact in reality or illustrate their complex behaviour and interactions. These limits to risk modelling apply in particular in extreme situations. Supplementary stress tests and scenario analyses can only show examples of the risks to which a portfolio may be exposed in extreme market situations; stress-testing all imaginable scenarios is not feasible. They cannot definitively estimate the maximum loss should an extreme event occur.