Group Management Report

Group Management Report

Fundamental Information about the Group

Business model

Aareal Bank AG, headquartered in Wiesbaden, Germany, is the parent company of the Group. Its shares are admitted to trading on the regulated market (geregelter Markt) of the Frankfurt Stock Exchange. Aareal Bank Group's strategy focuses on sustainable business success.

The strategic business segments of Aareal Bank Group are commercial property financing and services, software products and digital solutions for the property sector and related industries. The strategic business segments are broken down into the three segments Structured Property Financing, Banking & Digital Solutions and Aareon.

Structured Property Financing

In the Structured Property Financing segment, Aareal Bank facilitates property investments for its domestic and international clients, and is active in Europe, North America and the Asia/Pacific region. Aareal Bank finances commercial property investments, especially for office buildings, hotels, retail, logistics and residential properties, with a focus on existing buildings. By combining local market expertise with sector-specific know-how from the Group's head office, Aareal Bank can offer financing concepts that meet the special requirements of its domestic and international clients, as well as conclude structured portfolio and cross-border financings.

Aareal Bank manages its sales activities in the individual regions worldwide via a network of sales centres (hubs). In addition to the locally-based experts, the distribution centres for sector specialists covering the financing of hotels, retail and logistics properties, as well as those catering to the specific needs of investment fund clients, are located in Wiesbaden.

There are two regional hubs in Europe: one hub combines sales activities for the euro zone, with a focus on the Benelux countries, France, Germany, Italy and Spain. An additional hub focuses on sales activities outside the euro zone, with a focus on the UK[1] and Central and Eastern Europe. Distribution in Northern Europe is managed from the head office in Wiesbaden. As before, the hubs have a network – comprising branches in London, Paris, Rome, Stockholm and Warsaw – at their disposal. Aareal Bank also has a branch office in Dublin, where it conducts exclusively Treasury business and holds securities. Representative offices are located in Madrid (until 31 July 2023), Moscow, and Istanbul.

Aareal Bank Group's activities on the North American market are carried out through the subsidiary Aareal Capital Corporation, operating from New York City. The Singapore subsidiary Aareal Bank Asia Limited conducts the sales activities in the Asia/Pacific region.

Funding

Aareal Bank is an active issuer of Pfandbriefe, which account for a major share of its long-term funding. Moody's Aaa rating of the Pfandbriefe confirms the quality of the cover assets pool. To cater to a broad investor base, Aareal Bank uses a wide range of other refinancing tools, including senior preferred and senior non-preferred bonds, as well as other promissory notes and bonds. Depending on market conditions, the Bank places large-sized public issues or private placements. In the Banking & Digital Solutions segment, the Bank also generates bank deposits from the housing industry, which represent a strategically important additional source of funding. Furthermore, it has recourse to institutional money market investor deposits, and to retail deposits via a trust model.

Banking & Digital Solutions

In the Banking & Digital Solutions segment, Aareal Bank Group offers its clients from the institutional housing industry, commercial property companies, as well as the energy and utilities industries, services for the management of properties for residential use and

[1] Hereinafter refers to the United Kingdom of Great Britain and Northern Ireland.

the integrated processing of payment flows, amongst other things, thus contributing to a more efficient and sustainable structuring of its clients' fundamental business processes. With its BK01 software, it operates a procedure for the automated settlement of mass payments, in the German property industry. The procedure is integrated in licenced ERP systems. In conjunction with payment transactions processed via Aareal Bank's systems, deposits are generated that contribute significantly to Aareal Bank Group's refinancing base. Besides the German property industry, the German energy sector forms a second major client group of the segment for the services mentioned above. This enables the offer of further products, facilitating the cross-sector cooperation of client groups by realising synergies via digital processes. Aareal Bank Group is further strengthening its market position with its range of digital products and invoicing solutions within this segment. These products include mobile solutions for recording and processing meter readings, a platform solution for managing B2B payment processes and services, as well as end-customer communication offers and AI-supported invoicing and dunning solutions. The Banking & Digital Solutions segment also includes the First Financial Solutions, plusForta, BauGrund and CollectAI subsidiaries. The start-up objego, in which Aareal Bank holds an equity interest as part of a joint venture with ista, is also allocated to this segment.

Aareon

In the Aareon segment, the Aareon sub-group offers the European property industry and its partners user-oriented ERP software and digital solutions that simplify and automate processes, and support sustainable and energy-efficient operations. The integrated digital ecosystem Aareon Smart World, with the country-specific ERP systems at its core, connects property companies and their employees with clients, business partners as well as technical equipment in apartments and buildings using different digital solutions. The ERP systems are a starting point for cross-selling activities for the digital solutions. Aareon consistently invests in expanding Aareon Smart World's portfolio of products. This involves on the one hand the co-creative development of the digital ecosystem and the cooperation with PropTech companies, and targeted acquisitions on the other as part of the international growth strategy. Aareon Group has an international presence with offices in the DACH region, Finland, France, the UK, the Netherlands, Norway and Sweden, Aareon operates a development company in Romania.

Management system

Aareal Bank Group is managed using key financial performance indicators, taking the Group's risk-bearing capacity into account. Management takes place primarily at Group level, and is additionally differentiated by business segment. Group management is based on medium-term Group planning, prepared annually, which is geared towards the Group's long-term business strategy. An extensive (management) reporting system regularly provides the information required for management and monitoring purposes.

The following indicators implemented within the scope of business and return management are Aareal Bank Group's key financial performance indicators:

- **Group**
  - Net interest income (in accordance with IFRSs)
  - Net commission income (in accordance with IFRSs)
  - Loss allowance (in accordance with IFRSs)
  - Administrative expenses (in accordance with IFRSs)
  - Operating profit (in accordance with IFRSs)
  - Return on equity (RoE) after taxes[1)]
  - Earnings per ordinary share (EpS)[2)]
  - Common Equity Tier 1 ratio (CET1 ratio) (%) – Basel IV (phase-in)

1) RoE after taxes = consolidated net income excluding consolidated net income attributable to non-controlling interests and AT1 coupon (net) / average equity (IFRS) excluding non-controlling interests, AT1 bond and dividends
2) EpS = operating profit excluding income taxes, consolidated net income attributable to non-controlling interests, and AT1 coupon (net) / number of ordinary shares

- **Structured Property Financing segment**
  – New business[1]
  – Credit portfolio of Aareal Bank Group

- **Banking & Digital Solutions segment**
  – Average deposit volume from the housing industry
  – Net commission income (in accordance with IFRSs)

- **Aareon segment**
  – Sales revenue (in accordance with IFRSs)
  – Adjusted EBITDA[2]

The Group's existing risk management system is used to manage and monitor the individual risk exposures of Aareal Bank Group entities, in a centralised manner. All management-relevant information is systematically collected and analysed, to develop suitable strategies for risk management and monitoring. We also employ forecasting models for balance sheet structure, liquidity and portfolio development for strategic business and revenue planning. In addition to business-related management tools, we also use various other instruments to optimise our organisation and workflows. These include comprehensive cost management, centralised management of project activities and Human Resources controlling, for example.

Structured Property Financing also deploys supplementary management tools and indicators. The property financing portfolio is actively managed throughout Aareal Bank Group, with the aim of optimising its risk diversification and profitability. To develop risk- and return-oriented strategies for our portfolio, we evaluate market and business data, using this as a basis to simulate potential lending strategies, and to identify a target portfolio, which is part of Group planning. This helps us to identify – and to respond to – market changes at an early stage. Active portfolio management makes it possible for us to optimally allocate equity to the most attractive products and regions from a risk/return perspective, within the scope of our strategy. By taking into consideration maximum allocations to individual countries, products and property types in the portfolio, we ensure a high level of diversification and avoid risk concentrations.

The Banking & Digital Solutions and Aareon segments also have specific management indicators typical for the respective business. The deposit volume from the housing industry and net commission income are key financial performance indicators for the Banking & Digital Solutions segment. Aareon is managed on the basis of target figures commonly applied to software companies, such as sales revenue and adjusted EBITDA.

Report on the Economic Position

Macro-economic environment

2022 proved to be a difficult year for the global economy as a whole. The war in Ukraine that broke out at the beginning of the year and the reciprocal sanctions imposed by Western states and Russia have hit the European economy especially hard, in the form of higher prices for food and energy, and a temporary intensification of the problems already besetting supply chains. The economic and business climate also deteriorated on a more global scale during the course of 2022, especially in the second half of the year. High inflation rates dampened private consumption in many economies and put the brakes on the catch-up effects from the Covid-19 pandemic. Monetary tightening in the wake of high inflation also slowed economic development. While many countries benefited from the easing of contact restrictions, China's zero-Covid policy continued to burden its economic growth. Rising inflationary pressure also shaped developments on the financial markets: bond yields markedly increased in the face of monetary policy tightening, while equity markets also suffered some hefty price losses.

[1] New business = newly-originated loans plus renewals
[2] Earnings before interest, taxes, depreciation and amortisation before new products, Value Creation Programme (VCP), ventures, M&A activities and non-recurring effects

Economy

In the euro zone, real gross domestic product in 2022 climbed by 3.3 % compared with 2021 – meaning that economic momentum was rather subdued after the pandemic. In the spring, relaxations of Covid 19-related contact restrictions initially led to an increase in consumer spending, particularly on services. However, Russia's war of aggression against Ukraine, which began in February, led to sharp increases in energy prices and intensified existing supply chain problems, placing particular strain on the manufacturing industry. While the war had a dampening effect on demand and drove inflation worldwide, the euro zone was particularly affected by its impact due to its geographical proximity to and reliance on energy from Russia. Consequently, the euro zone's economic momentum progressively declined over the course of the year against a backdrop of elevated uncertainty, high energy price pressures, erosion of households' purchasing power, a weaker export environment and tighter financing conditions. Economic growth for the full year 2022 in the largest countries in the euro zone was 5.3 % in Spain, 3.8 % in Italy, 2.5 % in France and 1.7 % in Germany.

Countries in the European Union that do not belong to the euro zone also demonstrated different economic developments. Sweden, for example, achieved economic growth of 2.9 % in 2022 and the Czech Republic 2.5 % growth year-on-year. Poland's economy, on the other hand, expanded by a much stronger 5.7 %.

At the start of the year, economic activity in the UK was dynamic across all sectors, with those services involving close contact benefiting most from the easing of contact restrictions. Economic momentum started to slow in the second quarter, with the industrial sector facing rising prices for intermediate products, supply bottlenecks, and labour shortages. In the second half of the year, consumption-related services suffered from depressed consumer sentiment as a result of high inflation rates and a decline in real wages. Sweeping tax cuts were announced in the autumn, but were largely not implemented following financial market turmoil, culminating in a change of government. All in all, economic output in 2022 rose by 4.1 % compared with 2021.

In the US, economic output rose by a total of 2.1 % in 2022 compared to the previous year, although the economy still contracted in the first half of the year. The economic slowdown was attributable to a decline in domestic demand as a result of high inflation rates, tightened monetary policy and persisting supply chain issues. However, private consumption, a key driver of the economy, continued to rise, but came under increasing pressure from high inflation rates and tighter financing terms. Buoyed by an increase in exports, the economy expanded again in the second half of the year, largely due to high global demand for fossil fuels. Meanwhile, the increasingly restrictive financing terms started to kick in, affecting and reducing rate-sensitive investments in particular. In Canada, economic performance at the end of 2022 was still 3.3 % higher than in the previous year.

China's zero-Covid strategy – where just a few infections were enough to incite a drastic government response – continued to shape the course of the economy, causing the most severe economic and social distortions since 2020. Ongoing problems at some property conglomerates also had a braking effect, to which the government responded with a more expansive monetary policy, a prescribed easing of credit guidelines and infrastructure investments. All in all, economic output in 2022 rose by 3.0 % relative to the previous year. At 3.6 % over the previous year, Australia's growth rate in 2022 was more dynamic than for many other advanced economies. Exports and private consumption, which benefited from a strong labour market coupled with low unemployment, had a particularly positive effect.

Despite the generally challenging environment, labour markets in many economies performed well and continued to recover from the Covid-19 pandemic, and job creation proceeded apace especially in the services sector. It was, however, limited by a labour shortage, which was quite pronounced in some places. The unemployment rate in the euro zone stood at 6.6 % at the end of the year, a historic low. The same applied to the US, where the strong job creation of the previous year continued, with employment reaching new record levels from August onwards. At year-end, the unemployment rate was 3.5 %.

Annual rate of change in real gross domestic product

%	2022[1]	2021[2]
Europe		
Euro zone	3.5	5.3
Belgium	3.1	6.1
Germany	1.9	2.6
Finland	1.8	3.0
France	2.6	6.8
Italy	3.9	6.7
Luxembourg	2.1	5.1
Netherlands	4.2	4.9
Austria	4.8	4.7
Spain	5.5	5.5
Other European countries		
Denmark	3.1	4.9
United Kingdom	4.1	7.6
Poland	5.8	6.8
Russia	-2.3	4.8
Sweden	2.8	4.8
Switzerland	2.0	4.2
Czech Republic	2.5	3.5
North America		
Canada	3.4	5.0
USA	2.1	6.0
Asia/Pacific		
Australia	3.6	5.2
China	3.0	8.1
Maldives	13.7	41.8

[1] Preliminary figures; [2] Adjusted to final results

Financial and capital markets, monetary policy and inflation

On the financial markets, the focus was no longer on the Covid-19 pandemic, but rather on the higher inflation rates and expectations as well as the increasingly gloomy macro-economic environment. Major central banks started to tighten their monetary policy very significantly or announced their intention to do so. As a result, government bond yields rose sharply, not least because major central banks signalled that they would raise interest rates further in order to fulfil their mandate.

Whilst the European Central Bank (ECB) continued to follow a very accommodating path at the start of the year in order to promote favourable financing conditions for governments and the real economy, and to support economic recovery, it announced a monetary policy turnaround in June, giving in to broad inflationary pressure. The ECB raised key interest rates at each of its four meetings between July and December by a total of 250 basis points to 2.50 % (main refinancing rate), 2.00 % (deposit rate) and 2.75 % (marginal lending rate). In December, the ECB Governing Council pledged to keep raising key interest rates, depending on data, also to prevent a permanent shift in inflation expectations. A decision was also taken to pare back the asset purchase programme (APP) portfolio from March 2023 onwards. Net asset purchases under the programme had been discontinued as of July 2022. Accordingly, principal payments for maturing assets bought under the pandemic emergency purchase programme (PEPP) will continue to be reinvested at maturity until at least the end of 2024. In the event of renewed market fragmentation, the Governing Council reserves the right to apply flexibility in reinvesting redemptions across time, asset classes and jurisdictions at any time. Furthermore, in the second half of the year, the terms of targeted longer-term refinancing operations (TLTRO 3) were changed retroactively, and a transmission protection instrument (TPI) was adopted. The TPI is intended to ensure a seamless return to normal monetary policy in the euro zone and to prevent an excessive tightening of financial terms in individual member countries.

With inflation above 2 % over the longer term and a tight labour market, the US Federal Reserve (Fed) already ended its government bond and mortgage-backed security purchase programme in the first quarter and started to reduce its securities holdings in June 2022. Furthermore, the Fed raised its key interest rate a total of seven times during the year, to a target range between 4.25 % and 4.50 %. It also indicated further interest rate hikes, as did the ECB.

Faced with a similarly tight labour market and high inflation, in 2022 the Bank of England increased its base rate at eight consecutive meetings, taking the key interest rate from 0.25 % to 3.50 %. A series of unfunded tax cuts by the UK government, initially announced and later abandoned, led to an abrupt rise in government bond yields in September. This prompted the Bank of England, despite its tightening of monetary policy, to make temporary purchases of government bonds and implement further short-term support measures.

Other major central banks lifted their key rates, too: the Bank of Canada raised its key interest rate to 4.25 % in 2022, the Swedish Riksbank to 2.5 %, and the Reserve Bank of Australia to 3.1 %.

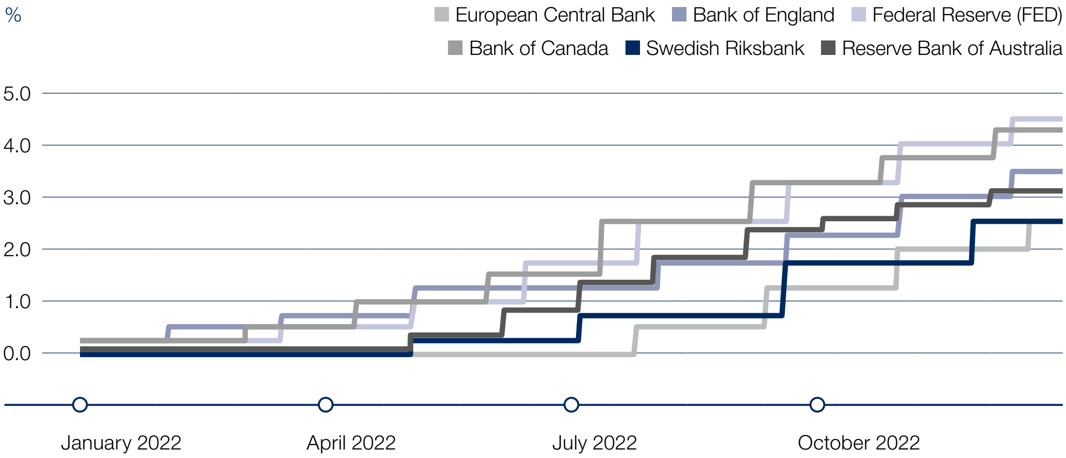
Short-term interest rates[1] in the euro zone at year-end 2022 were above those for year-end 2021. The same applied to the pound sterling, the Swedish krona, and the Australian dollar. The increase was particularly pronounced in the US dollar and the Canadian dollar. Long-term interest rates[2] rose in all of the currency areas that are relevant to Aareal Bank. Nominal yields on ten-year government bonds also painted a uniform picture and rose year-on-year.

Monetary policy in the individual currency areas, differing economic outlooks and inflation expectations also shaped the currency markets in 2022. The euro lost value vis-a-vis the US dollar in the course of the year, with significant volatility observed at times. Russia's war of aggression against Ukraine, a worsening economic outlook and the energy crisis were among the factors that weighed on the European common currency. After temporarily falling below the EUR/USD parity, the euro strengthened in the fourth quarter against a backdrop of reduced energy risks. At the end of the year, the exchange rate was USD 1.07 to the euro and therefore below the rate of 31 December 2021 (USD 1.13 to the euro). The euro initially depreciated against the Canadian dollar in the first half of the year, but recovered in the second half, ending the year unchanged at CAD 1.44 to the euro. Against the British pound, the euro rose over the course of the year from GBP 0.84 to the euro at the beginning of the year to GBP 0.89 at the end of the year. The UK's economic outlook darkened in the second half of the year, allowing the euro to gradually appreciate against the pound – despite monetary tightening by the Bank of England. After an overall volatile performance, the euro appreciated vis-a-vis the Swedish krona, from SEK 10.25 to the euro at the beginning of the year to SEK 11.12 at the end of the year. The euro remained virtually unchanged relative to the Australian dollar, and appreciated from AUD 1.56 to AUD 1.57 to the euro.

Inflation increased sharply in many economies in 2022, and clearly exceeded the target inflation rates defined by the central banks for their respective currency area. Aside from markedly higher core inflation rates, inflation drivers were higher energy and commodity costs, along with food price pressure as a result of the war in Ukraine. While supply chains disrupted by the effects of the Covid-19 pandemic still contributed to price rises in the first half of the year, supply bottlenecks began to ease in the second half. In the US, this contributed to a decline in the rise in price levels from July onwards. In areas that had been particularly hit by the Covid-19 crisis, such as the hospitality industry, high demand met with limited supply and labour shortage strains. Especially in the US and the UK, the stressed labour market incited wage increases, which also contributed to the inflation development. In the euro zone, inflation reached 9.2 % at the end of the year compared with the same month of the previous year: in the US it was 6.5 % and 10.5 % in the UK.

[1] Calculated on the basis of 3-month Euribor, LIBOR or other comparable rates for other currencies
[2] Calculated on the basis of swaps in the respective currencies

Key rate developments in 2022[1)]



[1)] The upper level of the corridor for Fed key rates is shown in the chart.

The ongoing Covid-19 pandemic and the Russian war of aggression against Ukraine caused a turnaround in international monetary policy and increased uncertainty on the capital markets. This led to record levels of covered bond issues, underlining their importance as a crisis-proof instrument. After the first monetary policy adjustments in the course of the first three quarters of the year under review, covered bond yields rose sharply, remaining on a high level in the fourth quarter.

Regulatory environment

The environment in which banks are operating continues to be defined by highly dynamic regulatory requirements, as well as by changes in banking supervision. This includes, in particular, implementation of the final draft of the Basel III framework into EU law (known as "Basel IV"), which was resolved by the Basel Committee (BCBS). The EU Commission submitted proposals on this on 27 October 2021, which are now to be finalised as part of the trilogue procedure. The proposed first-time application of the new regulation is 1 January 2025 – two years later than initially planned by the BCBS.

The first draft of the seventh MaRisk amendment was published in September 2022. It focuses on implementing the EBA guidelines on loan origination and monitoring, new requirements for banks' proprietary property business, and the management of sustainability risks. It is expected that the seventh MaRisk amendment is to be implemented by the end of 2023.

Moreover, both national and European regulators are imposing various new requirements – including in connection with IT/information security risks, or regarding the prevention of money laundering/terrorist financing and tax evasion. Furthermore, politicians and banking supervisors deem it necessary to establish sustainability more strongly with society, and as a regulatory requirement within the economy. To this end, a standard taxonomy was introduced in the EU, which provides the basis for the classification of economic activities with regard to sustainability targets. The taxonomy forms the basis for a large number of disclosure obligations for financial and non-financial entities. Initial minor disclosure requirements for environmental, social and governance ("ESG") matters were applicable as of 31 December 2021, with the scope increasing over time. Furthermore, the ECB conducted its first climate stress test in 2022. The requirement introduced for the first time under CRR II for large listed institutions to include qualitative and quantitative information on ESG risks in the regulatory disclosure report entered into effect on 31 December 2022.

The ECB's Supervisory Review and Evaluation Process (SREP) ensures a common approach on the supervisory review of banks, within the framework of Pillar 2. The SREP is built around a business model analysis, an assessment of governance, as well as of the capital and liquidity risks. The results of the individual areas are aggregated in a score value, from which the ECB derives supervisory measures on holding additional capital and/or additional liquidity buffers.

Sector-specific and business developments

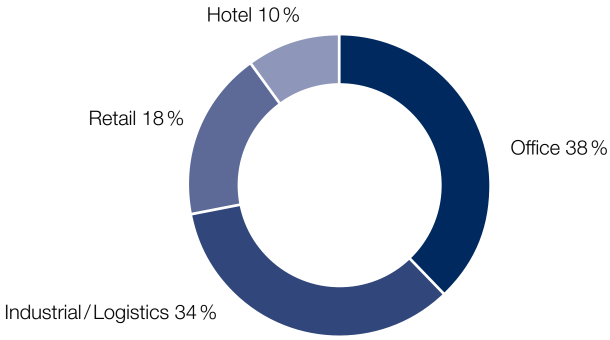
Structured Property Financing segment

Economic and monetary developments are also being reflected in the commercial property markets. Rising interest rates increased financing costs for commercial property, sometimes considerably, and slowed down transaction activity relative to the previous year. Uncertainty among market participants due to the overall economic gloom and risk also depressed the transaction markets. Price expectations of sellers and buyers diverged and increasingly fewer properties were transferred, which resulted in a decline in global transaction volume compared to the previous year. In North America, volume was above the previous year's level up to and including the third quarter, followed by a weak fourth quarter, ending the year around 12 % lower than for the full year 2022. In the other regions, momentum started to slow as early as in the third quarter. Transaction volumes in Europe and the Asia/Pacific region fell by around 17 % and around 29 % respectively year-on-year.

In all regions, almost every property type recorded a decline in transaction volume compared to 2021, except for retail property in North America, where higher volumes were seen. The downturn in office properties affected all regions by roughly the same amount, and logistics properties saw a global annual decline in volume for the first time since 2016.

Lenders focused their interest on housing and logistics properties, food stores, as well as on office properties in preferred locations. Properties which meet sustainability criteria, such as energy-efficient management, saw a rise in demand. During the first half of the year, commercial property continued to be supported by a recovery from the Covid-19 pandemic. The second half of the year, however, saw increasing economic and monetary uncertainty: For example, construction phases were delayed since energy and construction materials were subject to price hikes and supply bottlenecks. On the back of rising interest rates linked to inflation, financing costs for newly-financed commercial properties increased in many markets since the start of 2022. Similarly, transaction yields have also moved higher, depending on the market and type of property. At the same time, loan-to-value ratios on the financing markets fell moderately or remained stable. Strong investor interest in the logistics sector ensured that the margins for office and logistics properties not only converged, but that in some markets logistics financings were more competitively priced.

Share of transaction volume observed worldwide in 2022
%



In an environment defined by uncertainty, Aareal Bank generated new business[1] of € 8.9 billion (2021: € 8.5 billion), which was above the communicated target corridor of € 7 billion to € 8 billion. This was mainly attributable to a higher than expected volume of renewals. The share of newly-originated loans was 67 % (2021: 63 %) or € 6.0 billion (2021: € 5.4 billion). Renewals amounted

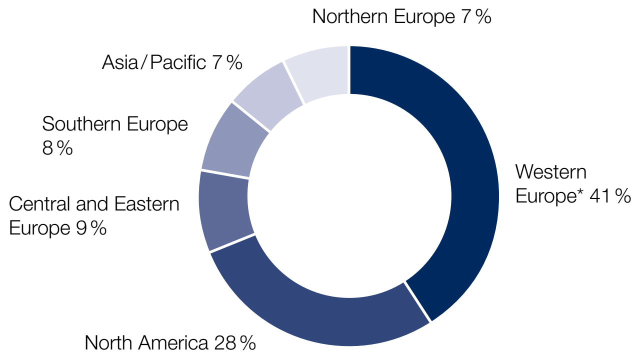
[1] New business, excluding private client business and former WestImmo's local authority lending business

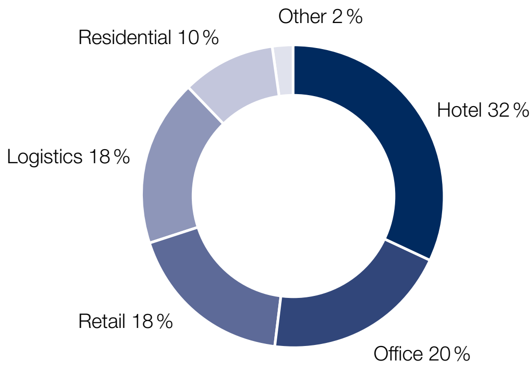
to € 2.9 billion (2021: € 3.1 billion). Green financings of approximately € 1.0 billion were concluded for the full year. The volume of green financings therefore increased by around € 1.8 billion to a total of € 2.2 billion, as some existing clients also issued the required undertaking and related certificates for the first time. These green loans meet the high energy efficiency requirements of the "Aareal Green Finance Framework" and the client undertakes to meet these requirements throughout the term of the loan. The criteria for classification as a green building comprise the EU taxonomy criteria, an above-average sustainability rating by recognised rating agencies or compliance with conservative energy efficiency criteria. All in all, Aareal Bank Group's property financing portfolio had grown to € 30.9 billion by the end of 2022.

At 65 % (2021: 66 %), Europe accounted for the largest share of new business, followed by North America with 28 % (2021: 28 %) and the Asia/Pacific region with 7 % (2021: 6 %).[1)]

New business[2)] 2022

by regions | by type of property (%)





* Incl. Germany

2) New business, excluding private client business and former WestImmo's local authority lending business

With a share of 32 %, hotel properties accounted for the largest share in new business in terms of property type (2021: 26 %), followed by office property with 20 % (2021: 30 %), ahead of retail property with 18 % (2021: 22 %) and logistics property with 18 % (2021: 19 %). Residential property represented 10% of the portfolio (2021: 3 %), while 2 % was attributable to other property types (2021: 0 %). "Other property types" exclusively referred to life science properties containing office space: these are heavily sought after by investors.

Europe

Transaction volumes declined by around 17 % in Europe. Declining activity was observed in most European countries, and was particularly pronounced in Sweden, Germany and the UK. In France, however, volumes remained constant, while Italy and Spain even recorded a year-on-year increase. All property types were affected by the decline across Europe as a whole, with retail property posting the smallest volume decrease. In the case of hotel properties, transaction volumes have not yet returned to the levels seen before the Covid-19 pandemic, despite a significant increase in international and domestic travel. Investor positions changed marginally compared to the previous year. Cross-border and institutional investors accounted for the majority on the buy side in 2022, while private investors and REIT structures tended to be on the sell side.

1) New business is allocated to the individual regions on the basis of the location of the property used as collateral. For exposures not collateralised by property, allocation is based on the borrower's country of domicile.

As for office properties, both average rents in the prime segment, and average rents for the overall market, increased slightly over the course of 2022. While some sub-markets, e.g. central locations in Amsterdam, Milan and Paris, also saw higher rent increases, rents in Frankfurt and Helsinki virtually remained unchanged. Retail property rents remained stable in the vast majority of markets, except for London and Milan where high-street rents increased, and Barcelona and Madrid where shopping centre rents declined. Rents for logistics properties benefited from persistent strong demand and historically low vacancy rates in the entire segment, continuing the positive development of the last few years.

While prime yields for office properties changed only slightly in the first half of the year, they rose in the second half of the year in line with the general increase in interest rates and financing costs on a European average. This picture was observed in almost all major European cities. The German and Dutch markets recorded the strongest rises, with yields in secondary locations generally increasing more strongly. As for logistics properties, the long-term trend of falling yields has reversed since the second quarter: this development was particularly pronounced on the British, French and Dutch markets. Looking at retail properties, prime yields for both shopping centres and high-street properties rose on a European average, which was essentially reflected in secondary locations as well. As with office and logistics properties, the yield increases only became more and more apparent during the second half of the year.

In 2022, the ongoing recovery of global travel from the Covid-19 pandemic was clearly felt in the hospitality and hotel sector. Domestic travel has seen the strongest recovery so far, whilst longer distance tourism recovered more slowly, probably due to travellers' greater familiarity with closer travel destinations and the higher sense of security that comes with it. In this environment, occupancy and revenue per available room in European hotels increased year-on-year on average, even though pre-crisis levels had not been reached for all markets by the end of the year.

The Bank originated new business of € 5.8 billion (2021: € 5.6 billion) in Europe during the year under review. As in previous years, at around € 3.7 billion (2021: € 3.9 billion), Western Europe accounted for the largest share of this. This was followed by Central and Eastern Europe, where new business of € 0.8 billion (2021: € 1.0 billion) was generated mainly in Poland, € 0.7 billion (2021: € 0.5 billion) in Southern Europe and € 0.6 billion (2021: € 0.2 billion) in Northern Europe.

North America

Transaction volumes in North America decreased by around 12% in 2022 compared with the previous year. Despite this decline, volumes were still above the long-term average and did not fall as much as in other regions. Except for the last quarter, the number of transactions was higher than the long-term average, following reduced activity at the peak of the Covid-19 pandemic. Cross-border and institutional investors were on the buy side for the most part, while REIT structures and private investors were predominantly sellers.

Average rents offered for prime and secondary office properties in US metropolitan areas remained stable in 2022, which was also true for relevant individual markets such as New York or Chicago. In San Francisco, rents declined slightly compared with the previous year. In contrast, the average shopping mall rents in the US were up on a national average. The rise was most pronounced in Atlanta, Chicago and Dallas, whilst rent levels in New York remained stable and fell in San Francisco. Rents for logistics properties again rose significantly, averaging around 12% nationwide. An increase was reported in all the important individual markets.

Yields on prime and secondary office properties remained at almost unchanged levels in 2022 and have fallen slightly on average in the main metropolitan areas, owing to the fundamental availability of market liquidity and readiness to provide financing. Yields on retail properties declined slightly on a national average, but differences were observed here between metropolitan areas. For example, yields fell in Dallas, but remained stable in the Chicago and New York markets. In San Francisco, however, there was a slight year-on-year increase in the yield level. Logistics properties continued to see falling yields on average nationwide.

Hotels in North America saw an increase in occupancy and revenues over the course of the year. Occupancy ratios and revenues per available room in the luxury & upper upscale category, and also in the market as a whole, increased significantly on average in the US between January and December, driven not only by strong domestic tourism, but also by an increasing number of visitors from abroad. A complete recovery of international tourism can still take several years. In Canada, key hotel indicators developed even better in 2022.

In North America, new business of € 2.5 billion (2021: € 2.4 billion) was originated in 2022, most of which was attributable to the US.

Asia/Pacific region

Transaction volumes for commercial property in the Asia/Pacific region were roughly 29 % lower in 2022 than in the previous year, with sharp declines also seen in Australia (-24 %) and China (-40 %). The decline in momentum that began in the second quarter accelerated in the second half of the year, affecting all the key markets and sectors. Cross-border and institutional investors were on the buy side for the most part, whilst REIT structures and private investors were predominantly sellers.

Prime rents for logistics properties in the Australian metropolitan areas of Sydney, Perth and Melbourne continued to show a rising trend in 2022 compared to the previous year. Rents for retail properties developed differently across the Chinese metropolitan areas; they stagnated in Shanghai and Beijing and fell moderately in Tianjin.

Whilst the logistics property yields in Australia were still stable in the first half of the year compared to the previous year, yields started to rise in the second half of 2022. At year end, increases in the key Australian markets ranged between 40 and 60 basis points compared with the previous year. In contrast, yields for Chinese retail properties only saw a marginal increase.

Hotels in the Asia/Pacific region once again showed a recovery in 2022, sometimes remarkable, due to the easing of contact and travel restrictions in many countries. However, the pace of recovery across the region was mixed, and whilst domestic tourism recovered to pre-pandemic levels, international tourism continued to lag behind. Travel restrictions remained in place for some markets and for China this led to a decline in occupancy and revenues compared to the previous year. But overall, strong growth in occupancy rates across the entire region increased revenue per available room relative to 2021. The Maldives was among the destinations that recorded a significant increase in visitors. A total of 1.7 million tourists visited the island nation in 2022 compared with around 1.3 million in the previous year. In fact, visitor numbers were back to the pre-pandemic levels of 2019.

The Bank originated new business of € 0.6 billion in the Asia/Pacific region in 2022 (2021: € 0.5 billion), most of which was attributable to Australia.

Banking & Digital Solutions segment

The housing and commercial property sectors proved stable market segments, despite the fact that the year under review continued to be affected not only by the Covid-19 pandemic but also the war in Ukraine and the subsequent surge in energy costs and high inflation. These developments, combined with rising interest rates, have a direct impact on construction projects, making new construction measures and energy-efficient refurbishments more expensive. Moreover, conventional construction costs rose sharply.

Rising construction and purchase prices have the potential to increase demand pressure on rental stock, which is further driven by a significant influx of Ukrainian refugees. Furthermore, new residential building is lagging behind required numbers and policy expectations (400,000 new homes per year): even though around 380,000 new homes were approved for construction in 2021, the number of new builds fell for the first time, down 4.2 % to just over 290,000 compared with the previous year. In 2022, the number of housing completions is expected again not to exceed 320,000.

In 2022, new-build rents rose by 1.9 % in the municipal districts and by 1.2 % in rural districts. Year-on-year (compared with the fourth quarter of 2021), the increase in Germany amounted to 6.3 %. Rents for existing properties also rose by an average of 1.7 % in the first half of 2022.

Although housing and energy industry customers are confronted with significantly rising ancillary costs, whilst having to cope with reduced purchasing power, there have been no major rental defaults to date.

Over the course of the year under review, we have expanded our property-related offerings to include functional enhancements to existing products, in cooperation with our subsidiary Aareal First Financial Solutions. Our acquisition of payment solutions provider Collect Artificial Intelligence GmbH (CollectAI) for AI-based intelligent invoicing and dunning has also enabled us to expand the range of services we offer in the Banking & Digital Solutions segment, to include end-customer communication and AI-based solutions for interactive invoicing and intelligent dunning.

Favourable interest rate developments mean that we can now offer clients fixed-term deposits and deposits at notice again.

At present, more than 4,000 corporate clients throughout Germany are using our process-optimising products and banking services. The segment's volume of deposits averaged € 13.4 billion in the financial year 2022 (2021: € 12.0 billion), exceeding our original expectations. Net commission income of € 31 million increased as planned (2021: € 28 million). The interest rate turnaround initiated by the European Central Bank already contributed to an increase in consolidated operating profit in our BDS segment. We benefit from the trust our clients place in us, which is reflected in the high volume of deposits we receive as a result.

Aareon segment

Aareon is a technology provider for the European property industry and its partners. The company digitalises property management with user-oriented software solutions that simplify and automate processes, support sustainable and energy-efficient operations, and interconnect all process participants. Aareon pursues an international growth strategy with the aim of transforming Aareon into a "Rule of 40" SaaS company, with its combined EBITDA margin and revenue growth set to exceed 40% by 2025.

Hartmut Thomsen was appointed as the new CEO of Aareon AG with effect from 1 April 2022. Dr Ernesto Marinelli joined the Management Board on 1 July 2022 to assume the newly created Management Board function of Chief People Officer (CPO), along with Rumyana Trencheva, who succeeded Sabine Fischer as Chief Revenue Officer (CRO). The new members of the Management Board launched a number of important strategic initiatives during 2022, which will contribute to Aareon's growth strategy and increase profitability, as well as generating added value for clients. As part of its inorganic growth, Aareon acquired Momentum Software Group, a Swedish provider of SaaS property management and energy monitoring, in June 2022.

Aareon's revenue increased by 15% to € 308 million in the 2022 financial year (2021: € 269 million), in line with the forecast range of between € 305 million and € 325 million, in what is becoming an increasingly challenging environment. This was driven by the increase in sales of both digital solutions and ERP software. Adjusted EBITDA[1] amounted to € 75 million (2021: € 67 million), in line with the forecast range between € 73 million and € 78 million.

Aareon is well on its way to becoming a "Rule of 40" SaaS company. In 2022, combined revenue growth and adjusted EBITDA margin totalled 39% (2021: 29%), which is already close to the target level. The transformation process towards SaaS and subscription solutions continued to be on track (25% growth). SaaS makes cloud-based software more easily accessible to clients, thus increasing the share of recurring revenue compared to total sales to 74% (2021: 71%).

Revenue from ERP software solutions was significantly above the previous year's level. As part of the process to transform Aareon to a SaaS company, the SaaS campaign for the new product generation Wodis Yuneo was continued in the Germany/Austria/Switzerland (DACH) region, while other process-oriented product packages were offered to meet clients' individual needs and simplify the offer structure for clients. As a result, sales of Wodis Yuneo/Wodis Sigma, RELion, the ERP system for the commercial property sector, and SAP® solutions, including Blue Eagle, markedly increased year-on-year. immotion®, the ERP solution from GAP Group, which was acquired during the year under review, made a significant contribution to revenue.

Tobias (Netherlands), Arthur (UK) and Twinq, the Dutch management software for residential owners' associations, were the main contributors to the success of the international ERP business. Momentum, the SaaS property management system, also made a contribution to revenue. Revenue from Xpand, the existing ERP solution in the Scandinavian market, PremHabitat, the French ERP system, REMS, the ERP system for the commercial property industry in the Netherlands, and QL, the UK ERP system featuring the new QL Yuneo product generation, was slightly down on the previous year, whilst revenue from the French ERP system Portalimmo was slightly up compared to 2021.

BauSecura's insurance business in the DACH region developed favourably. Revenue generated by Aareon Cloud Services in the DACH region and in the Netherlands remained roughly in line with the previous year.

[1] Earnings before interest, taxes, depreciation and amortisation before new products, Value Creation Programme (VCP), ventures, M&A activities and non-recurring effects

In terms of digital solutions, demand for BRM (Building Relationship Management) solutions was stronger than in the previous year; AiBATROS®/epiqr®, which meets the requirements for sustainable portfolio management, was particularly popular in the DACH region. Abroad, notable sales contributions were made by British Tactile Ltd's ("Fixflo") BRM solution; Aareon acquired the company in 2021. Facilitor, the facility management solution, and Trace & Treasury, the financial and asset management solution, both in the Netherlands, also increased sales. Momentum Software Group's energy monitoring solution also boosted revenue.

Demand for Customer Relationship Management (CRM) solutions exceeded the previous year's level in nearly all markets. wohnungshelden, acquired in 2021, made a particularly positive revenue contribution in the DACH region. Supplier Relationship Management (SRM) solutions also performed well. In the DACH region, Mareon's service portal that connects craftsmen, and particularly those for occupant change management, contributed to revenue. Since 2021, occupant change management has been successfully used in combination with the CRM portal and app as an EED (Energy Efficiency Directive)-compliant solution for the property industry's obligations to provide information to its tenants. Revenue from Workforce Relationship Management (WRM) solutions also increased overall. Mobile solutions made a significant contribution here. In the Digital Office product group, revenue from Archiv kompakt for digital archiving was also clearly above the previous year.

Financial Position and Financial Performance

Financial performance

Group

Consolidated net income of Aareal Bank Group

€ mn	1 Jan – 31 Dec 2022	1 Jan – 31 Dec 2021
Net interest income	702	597
Loss allowance	192	133
Net commission income	277	245
Net derecognition gain or loss	1	23
Net gain or loss from financial instruments (fvpl)	26	-30
Net gain or loss from hedge accounting	-2	-5
Net gain or loss from investments accounted for using the equity method	-2	-2
Administrative expenses	571	528
Net other operating income/expenses	0	-12
Operating profit	**239**	**155**
Income taxes	86	87
Consolidated net income	**153**	**68**
Consolidated net income attributable to non-controlling interests	0	1
Consolidated net income attributable to shareholders of Aareal Bank AG	153	67

At € 239 million, consolidated operating profit for the 2022 financial year reached the upper end of the target range and was significantly higher than in the previous year (€ 155 million), reflecting strong operating performance.

Essentially, net interest income of € 702 million was significantly higher than in the previous year (€ 597 million), as expected, mainly due to a year-on-year increase in the credit portfolio and good margins because of first positive effects from higher market interest rates on the deposit-taking business and an improved funding mix.

Loss allowance totalled € 192 million (2021: € 133 million). This included an addition to loss allowance of € 134 million for the Bank's exposure to Russia which is being run down, determined in line with IFRS 9 based on various probability-weighted scenarios: the highest probability was attributed to the scenario of a sale of receivables, the second-highest probability to the scenario of a total default. A third scenario assumed the renewal and repayment of receivables. This brings coverage of the outstanding exposure (around € 213 million) to more than 60 %. The exposure could not be serviced due to the sanctions imposed in Russia (transfer risk), even though the borrower is willing and able to pay. The potential additional impact of the war in Ukraine and the economic consequences of the mutual sanctions imposed are very difficult to estimate at this point in time.

Furthermore, we moved a new LGD model for our commercial property finance portfolio (which complies with new EBA guidelines for rating procedures) into production as at the end of the first half of the year; this new model also serves as a basis for model-based Stage 1 and Stage 2 loss allowance. The model effect due to this conversion was approximately € 10 million. In addition, Aareal Bank has recognised a management overlay of approximately € 11 million for all property loans in Stage 1 and Stage 2, in order to account for macro-economic uncertainty affecting economic forecasts to an extraordinary extent, given the impact of the Ukraine war. Other than that, there were only few loan defaults, a reflection of the portfolio's high quality and clear recovery trends given the end of the pandemic.

Net commission income also increased, as expected, to € 277 million (2021: € 245 million) on the back of higher sales revenue at Aareon and in the Banking & Digital Solutions segment.

The net derecognition gain or loss amounted to € 1 million (2021: € 23 million). Following the decision of the Governing Council of the ECB on 27 October 2022 to adjust the terms of the current third series of the targeted longer-term refinancing operations (TLTRO 3), Aareal Bank already repaid € 4.3 billion of the € 5.3 billion TLTROs in November 2022. As a result of the unilateral change to the contractual terms, a valuation loss of € 24 million was realised with regard to the interest rate hedges entered into in this context, which offset the market-driven effects from early loan repayments.

Net gain or loss from financial instruments (fvpl) and net gain or loss from hedge accounting in the aggregate amount of € 24 million (2021: € -35 million) was mainly incurred from positive valuation effects resulting from market developments for currency and interest rate hedging derivatives, due to the strong market dynamics and coming from negative values at the beginning of 2022. To reduce volatility in the income statement brought about by these items, the Bank had concluded additional hedges in the first half of 2022.

Administrative expenses rose to € 571 million (2021: € 528 million) as a result of two factors: on the one hand, business expansion, especially at Aareon; on the other hand, transaction costs incurred by the successful completion of the voluntary public offer made by Atlantic BidCo. Excluding transaction costs, the Bank's costs remained stable. It achieved this by effectively pursuing its strategy of growth at low marginal costs. The cost/income ratio in the banking business (which, in line with common practice in the banking sector, does not include the bank levy and contributions to the deposit guarantee scheme) improved to 40 % and demonstrates Aareal Bank's high cost efficiency, even in a European comparison.

Net other operating income/expenses amounted to € 0 million (2021: € -12 million). It was burdened in the previous year by € 11 million in interest on tax back payments.

All in all, consolidated operating profit for the 2022 financial year totalled € 239 million, after € 155 million in 2021. Taking into consideration income taxes of € 86 million (2021: € 87 million) and non-controlling interest income of € 0 million, consolidated net income attributable to shareholders of Aareal Bank AG amounted to € 153 million (2021: € 67 million). Income taxes were burdened in the previous year by the consideration of new findings on the tax treatment of a legacy fund investment which was sold in 2012. Assuming the pro rata temporis accrual of net interest payments on the AT1 bond, consolidated net income allocated to ordinary shareholders stood at € 138 million (2021: € 53 million). Earnings per ordinary share (EpS) of € 2.32 (2021: € 0.89) and RoE after taxes of 5.0 % (2021: 2.1 %) were within the forecast.

Structured Property Financing segment

Segment result

€ mn	1 Jan-31 Dec 2022	1 Jan-31 Dec 2021
Net interest income	627	560
Loss allowance	192	133
Net commission income	6	8
Net derecognition gain or loss	1	23
Net gain or loss from financial instruments (fvpl)	26	-30
Net gain or loss from hedge accounting	-2	-5
Net gain or loss from investments accounted for using the equity method	0	0
Administrative expenses	260	256
Net other operating income/expenses	-6	-13
Operating profit	**200**	**154**
Income taxes	70	82
Segment result	**130**	**72**

As expected, net interest income of € 627 million in the segment was significantly higher than in the previous year (€ 560 million), mainly due to a year-on-year increase in the credit portfolio, good margins, and an improved funding mix.

Loss allowance totalled € 192 million (2021: € 133 million). This included an addition to loss allowance of € 134 million for the Bank's exposure to Russia which is being run down, determined in line with IFRS 9 based on various probability-weighted scenarios: the highest probability was attributed to the scenario of a sale of receivables, the second-highest probability to the scenario of a total default. A third scenario assumed the renewal and repayment of receivables. This brings coverage of the outstanding exposure (€ 213 million) to more than 60 %. The exposure could not be serviced due to the sanctions imposed in Russia (transfer risk), even though the borrower is willing and able to pay. The potential additional impact of the war in Ukraine and the economic consequences of the mutual sanctions imposed are very difficult to estimate at this point in time.

Furthermore, we moved a new LGD model for our commercial property finance portfolio (which complies with new EBA guidelines for rating procedures) into production as at the end of the first half of the year; this new model also serves as a basis for model-based Stage 1 and Stage 2 loss allowance. The model effect due to this conversion was approximately € 10 million. In addition, Aareal Bank has recognised a management overlay of approximately € 11 million for all property loans in Stage 1 and Stage 2, in order to account for macro-economic uncertainty affecting economic forecasts to an extraordinary extent, given the impact of the Ukraine war. Other than that, there were only few loan defaults, a reflection of the portfolio's high quality and clear recovery trends given the end of the pandemic.

The net derecognition gain or loss amounted to € 1 million (2021: € 23 million). Following the decision of the Governing Council of the ECB on 27 October 2022 to adjust the terms of the current third series of the targeted longer-term refinancing operations (TLTRO 3), Aareal Bank already repaid € 4.3 billion of the € 5.3 billion TLTROs in November 2022. As a result of the unilateral change to the contractual terms, a valuation loss of € 24 million was realised with regard to the interest rate hedges entered into in this context, which offset the market-driven effects from early loan repayments.

Net gain or loss from financial instruments (fvpl) and net gain or loss from hedge accounting in the aggregate amount of € 24 million (2021: € -35 million) was mainly incurred by positive valuation effects resulting from market developments for currency and interest rate hedging derivatives, due to the strong market dynamics and coming from negative initial values at the beginning of 2022. To reduce volatility in the income statement brought about by these items, the Bank had concluded additional hedges in the first half of 2022.

Administrative expenses rose to € 260 million (2021: € 256 million), exclusively attributable to transaction costs incurred by the successful completion of the voluntary public offer made by Atlantic BidCo.

Net other operating income/expenses of € -6 million (2021: € -13 million) resulted largely from the devaluation of property held by the Bank. It was burdened in the previous year by € 11 million in interest on tax back payments.

Overall, operating profit for the Structured Property Financing segment was € 200 million (2021: € 154 million). Taking into consideration income taxes of € 70 million (2021: € 82 million), the segment result amounted to € 130 million (2021: € 72 million). Income taxes were burdened in the previous year by the consideration of new findings on the tax treatment of a legacy fund investment which was sold in 2012.

Banking & Digital Solutions segment

Segment result

€ mn	1 Jan-31 Dec 2022	1 Jan-31 Dec 2021
Net interest income	92	43
Loss allowance	0	0
Net commission income	31	28
Administrative expenses	79	73
Net other operating income/expenses	-1	-1
Operating profit	**42**	**-4**
Income taxes	14	-1
Segment result	**28**	**-3**

Net interest income in the Banking & Digital Solutions segment of € 92 million was significantly higher than in the previous year (€ 43 million), because of first positive effects from higher market interest rates on the deposit-taking business.

Net commission income of € 31 million increased as planned (2021: € 28 million).

Administrative expenses increased to € 79 million (2021: € 73 million) – due to, among other things, the acquisition of CollectAI, which will lead to a business expansion in the future.

Overall, segment operating profit was € 42 million (2021: € -4 million). Taking income taxes into consideration, the segment result for the first half of the year amounted to € 28 million (2021: € -3 million).

Aareon segment

Segment result

€ mn	1 Jan-31 Dec 2022	1 Jan-31 Dec 2021
Net interest income	-17	-6
Loss allowance	0	0
Net commission income	252	221
Net gain or loss from financial instruments (fvpl)	0	–
Net gain or loss from investments accounted for using the equity method	-1	-1
Administrative expenses	244	211
Net other operating income/expenses	7	2
Operating profit	**-3**	**5**
Income taxes	2	6
Segment result	**-5**	**-1**

Net interest income in the Aareon segment amounted to € -17 million, reflecting partially debt-financed M&A activities (2021: € -6 million).

Net commission income increased to € 252 million (2021: € 221 million), despite Aareon's transformation to a SaaS company. M&A transactions closed in the previous year also contributed to this rise.

Administrative expenses increased to € 244 million (2021: € 211 million), as expected, reflecting the business expansion as well as non-recurring effects.

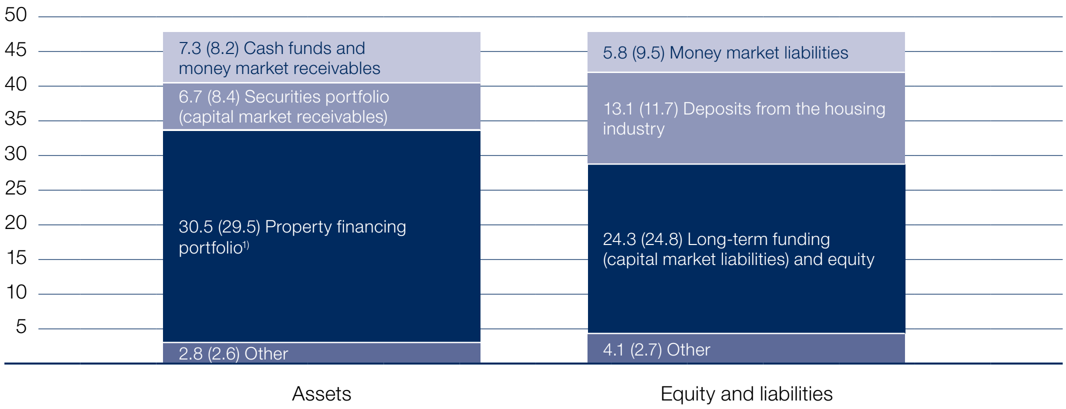
Overall, segment operating profit was € -3 million (2021: € 5 million). Taking income taxes into consideration, the segment result for the first half of the year amounted to € -5 million (2021: € -1 million).

Financial position – assets and liabilities

Despite repayment of € 4.3 billion in funds under Deutsche Bundesbank's Targeted Longer-Term Refinancing Operations (TLTRO) consolidated total assets of Aareal Bank Group declined only slightly, to € 47.3 billion as at 31 December 2022 (31 December 2021: € 48.7 billion). The increased property financing portfolio was funded also by the high volume of deposits from the housing industry.

Statement of financial position – structure as at 31 December 2022 (31 December 2021)

€ bn



1) Excluding € 0.2 billion in private client business (31 December 2021: € 0.3 billion) and € 0.2 billion in local authority lending business by the former Westdeutsche ImmobilienBank AG (WestImmo) (31 December 2021: € 0.3 billion), and excluding loss allowance

Cash reserve and money market receivables

The cash reserve and money market receivables position contains excess liquidity invested at short maturities. As at 31 December 2022, it comprised predominantly cash funds and deposits with central banks and money-market receivables from banks, and was only reduced slightly despite € 4.3 billion in TLTRO repayments.

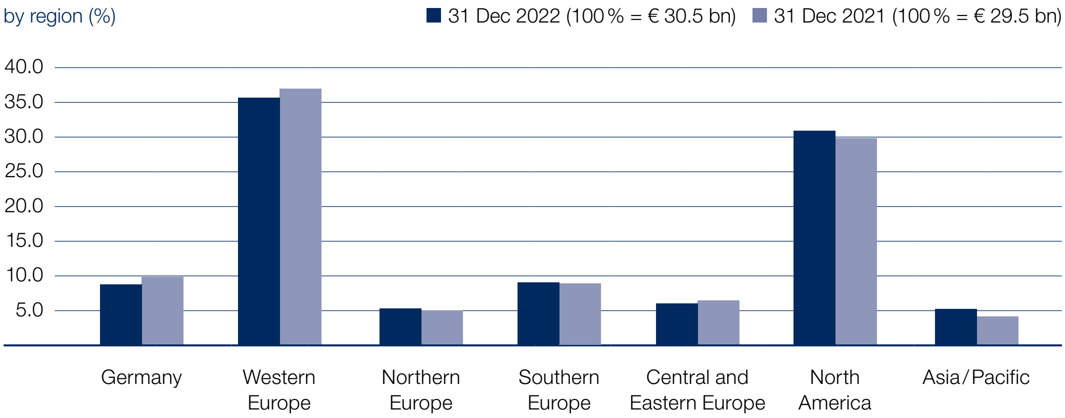
Property financing portfolio

As at 31 December 2022, the volume of Aareal Bank Group's property financing portfolio[1] stood at € 30.5 billion (2021: € 29.5 billion). Including the former WestImmo's private client business and local authority lending, it amounted to € 30.9 billion (2021: € 30.0 billion). Accordingly, Aareal Bank has virtually reached its original target portfolio size of around € 31 billion.

At the reporting date (31 December 2022), Aareal Bank Group's property financing portfolio was composed as shown in the charts, compared with year-end 2021.

Property financing volume[1] (amounts drawn)

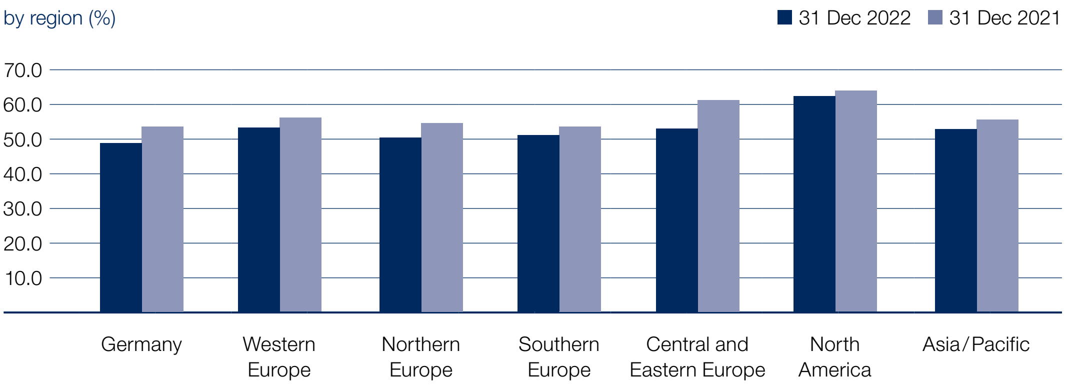
by region (%)



[1] Excluding private client business and former WestImmo's local authority lending business

Average LTV of property financing[1]

by region (%)



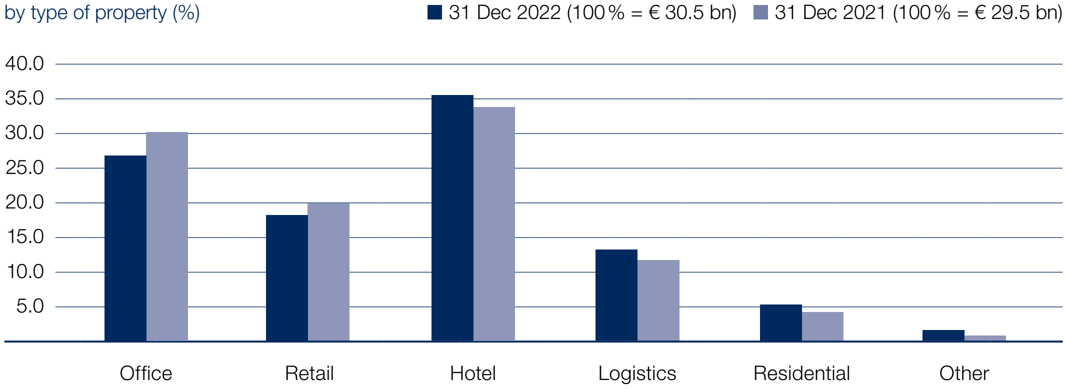
[1] Excluding private client business and former WestImmo's local authority lending business

Note that the loan-to-value ratios are calculated on the basis of drawdowns and market values, including supplementary collateral with sustainable value, excluding defaulted property financings.

[1] Excluding private client business and former WestImmo's local authority lending business

Property financing volume[1] (amounts drawn)

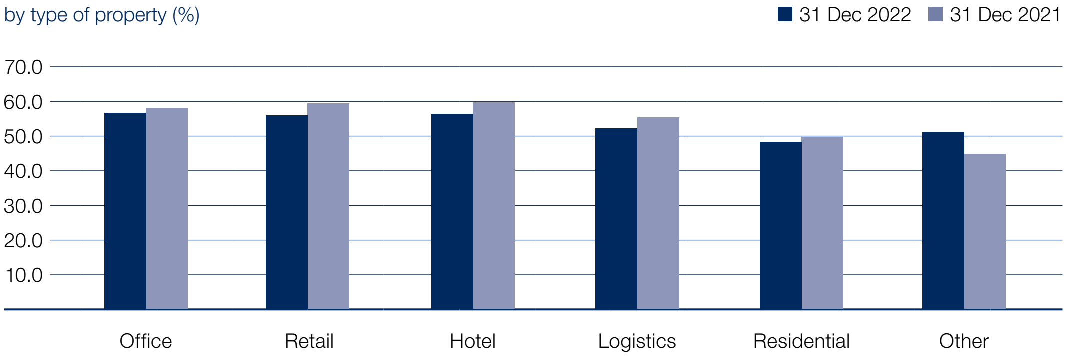
by type of property (%)



1) Excluding private client business and former WestImmo's local authority lending business

Average LTV of property financing[1]

by type of property (%)



1) Excluding private client business and former WestImmo's local authority lending business

Note that the loan-to-value ratios are calculated on the basis of drawdowns and market values, including supplementary collateral with sustainable value, excluding defaulted property financings.

Portfolio allocation by region and continent did not change significantly during the period under review. Whilst the portfolio share of exposures in Asia and North America rose by about 1.2 percentage points, it was down by around 1.1 percentage points for Germany, and by around 1.2 percentage points for Western Europe, while remaining relatively stable for all other regions.

The share of hotel property increased by 1.7 percentage points and the share of logistics property by 1.5 percentage points compared to year-end. The share of office property declined by 3.4 percentage points, while the retail property share was 1.7 percentage points lower. The share of residential property, as well as other financings in the overall portfolio remained almost unchanged compared to year-end 2021.

All in all, the high degree of diversification by region and property type within the property financing portfolio was maintained during the period under review.

Treasury portfolio

In terms of its ratings structure, Aareal Bank's Treasury portfolio has a very high credit quality and liquidity. As part of the overall management of the Bank, it fulfils two major tasks: On the one hand, the bulk of the securities are held for the liquidity portfolio, which accounts for a major part of the liquidity reserve from both the economic and normative perspective of risk-bearing capacity.

In addition to the liquidity portfolio, part of the Treasury portfolio is also used as a collateral portfolio. We define this mainly as the securities and promissory note loans that are used as collateral for the two Pfandbrief programmes.

Key aspects taken into account for portfolio management are good credit quality and the related value stability, as well as a high degree of liquidity, depending on the intended use.

As at 31 December 2022, the total nominal volume of the Treasury portfolio[1] was € 6.7 billion (31 December 2021: € 7.4 billion), reduced by maturities and the sale of securities issued by public-sector entities.

The portfolio comprises the asset classes public-sector borrowers, covered bonds and bank bonds (financials), with the public-sector asset class accounting for the largest share of the portfolio (currently at around 83 %). The share of covered bonds was 16 %, while bank bonds account for a small share of 2 %.

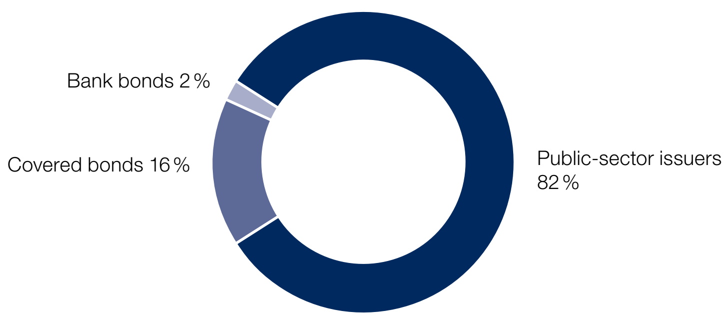
The high credit quality requirements are also reflected in the rating breakdown in the portfolio. 99.8 % of the portfolio has an investment grade rating[2], and 84.2 % of the positions have an AAA to AA- rating (2021: 83.3 %).

The portfolio currently comprises almost exclusively (92 %) securities denominated in euros, and its average remaining term on the reporting date was 5.9 years.

Given the high requirements as regards liquidity of the positions as part of their use for the liquidity portfolio, 88 % of the portfolio can be pledged as collateral with the ECB and 81 % fulfils the requirements for “High Quality Liquid Assets” (as defined in the Liquidity Coverage Ratio (LCR)).

Treasury portfolio as at 31 December 2022

% Total volume (nominal): € 6.7 bn



Financial position – liquidity

Money-market liabilities and deposits from the housing industry

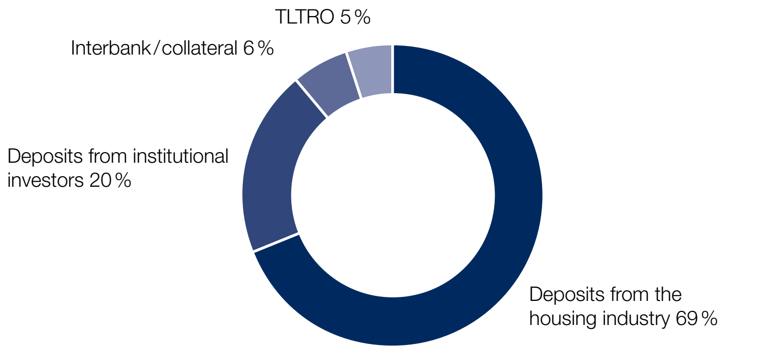
Generally, in addition to deposits from housing industry clients, Aareal Bank also uses deposits from institutional investors including retail deposits for short-term refinancing. To raise funds from retail deposits, it launched several cooperations in the year under review by way of a trust model, for example, with Raisin and Deutsche Bank. It also uses interbank and repo transactions to manage liquidity and cash positions.

[1] As at 31 December 2022, the securities portfolio was carried at € 6.7 billion (31 December 2021: € 8.4 billion).
[2] The rating details are based on the composite ratings.

As at 31 December 2022, Aareal Bank had € 13.1 billion at its disposal in deposits generated from the business with the housing industry (31 December 2021: € 11.7 billion). Money market liabilities, including targeted longer-term refinancing operations (TLTROs) of Deutsche Bundesbank, amounted to € 5.8 billion (31 December 2021: € 9.5 billion), after repayment of € 4.3 billion of the € 5.3 billion TLTRO funds in November 2022.

Money market funding mix as at 31 December 2022

% Total volume: € 18.9 bn



Long-term funding and equity

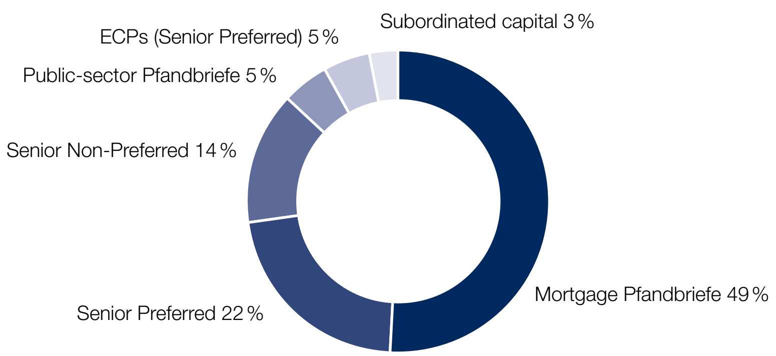
Funding structure

Aareal Bank Group continues to be solidly funded, a development visible by its major share of long-term funding. This encompasses registered and bearer Pfandbriefe, promissory note loans, medium-term notes, other bonds and subordinated issues. According to its legal characteristics, we recognise European Commercial Paper (ECP) as debt even though their maturity is usually less than one year. Subordinated capital includes subordinated liabilities and the Additional Tier 1 (AT1) bond.

As at 31 December 2022, the notional volume of the long-term refinancing portfolio was € 23.0 billion. Book values of the long-term refinancing portfolio totalled € 20.3 billion.

Capital market funding mix as at 31 December 2022

% Total volume (nominal): € 23.0 bn



Refinancing activities

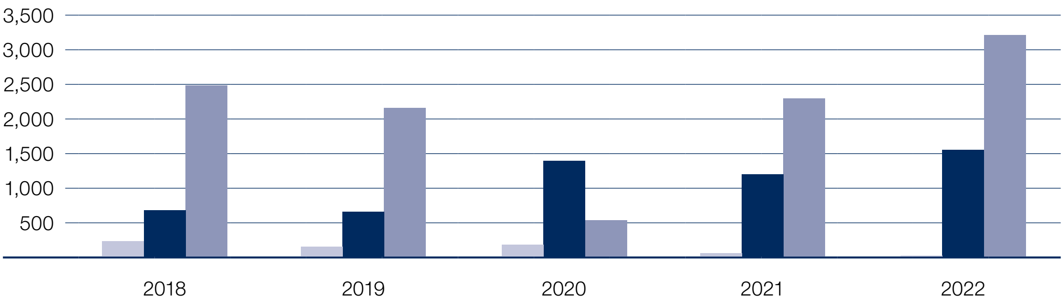
During the 2022 financial year, Aareal Bank Group was able to place € 4.7 billion on the capital markets. This included six benchmark transactions: two € 750 million Pfandbrief issues, one € 625 million Pfandbrief issue and one Pfandbrief issue in the amount of € 500 million. Aareal Bank Group raised a total of € 1.5 billion in senior unsecured funding, including two 'green' senior preferred issues[1] of € 500 million each.

Since we conduct our business activities in a range of foreign currencies, we have secured our foreign currency liquidity over the longer term by means of appropriate measures.

Issuing activities – 2018 to 2022

Issue volume, € mn

Senior Non-Preferred | Senior Preferred | Mortgage Pfandbriefe



Equity

Aareal Bank Group's total equity as disclosed in the statement of financial position amounted to € 3,258 million as at 31 December 2022 (31 December 2021: € 3,061 million), comprising € 300 million for the Additional Tier 1 (AT 1) bond. It increased due to the retention of the originally planned dividend and consolidated net income for 2022. In addition, the negative amount of the reserve from remeasurements of defined benefit plans markedly declined due to the strong increase in interest rates. Please also refer to the statement of changes in equity, and to our explanations in Note 60 of the consolidated financial statements.

At 19.3 %, the Common Equity Tier 1 ratio (CET1 ratio) – Basel IV (phase-in) – was markedly above the target value of 16 % in the year under review, as expected.

[1] The requirements for 'green' issues are set out in the Aareal Green Finance Framework.

Regulatory indicators[1)]

€ mn	31 Dec 2022	31 Dec 2021
Basel IV (phase-in)		
Common Equity Tier 1 (CET1) capital	2,468	2,327
Tier 1 (T1) capital	2,768	2,627
Total capital (TC)	3,065	3,021
%		
Common Equity Tier 1 ratio (CET1 ratio)	19.3	18.2
Tier 1 ratio (T1 ratio)	21.7	20.5
Total capital ratio (TC ratio)	24.0	23.6
Basel III		
Common Equity Tier 1 ratio (CET1 ratio)	19.3	22.2

1) Aareal Bank AG utilises the rules set out in section 2a of the KWG in conjunction with Article 7 of the CRR, pursuant to which regulatory indicators of own funds may only be determined at Group level. In this respect, the following disclosures relate to Aareal Bank Group.
31 December 2021: excluding originally proposed dividend of € 1.60 per share in 2022 for the financial year 2021, including the dividend of €1.10 per share not distributed in 2021 as well as the pro rata temporis accrual of net interest on the AT1 bond.
31 December 2022: including originally proposed dividend of € 1.60 per share in 2022 and pro rata temporis accrual of the net interest on the AT1 bond, excluding profits for 2022 under commercial law. There are no plans to distribute any dividends, in line with the strategy for 2023. The appropriation of profits is subject to approval by the Annual General Meeting.
The SREP recommendations concerning the NPL inventory and the ECB's NPL guidelines for the regulatory capital of NPLs and an additional voluntary and preventive capital deduction for regulatory uncertainties from ECB tests were taken into account.
Adjusted total risk exposure amount (as defined in Article 92 (3) CRR – RWAs), in accordance with applicable law as at 31 December 2022 (CRR II) and applying the partial regulation for the "output floor" in connection with commercial property lending and equity exposures, based on the European Commission's proposal dated 27 October 2021 for implementation of Basel IV. The adjusted risk-weighted exposure amount for commercial property lending and equity exposures is determined using the higher of (i) total RWAs calculated in accordance with CRR II currently in force, and (ii) the figure calculated in accordance with the revised CRSA (pursuant to CRR III), applying the transitional provisions for 2025 (50% output floor). This forms the basis for the development of Basel III ratios during the 2022 financial year, as shown; said "higher-of" comparison was not carried out in this respect as at 31 December 2021.

Regulatory capital[2)]

€ mn	31 Dec 2022	31 Dec 2021
Tier 1 (T1) capital		
Subscribed capital and capital reserves	900	900
Eligible retained earnings	1,985	1,804
Accumulated other comprehensive income	-71	-127
Amounts to be deducted from CET1 capital	-346	-250
Total Common Equity Tier 1 (CET1) capital	**2,468**	**2,327**
AT1 bond	300	300
Sum total of Additional Tier 1 (AT1) capital	**300**	**300**
Sum total of Tier 1 capital (T1)	**2,768**	**2,627**
Tier 2 (T2) capital		
Subordinated liabilities	248	346
Other	49	48
Sum total of Tier 2 capital (T2)	**297**	**394**
Total capital (TC)	**3,065**	**3,021**

2) 31 December 2021: excluding originally proposed dividend of € 1.60 per share in 2022 for the financial year 2021, including the dividend of € 1.10 per share not distributed in 2021 as well as the pro rata temporis accrual of net interest on the AT1 bond.
31 December 2022: including originally proposed dividend of € 1.60 per share in 2022 and pro rata temporis accrual of net interest on the AT1 bond, excluding profits for 2022 under commercial law. There are no plans to distribute any dividends in 2023, in line with the strategy. The appropriation of profits is subject to approval by the Annual General Meeting.
The SREP recommendations concerning the NPL inventory and the ECB's NPL guidelines for the regulatory capital of NPLs and an additional voluntary and preventive capital deduction for regulatory uncertainties from ECB tests were taken into account.

Analysis of risk-weighted assets (RWA)[1)]

€ mn	Risk-weighted assets (RWA) 31 Dec 2022	Minimum capital requirements Total 31 Dec 2022	Risk-weighted assets (RWA) 31 Dec 2021	Minimum capital requirements Total 31 Dec 2021
Credit risk (excluding counterparty credit risk)	10,063	805	11,305	904
Counterparty credit risk	384	31	381	31
Market risk[2)]	136	11	n/a	n/a
Operational risk	1,142	91	1,131	91
Additional RWA pursuant to Article 3 of the CRR	1,057	85	n/a	n/a
Total	**12,782**	**1,023**	**12,817**	**1,026**

1) 31 December 2022: Adjusted total risk exposure amount (as defined in Article 92 (3) CRR – RWAs), in accordance with applicable law as at 31 December 2022 (CRR II) and applying the partial regulation for the "output floor" in connection with commercial property lending and equity exposures, based on the European Commission's proposal dated 27 October 2021 for implementation of Basel IV. The adjusted risk-weighted exposure amount for commercial property lending and equity exposures is determined using the higher of (i) total RWAs calculated in accordance with CRR II currently in force, and (ii) the figure calculated in accordance with the revised CRSA (pursuant to CRR III), applying the transitional provisions for 2025 (50 % output floor).
2) 31 December 2021: there was no requirement to determine market risk since, under article 351 of the CRR, the sum total of the net foreign currency position in aggregate did not exceed 2 % of regulatory capital.

Our Employees

In view of the ongoing pandemic, numerous restrictions and safety measures continued to apply during the year under review. After the first lockdown, we introduced a rolling attendance system with varying attendance ratios, depending on infection rates. Implemented along-side a strict hygiene concept, this allowed both working at the office and mobile work during the year under review. Where appropriate and compatible with the local regulations, this system was implemented at our international locations correspondingly. After another year with SARS-CoV-2, we have further strengthened those ways of cooperation in an exceptional situation and mastered the crisis well thanks to the measures and decisions taken.

Employee data as at 31 December 2022[1)]

	31 Dec 2022	31 Dec 2021	Change
Number of employees at Aareal Bank Group	3,316	3,170	6.3 %
Years of service	11.1 years	10.9 years	0.2 years
Staff turnover rate	10.0 %	5.8 %	72.4 %

1) The overview of employee key indicators in the "Responsibility" section of the Company's website (www.aareal-bank.com/en/responsibility/reporting-on-our-progress/) provides more information, including the breakdown by gender, age and region.

Qualification and training programmes

Qualified and motivated employees make a decisive contribution to our Company's economic performance and are thus a key factor in its success – as well as a competitive advantage. For this purpose, Aareal Bank Group operates a human resources approach aimed at the further qualification of its employees. In line with the corporate strategy, the human resources policy is continuously developed in a targeted way. Aareal Bank Group supports employees in change processes, and promotes lifelong professional learning.

With the new training and continuing professional development approach Learning@Aareal, introduced in 2020, Aareal Bank supports employees through targeted offers that are focused on the Company and HR strategy, and Aareal Bank's Unique Selling Point (USP).

Learning@Aareal is integrated in Aareal Bank's strategic development approach, which uses a skills matrix as the basis for talent develop-ment at an organisational level. By linking the skills matrix, Learning@Aareal, clear selection procedures and management and expert career paths, we are facilitating the sustainable development of our employees, which is supplemented by the mandatory staff development dialogue for all managers and employees. In this dialogue between employees and their managers, individual development measures are agreed upon for a medium- to long-term horizon covering the years ahead so that employees will develop competencies and invest their talent in a forward-looking way.

The staff development dialogue builds on the employee's current tasks and, in the Company's and the employee's interests, promotes and enhances both soft skills and hard (professional, methodological and digital) skills. In this context, networking knowledge contributes to the permanent development of the organisation and guarantees that specialist knowledge is secured through sustainable succession planning.

This integrated qualification and professional development approach also helps to improve the balance between work and family life, which is one of Aareal Bank's core concerns. As a matter of consequence, 50 % of the training content is available in digital format, therefore facilitating permanent learning regardless of time or location.

In addition, a digital language learning portal helps to further build language and communications skills, within the scope of internation-alisation. This learning portal was expanded in 2021 and allows all employees throughout the Group to improve their language skills, anywhere (even at home) and at any time.

Another personnel development measure was to conduct the cross-mentoring programme again. Since demand was again strong, two parallel groups embarked upon the programme in 2022, which is designed to promote knowledge transfer between companies by facilitating the targeted exchange of staff.

Promoting the next generation

Attracting and growing talented young employees is a core element of Human Resources work at Aareal Bank Group. The specialist knowledge required in our business segments means that we have to invest continuously and in a targeted manner in training the next generation. For this reason, talent recruitment and training are integral parts of our sustainable succession planning and our structured knowledge management. In the year under review, we continued to expedite talent recruitment and training and were able to fill almost half of the vacancies with young professionals.

Aareal Bank's talent development programme comprises not only trainee programmes, but also two twin-track degree courses – business information systems and business administration – in cooperation with DHBW Mannheim and RheinMain University, plus an on-the-job Bachelor's degree in business administration offered in cooperation with the University of Applied Sciences in Mainz. In addition, Aareal Bank focuses on twin-track vocational training and offers apprenticeships as IT specialists, in cooperation with other companies in the region. It collaborates closely with universities in the region using a variety of initiatives that are constantly being expanded. In addition to the successful transfer of specialist knowledge and the gathering of new perspectives, the specific measures taken at Aareal Bank to empower young professionals have already reduced the average age.

Remuneration system

In addition to a fixed remuneration component, all permanent employees receive performance-based variable remuneration. The objective is to offer a remuneration level that is both appropriate and attractive to all Group employees.

Work-life balance

Aareal Bank Group places great importance on compatibility between career and family. This is emphasised by a broad range of dedicated support services such as partnerships with childcare institutions or service providers for the provision of private childcare, holiday programmes for employees' children, the availability of a parent-child workroom, flexible working policies, part-time positions and the option of mobile working for all employees. Another component of improving the work-life balance of the employees consists of services that make it easier to combine working life with the care of close relatives. This includes, among other things, the offer of counselling and support in the event of illness as well as nursing care for close relatives (available throughout Germany), as well as the option of participating in various training courses in the Bank for better compatibility between family, care and work.

Health

In order to verify the effectiveness and continuous improvement of occupational safety management, occupational safety committees meet quarterly. These include the respective company doctor and occupational safety specialists, in addition to various company officers.

In order to protect and promote the health of its employees in a targeted manner, Aareal Bank Group offers a comprehensive range of health-promoting measures in the areas of information, prophylaxis, exercise and ergonomics, nutrition, mental health and relaxation that are always based on employees' current needs. Despite the restrictions imposed by the pandemic in the reporting year, successful formats continued to be applied in the Bank. These included preventative, individual health consultations on various topics, consultations with the company doctor including screenings, flu vaccinations, skin screenings, colorectal cancer screening and ergonomics advice, and business yoga that was continued digitally.

Risk Report

Aareal Bank Group Risk Management

The ability to correctly assess risks, and to manage them in a targeted manner, is a core skill in banking. Accordingly, being able to control risks in all their relevant variations is a key factor for a bank's sustainable, commercial success. This economic motivation for a highly-developed risk management system is continuously increased by extensive regulatory requirements for risk management.

Aareal Bank regularly reviews the appropriateness and effectiveness of its corporate governance systems (including risk governance systems). The Risk Appetite Framework was updated during the second quarter of 2022, with pension risks defined as a separate type of risk, in order to enhance transparency.

The Bank's risk management also incorporates sustainability risks, i.e. ESG risks from the environmental, social and governance areas. Aareal Bank considers sustainability risks to include overarching risks or risk drivers that are influenced directly or indirectly by environmental or social issues, or by monitoring processes. All material sustainability risks were able to be classified as a form of existing financial and non-financial risks. In line with this, they are managed implicitly as part of the risk types under which they are classified. ESG risks are a component of the regular risk inventory process. Physical climate risk and transition risk in terms of investor behaviour that have an impact on credit, liquidity, property and reputational risk were identified as the major short-term risk factors. This is complemented by the material mid- to long-term risk factors of climate transition risk related to technology, the risk of regulatory breaches as well as governance factors such as fraud, sustainability management and data protection. In addition, there is client behaviour as an overarching factor. The system for monitoring and managing ESG risks is being continuously refined: suitable risk indicators and limits for climate and environmental risks are being developed for this purpose.

Risk management – scope of application and areas of responsibility

Aareal Bank AG, as the parent entity of the Group, has implemented extensive systems and procedures to monitor and manage the Group's risk exposure.

Uniform methods and procedures are deployed to monitor material risks generally associated with banking business across all entities of Aareal Bank Group. Specific risk monitoring methods have been developed and deployed to suit the relevant risk exposure at the subsidiaries. In addition, risk monitoring for these subsidiaries is carried out at Group level via the relevant control bodies of the respective entity, and equity investment risk controlling.

Overall responsibility for risk management and risk monitoring remains with the Management Board and – in its function of monitoring the Management Board – the Supervisory Board of Aareal Bank AG. The diagram below provides an overview of the responsibilities assigned to the respective organisational units.

Type of risk	Risk management	Risk monitoring
Overall responsibility: Management Board and Supervisory Board of Aareal Bank AG		
Loan loss risks		
Property Financing	Loan Markets & Syndication Credit Risk Credit Portfolio Management Credit Transaction Management Workout	Risk Controlling Second Line of Defence (NPL)
Treasury business	Treasury	Risk Controlling
Country risks	Treasury Credit Risk Credit Transaction Management	Risk Controlling
Interest rate risk in the banking book (IRRBB)	Treasury, Asset-Liability Committee	Risk Controlling Finance & Controlling
Market risks	Treasury, Asset-Liability Committee	Risk Controlling
Operational risks	Process owners	Non-Financial Risks
Investment risks	Group Strategy	Risk Controlling Finance & Controlling Controlling bodies
Property risks	Aareal Estate AG	Risk Controlling
Business and strategic risks	Group Strategy	Risk Controlling
Liquidity risks	Treasury	Risk Controlling
Process-independent monitoring: Internal Audit		

The Management Board formulates the business and risk strategies, as well as the so-called Risk Appetite Framework. For this purpose, 'risk appetite' means the maximum risk exposure where the Bank's continued existence is not threatened, even in the event of risks materialising. For individual business units (the "First Line of Defence"), the Risk Appetite Framework defines guidelines for the independent and responsible handling of risks.

The risk monitoring function (the "Second Line of Defence") regularly measures utilisation of risk limits, and reports on the risk situation. In this context, the Management Board is supported by the Risk Executive Committee (RiskExCo). The RiskExCo develops proposals for resolutions in line with delegated tasks, and promotes risk communications and a risk culture within the Bank. The risk management system was supplemented by a recovery plan, in line with regulatory requirements, which comprises the definition of threshold values for key indicators – both from an economic and a normative perspective. These are designed to ensure that any negative market developments having an impact upon our business model are identified at an early stage and corresponding action is taken in order to safeguard the sustained continuation of business operations. Risk Controlling is responsible for monitoring financial risks at portfolio level, whilst the Non-Financial Risks division exercises this function for non-financial risks. Both divisions report directly to the Group Chief Risk Officer (GCRO).

On top of this, Group Internal Audit (as the "Third Line of Defence") reviews the organisational structure and procedures, as well as risk processes – including the Risk Appetite Framework – and assesses their appropriateness. Moreover, internal processes provide for the involvement of the Compliance function whenever there are facts which are compliance-relevant.

In order to efficiently perform its control function, amongst other measures, the Supervisory Board has established a Risk Committee, whose responsibility includes the risk strategies as well as the management and monitoring of all material types of risk.

Strategies

The business policy set by the Management Board, and duly acknowledged by the Supervisory Board, provides the conceptual framework for Aareal Bank Group's risk management. The Risk Appetite Framework, which also outlines the key elements of the risk culture put in place, is defined consistently with the business strategy and building on the defined risk appetite. Taking the Risk Appetite Framework as a basis, and strictly considering the Bank's risk-bearing capacity, we have formulated detailed strategies for managing the material types of risk, in terms of capital as well as liquidity. Taken together, these represent the Group's risk strategy. These strategies are designed to ensure a professional and conscious management of risks. Accordingly, these strategies include general policies, to ensure a uniform understanding of risks across all parts of the Group. They also provide a cross-sectional, binding framework applicable to all divisions. The Bank has implemented adequate risk management and risk control processes to implement these strategies, and to safeguard the Bank's risk-bearing capacity.

The business strategy, the Risk Appetite Framework and the risk strategies are subject to review on an ongoing basis, and are updated if necessary. Besides the regular review (and, if appropriate, adjustment) of the business strategy (and consequently, of the Group risk strategy), the Bank's risk-bearing capacity and its material risk models are independently validated at least once a year. For this purpose, the appropriateness of risk measurement methods, processes, and risk limits is examined in particular. During the financial year under review, the strategies were adopted by the Management Board, duly noted, and approved by the Supervisory Board.

The Bank has defined escalation and decision-making processes to deal with limit breaches. Risk Controlling prepares timely and independent risk reports for the management.

Aareal Bank Group maintains a decentralised Internal Control System (ICS), with the respective control activities being outlined in the Written Set of Procedural Rules. These describe individual processes of divisions, subsidiaries, or other units. Internal controls may run upstream, downstream, or in parallel to workflows; this applies both to automatic control and monitoring functions as well as to the respective manual steps. Accordingly, the ICS comprises the entire universe of control activities; its objective is to ensure that qualitative and quantitative standards are adhered to (compliance with legal or regulatory requirements, with limits etc.).

Divisions and subsidiaries review the appropriateness and effectiveness of controls on an event-driven basis – in any case, at least once a year (Aareal Bank: at least half-yearly). The results are discussed with the corresponding units within the Second and Third Lines of Defence (Risk Controlling, Compliance and Internal Audit). Following a plausibility check carried out by a centralised ICS Coordination Unit, results are reported to the Management Board and the Supervisory Board. In the event of any irregularities or violations, depending on the severity of the event, the Management Board (as well as the Supervisory Board, if appropriate) must be notified without delay, so that adequate measures or audit activities can be initiated at an early stage.

Risk-bearing capacity and risk limits

The Bank's ability to carry and sustain risk (as determined within the framework of the Internal Capital Adequacy Assessment Process (ICAAP)) is a core determining factor governing the structure of its risk management system. To ensure its uninterrupted risk-bearing capacity, Aareal Bank Group has adopted a dual management approach comprising two complementary perspectives: the normative and the economic perspective.

The normative perspective aims to ensure Aareal Bank Group's ability to fulfil all of its regulatory requirements over a multi-year period. This perspective thus accounts for all material risks which may impact upon relevant regulatory indicators over the multi-year planning period.

The normative ICAAP perspective is embedded into Aareal Bank Group's planning process, which – in particular – also includes capital planning. Group planning covers three planning years, it comprises both baseline and adverse scenarios. Results of Group planning are shown as a projected consolidated income statement for Aareal Bank Group. Planning also encompasses the balance sheet structure, as well as key regulatory indicators, plus additional internal management indicators.

Besides the planning process itself, intra-year computation adjustments to Aareal Bank Group's planning process also included the ongoing monitoring of management indicators as well as checking whether limits in the normative perspective were being complied with. Management indicators in the normative perspective (which are being monitored, and for which limits have been set) comprise various regulatory ratios.

We are using the ICAAP economic perspective, whose purpose is to safeguard Aareal Bank Group's economic substance and thus, in particular, to protect creditors against economic losses. The procedures and methods are part of the Supervisory Review and Evaluation Process (SREP) and are applied in order to identify and quantify potential economic losses, and to determine the required capital backing.

The purpose of internal capital is to serve as a risk-bearing component under the economic perspective. Within Aareal Bank Group, the current regulatory Common Equity Tier 1 (CET1) capital forms the basis for determining economic aggregate risk cover. The Bank ceased adding Additional Tier 1 (AT1) capital to internal capital in April 2022. Tier 2 capital, as well as projected results to be incurred during the risk analysis horizon, are not taken into account.

Moreover, the value-oriented approach adopted under the economic perspective requires suitable adjustments to be made to regulatory Tier 1 capital, in order to bring aggregate risk cover into line with the economic assessment. Specifically, this may entail adjustments regarding conservative valuation, hidden encumbrances, or a management buffer. Starting in 2022, the management buffer has also included adjustments for potential climate risks as determined within the scope of our Group-wide ESG strategy.

Aareal Bank Group consistently applies a period of 250 trading days as a risk analysis horizon, as well as for the holding period as part of risk models under the economic perspective. To the extent that risks are measured on the basis of quantitative risk models, a uniform observation period of at least 250 trading days (or at least one year) is applied to the risk parameters used. The appropriateness of model assumptions is verified within the scope of independent validation of the corresponding risk models and parameters.

Looking at correlation effects between material types of risk within the framework of the economic ICAAP perspective, Aareal Bank Group has prudently opted for aggregation of risk levels; accordingly, no risk-mitigating correlation effects are being taken into account. Where we measure risks on the basis of quantitative risk models for the purposes of calculating risk-bearing capacity, these are based on a confidence interval of 99.9 %.

Limits for specific risk types are determined in such a manner that aggregate limits do not exceed economic aggregate risk cover, less a risk buffer designed to cover risks not explicitly covered by limits, and to also absorb other fluctuations of internal capital over time. Individual limits are set on the basis of existing risk exposures and historical levels of potential risks, and to an extent that is in line with the Bank's business and risk strategy. Specific limits have been set in a way that each limit is sufficient for utilisation in line with planned business development, as well as for common market fluctuations.

A detailed monthly report provides information regarding the utilisation of individual limits for the material types of risk, as well as on the overall limit utilisation. These are being monitored as part of daily reporting. No limit breaches at the aggregate risk level were detected during the period under review. The observed increase in market volatility in connection with the war in Ukraine led to 'amber' thresholds (early warning triggers) for individual risk categories being exceeded. These could be resolved through risk-mitigating measures without undue delay.

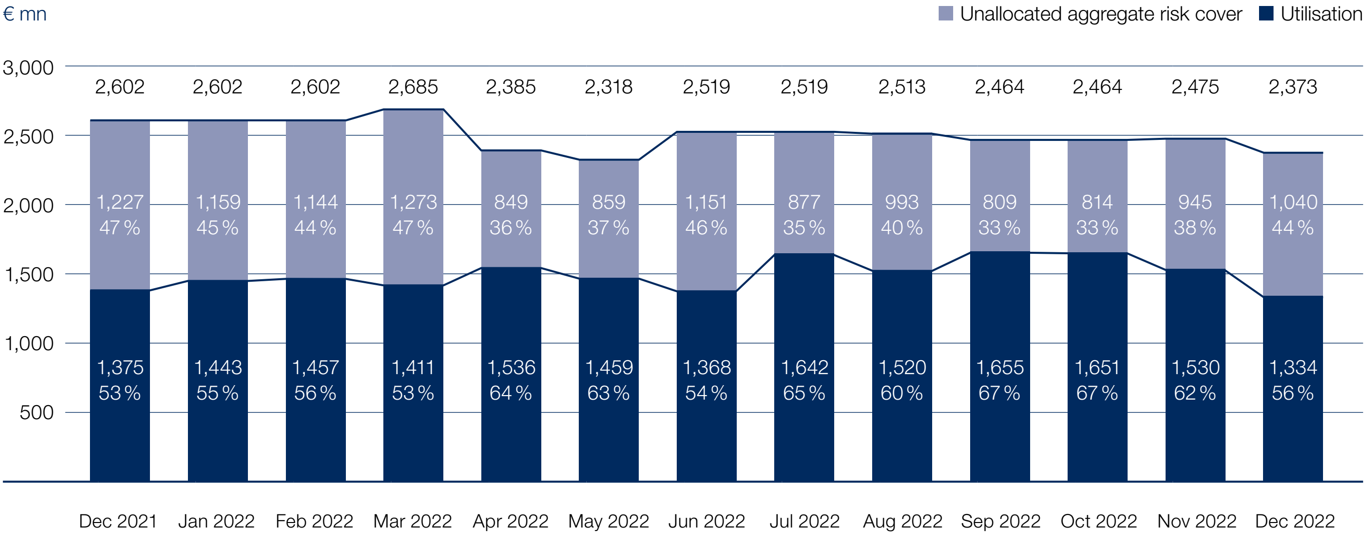
Risk-bearing capacity of Aareal Bank Group (ICAAP – economic perspective)

€ mn	31 Dec 2022	31 Dec 2021
Common Equity Tier 1 capital in accordance with Basel III[1]	2,468	2,622
Economic adjustments	-95	-20
Aggregate risk cover	**2,373**	**2,602**
Utilisation of aggregate risk cover		
Loan loss risks	467	574
Interest rate risk in the banking book (IRRBB)	86	136
Pension risks[2]	72	n/a
Market risks	406	373
Operational risks	91	93
Investment risks	75	62
Property risks	71	79
Business and strategic risks	66	58
Total utilisation	**1,334**	**1,375**
Utilisation (% of aggregate risk cover)	**56 %**	**53 %**

[1] T1 was still used in 2021
[2] In 2021, pension risks were included as part of interest rate risk in the banking book.

Utilisation of aggregate risk cover during the course of 2022

€ mn



Since risk cover potential is an inadequate measure to assess the risk-bearing capacity in terms of monitoring the Bank's ability to meet its payment obligations (liquidity risk in the narrower sense), we have defined special tools within the framework of the Internal Liquidity Adequacy Assessment Process (ILAAP) for managing and monitoring this type of risk. These tools are described in detail in the section "Liquidity risks".

Stress testing

Within the scope of ICAAP and ILAAP, scenario analyses are carried out in all perspectives, as a core element of our risk management system. This involves conducting stress tests for all material risks, using both historical parameters as well as hypothetical stress testing scenarios. To also be able to assess cross-relationships between the various types of risk, we have defined multi-factor stress scenarios, so-called 'global' stress tests. For instance, the impact of the crisis affecting financial markets and the economy, which broke out in 2007, on individual types of risk and aggregate risk is analysed within the scope of a historical scenario. In the hypothetical scenario, current potential developments are derived from factors such as political developments, and are combined with significant macro-economic deterioration. The stress testing methodology implemented also takes into account the impact of any risk concentrations. Stress scenarios are analysed both from an economic and a normative perspective, with the respective cross-relationships being taken into consideration – meaning that any economic risks which may materialise (from a normative view) over the analysis period being incorporated in the normative perspective, unless they are sufficiently covered already. ESG risks were integrated into the stress testing methodology in 2022. ESG-related stress test calculations comprise a scenario depicting climate change, which is being supplemented by a scenario on change in society.

The Management Board and the Supervisory Board are informed of the results issued by the stress analyses on a quarterly basis.

Lending business

Division of functions and voting

Aareal Bank Group's structural organisation and business processes consider regulatory requirements regarding the organisational structure and procedures in the credit business.

Processes in the credit business are designed to consistently respect the clear functional division of Sales units ("Markt") and Credit Management ("Marktfolge"), up to and including senior management level. In addition, the Risk Controlling division, which is not involved in making lending decisions, is responsible for monitoring all material risks whilst ensuring an adequate and targeted risk reporting system at portfolio level.

Lending decisions regarding credit business classified as relevant for the Bank's risk exposure require two approving votes submitted by a Sales unit and a Credit Management unit. The Bank's Schedule of Powers clearly defines the relevant lending authorities within Sales units and Credit Management. Where authorised persons are unable to come to a unanimous lending decision, the loan involved cannot be approved, or must be presented to the next-highest decision-making level for a decision.

The RiskExCo, which has delegated authority to the Heads of Risk Controlling, Credit Transaction Management and Credit Portfolio Management (organisational units which are independent of Sales units), is responsible for the approval of counterparty, issuer, or country limits.

We have implemented and documented the clear separation of Sales and Credit Management processes across all relevant divisions.

Process requirements

The credit process comprises the credit approval and further processing phases, each governed by a control process. Credit exposures subject to increased risks involve supplementary processes for intensified handling, the handling of problem loans, and – if necessary – for recognising allowance for credit losses. The corresponding processing principles are laid down in the Bank's standardised rules and regulations. Important factors determining the counterparty credit risk of a credit exposure are identified and assessed on a regular basis, taking into account sector and (where appropriate) country risks. Critical issues regarding an exposure are highlighted, and analysed assuming different scenarios where appropriate.

Suitable risk classification procedures are applied to evaluate risks for lending decisions, as well as for regular or event-driven monitoring of exposures. This classification scheme is reviewed at least once a year; depending on the risk situations, the review cycle may be shortened significantly. Furthermore, the risk assessment results influence pricing.

The organisational guidelines contain provisions governing escalation procedures and further handling in the event of limit breaches, or of a deterioration in individual risk parameters. Measures involved may include the provision of extra collateral, or an impairment test.

Early risk detection procedures

The early identification of credit risk exposure, using individual or combined (early warning) criteria is a core element of our risk management approach.

In particular, the procedures applied for the early detection of risks serve the purpose of identifying borrowers or exposures where higher risks start emerging, at an early stage. For this purpose, we generally monitor individual exposures and the parties involved (such as borrowers or guarantors) regularly throughout the credit term, assessing quantitative and qualitative factors, using instruments such as periodic monitoring and internal ratings. The intensity of the ongoing assessments is based on the risk level and size of the exposure. The Group's risk management processes ensure that counterparty credit risk is assessed at least once a year.

Extensive IT resources are deployed to identify risk positions, and to monitor and assess risks. Overall, the existing set of tools and methods enables the Bank to adopt risk management measures, where required, at an early stage.

Actively managing client relationships is crucially important in this context: approaching clients in time to jointly develop a solution to any problems which may arise. Where necessary, we muster the support of experts from the independent restructuring and recovery functions.

Risk classification procedures

Aareal Bank employs risk classification procedures tailored to the requirements of the respective asset class for the initial, regular, or event-driven assessment of counterparty credit risk. Responsibility for development, quality assurance, and monitoring implementation of risk classification procedures, and for annual validation, lies with two separate divisions outside the Sales units which are independent from each other.

The ratings determined using internal risk classification procedures are an integral element of the Bank's approval, monitoring, and management processes.

Property financing business

The Bank employs a two-level risk classification procedure for large-sized commercial property finance exposures, specifically designed to match the requirements of this type of business.

In a first step, the client's probability of default (PD) is determined using a rating procedure. The method used in this context comprises two main components, a property rating and a corporate rating.

The relative impact of the two components on the rating result is determined by the structure of the exposure concerned. The client's current and future default probability is determined based on specific financial indicators, together with qualitative aspects and expert knowledge.

The second step involves calculating the loss given default (LGD). The LGD estimates the extent of the economic loss in the event of a borrower defaulting. In simple terms, this is the amount of the claim not covered by the proceeds from the realisation of collateral.

When evaluating collateral, haircuts are applied or recovery rates used, depending on the type of collateral involved and specific realisation factors. For financings of domestic properties, recovery rates are taken from a pool of data used across the Bank, whilst recovery rates for international properties are derived using statistical methods, given the low number of realisations.

In this context, PD and LGD procedures are also applied for accounting purposes, for determining model-based loss allowance. Concerning the scenario analyses to be taken into account when determining individual LGDs, we applied an updated scenario mix, going beyond the customary process. This probability-weighted scenario mix reflects the uncertainty of future developments and supplements our baseline scenario through the addition of divergent developments over an observation period of three years.

The expected loss (EL) in the event of default of an exposure is determined as the product of PD, LGD and EAD. As a risk parameter related to the financing, EL is used as an input factor for the tools used to manage the property financing business.

Financial institutions
Aareal Bank Group employs an internal rating procedure for financial institutions, which incorporates qualitative and quantitative factors as well as our client's group affiliation, to classify the risk exposure to banks, financial services providers, securities firms, public-sector development banks, and insurance companies. Financial institutions are assigned to a specific rating grade by way of assessing relevant financial indicators and taking into account expert knowledge.

Sovereign states and local authorities
In addition, Aareal Bank Group employs internal rating methods for sovereign borrowers and regional governments, local and other public-sector entities. In this context, rating grades are assigned using clearly defined risk factors, such as fiscal flexibility or the level of debt. The expert knowledge of our rating analysts is also taken into account for the rating.

In general, the risk classification procedures employed by the Bank are dynamic methods which are permanently adapted to changing risk structures and market conditions.

Trading activities

Functional separation
We have implemented a consistent functional separation between Sales units and Credit Management for the conclusion, settlement and monitoring of trading transactions, covering the entire processing chain.

On the Sales side, the processing chain comprises the Treasury division, whilst Credit Management tasks are carried out by the independent Credit Transaction Management and Risk Controlling divisions. Beyond this, Finance & Controlling and Audit are responsible for tasks not directly related to processes.

We have laid down organisational guidelines providing for binding definitions of roles and responsibilities along the processing chain; with clearly defined change processes.

The detailed assignment of responsibilities is outlined below.

Treasury is responsible for risk management and trading activities as defined by the Minimum Requirements for Risk Management ("MaRisk"). Treasury is also responsible for asset/liability management, and for managing the Bank's market and liquidity risk exposures. In addition, we have established an Asset-Liability Committee (ALCO), to develop strategies for the Bank's asset/liability management and proposals for their implementation. The ALCO, which comprises the CFO and CRO, and other members appointed by the Management Board, meets every two weeks.

Credit Transaction Management is responsible for controlling trading activities, confirming trades to counterparties, and for trade settlement. The division is also responsible for verifying that trades entered into are in line with prevailing market conditions. Legal performs the legal assessment of non-standard agreements, and of new standard/master agreements.

To assess counterparty credit risk in the trading business, a rating is prepared for all counterparties and issuers on a regular or event-driven basis. The rating is a key indicator used to determine the limit for the relevant counterparty or issuer.

The tasks of the Risk Controlling division comprise identifying, quantifying and monitoring market price, liquidity and counterparty credit risk exposure from trading activities, and the timely and independent risk reporting to senior management.

Process requirements
Processes are geared towards ensuring end-to-end risk management, from conclusion of the trade right through to monitoring portfolio risk. The monitoring and reporting function comprises deploying adequate risk measurement systems, deriving limit systems, and ensuring the transparency of Aareal Bank Group's overall risk exposure from trading activities, in terms of scope and structure.

Change processes (as defined in section AT 8 of the MaRisk) are consistently measured via Group-wide framework directives. Moreover, processes and systems are designed in a way that allows to incorporate new products into the risk monitoring system swiftly and adequately, in order to ensure the flexibility of the Sales units in their business activities.

A standardised process exists for the intensified handling of counterparties and issuers, and for dealing with problems. This process comprises identifying early warning indicators, applying them for the purposes of risk analysis, as well as determining further action to be taken. In the event of counterparty or issuer default, the RiskExCo will be involved in devising an action plan, in cooperation with the Bank's divisions involved.

Escalation and decision-making processes have been set out to deal with limit breaches.

Loan loss risks

Definition

Aareal Bank defines loan loss risk as the risk of losses being incurred due to (i) a deterioration in a business partner's credit quality (migration risk); (ii) a business partner defaulting on contractual obligations; (iii) collateral being impaired; or (iv) a risk arising upon realisation of collateral. Both credit business and trading activities may be subject to counterparty credit risk. Counterparty credit risk exposure from trading activities may refer to risk exposure vis-à-vis counterparties or issuers. Country risk is also defined as a form of counterparty credit risk.

Credit risk strategy

Based on the Bank's overall business strategy, Aareal Bank's credit risk strategy sets out all material aspects of the Group's credit risk management and policies. The credit risk strategy serves as a strategic guideline for dealing with each respective category of risk within Aareal Bank Group; it also provides a binding, overarching framework applicable to all divisions.

The credit risk strategy will be reviewed, at least once a year, as to its suitability regarding the Bank's risk-bearing capacity and its business environment; amendments will be made as necessary. In this context, we also incorporate ESG criteria to assess the properties' sustainable intrinsic value. The associated process is instigated by senior management, and implemented by Risk Controlling, which submits a proposal, which has been agreed upon with all divisions to senior management. The credit risk strategy adopted is subsequently discussed by the Supervisory Board.

Designed in principle for a medium-term horizon, the credit risk strategy is adapted when necessary to reflect material changes in the Group's credit risk and business policies, or in the Group's business environment.

Risk measurement and monitoring

Regulatory requirements are taken into account for the organisation of operations and workflows in the credit and trading businesses.

Processes in the credit and trading businesses are designed to consistently respect the clear functional division of Sales units ("Markt") and Credit Management ("Marktfolge"), up to and including senior management level. The independent Risk Controlling division is responsible for identifying, quantifying and monitoring all material risks at portfolio level, and for maintaining a targeted risk reporting system.

Aareal Bank employs different risk classification procedures tailored to the requirements of the respective type of business for the initial, regular, or event-driven assessment of counterparty credit risk. Forward-looking as well as macro-economic information is taken into consideration for risk classification procedures, and in the valuation of collateral. The respective procedures and parameters are subject to regular review and adjustment. Responsibility for development, quality assurance, and monitoring implementation of procedures, is outside the Sales units.

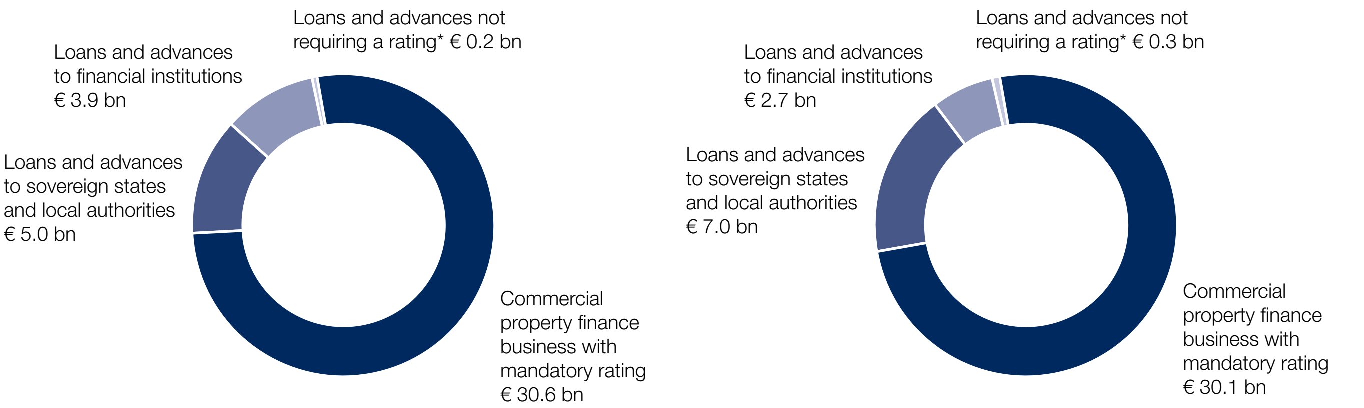
Against the background of the Covid-19 pandemic and the potential impact of the war in Ukraine, special attention is currently paid to macro-economic forecasts. In the context of this ongoing review, we also rely on projections published by the ECB, apart from those issued by our usual data providers. Yet estimation uncertainties are currently much higher than usual, as current events have provoked a situation unprecedented in recent history. Data and experience are therefore both lacking.

We use two different credit risk models to measure, control and monitor concentration and diversification effects on a portfolio level. These are supplemented by limits on individual and sub-portfolio level to facilitate operating management. Based on these instruments, the Bank's decision-makers are regularly informed of the performance and risk content of property financing exposures, and of business with financial institutions. The models in question allow the Bank to include, in particular, rating changes and correlation effects in the assessment of the risk concentrations.

Breakdown of on-balance sheet and off-balance sheet business (gross carrying amounts)

by rating procedure, € bn

31 Dec 2022 | 31 Dec 2021



* Including the private client business of former WestImmo

Within the process-oriented monitoring of individual exposures, the Bank uses various tools to monitor exposures on an ongoing basis: besides the tools already described, this includes rating reviews, the monitoring of payment arrears, and the regular, individual analysis of the largest exposures. The intensity of loan coverage is oriented upon the credit risk exposure.

Some effects of the Covid-19 pandemic were still felt in the year under review, but the portfolio most susceptible to it rebounded as expected, especially in the hotel sector, and returned to pre-pandemic levels on average. In this light, all Covid-specific provisions or processes in the most vulnerable portfolio (retail, hotels, student housing) were abolished as at the reporting date.

The following tables provide a breakdown of gross carrying amounts of on-balance sheet as well as off-balance sheet credit business, money-market business, and capital markets business, by rating classes and loss allowance stages, in line with credit risk management at Group level. The impact of the Covid-19 pandemic markedly decreased in the period under review, but the ongoing interest rate increases on the international markets burdened debt service requirements, resulting in continued high levels of Stage-2 loss allowance compared to historical levels. Figures are based on Aareal Bank Group's internal default risk rating classes. The default definition follows the definition pursuant to Article 178 of the CRR, which is decisive for management purposes.

On-balance sheet commercial property finance business with mandatory rating

	31 Dec 2022					31 Dec 2021				
	Stage 1	Stage 2	Stage 3	fvpl[1]	Total	Stage 1	Stage 2	Stage 3	fvpl[1]	Total
€ mn										
Class 1	–	–	–	–	**–**	–	–	–	–	**–**
Class 2	158	–	–	–	**158**	116	–	–	–	**116**
Class 3	258	–	–	–	**258**	203	3	–	–	**206**
Class 4	775	24	–	–	**799**	694	–	–	–	**694**
Class 5	4,367	19	–	18	**4,404**	3,602	105	–	160	**3,867**
Class 6	4,296	52	–	112	**4,460**	4,800	185	–	138	**5,123**
Class 7	4,534	772	–	37	**5,343**	4,337	331	–	67	**4,735**
Class 8	2,610	1,352	–	52	**4,014**	3,034	1,158	–	82	**4,274**
Class 9	3,649	2,623	–	33	**6,305**	1,004	2,545	–	48	**3,597**
Class 10	962	1,519	–	42	**2,523**	908	3,366	–	39	**4,313**
Class 11	157	116	–	–	**273**	38	731	–	–	**769**
Class 12	–	97	–	–	**97**	–	77	–	–	**77**
Classes 13-15	–	–	–	–	**–**	–	74	–	–	**74**
Defaulted	–	–	983	133	**1,116**	–	–	1,503	64	**1,567**
Total	**21,766**	**6,574**	**983**	**427**	**29,750**	**18,736**	**8,575**	**1,503**	**598**	**29,412**

[1] fvpl = at fair value through profit and loss (in accordance with IFRSs)

Off-balance sheet commercial property finance business with mandatory rating

	31 Dec 2022					31 Dec 2021				
	Stage 1	Stage 2	Stage 3	fvpl[1]	Total	Stage 1	Stage 2	Stage 3	fvpl[1]	Total
€ mn										
Classes 1-3	–	–	–	–	**–**	–	–	–	–	**–**
Class 4	5	–	–	–	**5**	8	–	–	–	**8**
Class 5	52	–	–	–	**52**	157	–	–	–	**157**
Class 6	72	–	–	0	**72**	70	–	–	–	**70**
Class 7	62	19	–	–	**81**	102	–	–	–	**102**
Class 8	211	33	–	–	**244**	15	9	–	–	**24**
Class 9	84	18	–	–	**102**	113	47	–	–	**160**
Class 10	211	20	–	–	**231**	65	66	–	–	**131**
Class 11	19	–	–	–	**19**	23	8	–	–	**31**
Classes 12-15	–	–	–	–	**–**	–	1	–	–	**1**
Defaulted	–	–	2	–	**2**	–	–	6	–	**6**
Total	**716**	**90**	**2**	**0**	**808**	**553**	**131**	**6**	**–**	**690**

[1] fvpl = at fair value through profit and loss (in accordance with IFRSs); commitments for loan portions earmarked for syndication

On-balance sheet loans and advances to financial institutions

	31 Dec 2022					31 Dec 2021				
	Stage 1	Stage 2	Stage 3	fvpl[1]	Total	Stage 1	Stage 2	Stage 3	fvpl[1]	Total
€ mn										
Class 1	322	–	–	–	**322**	619	–	–	–	**619**
Class 2	157	–	–	–	**157**	160	–	–	–	**160**
Class 3	476	–	–	–	**476**	373	–	–	–	**373**
Class 4	1,102	–	–	–	**1,102**	212	–	–	–	**212**
Class 5	302	–	–	–	**302**	21	–	–	–	**21**
Class 6	7	–	–	–	**7**	93	–	–	–	**93**
Class 7	655	–	–	–	**655**	708	–	–	–	**708**
Class 8	422	–	–	–	**422**	424	3	–	–	**427**
Class 9	396	–	–	–	**396**	30	–	–	–	**30**
Class 10	18	–	–	–	**18**	27	–	–	–	**27**
Classes 11-18	–	–	–	–	**–**	–	–	–	–	**–**
Defaulted	–	–	–	–	**–**	–	–	–	–	**–**
Total	**3,857**	**–**	**–**	**–**	**3,857**	**2,667**	**3**	**–**	**–**	**2,670**

[1] fvpl = at fair value through profit and loss (in accordance with IFRSs)

On-balance sheet loans and advances to sovereign states and local authorities

	31 Dec 2022					31 Dec 2021				
	Stage 1	Stage 2	Stage 3	fvpl[1]	Total	Stage 1	Stage 2	Stage 3	fvpl[1]	Total
€ mn										
Class 1	1,687	–	–	–	**1,687**	3,400	–	–	–	**3,400**
Class 2	1,802	–	–	–	**1,802**	1,777	–	–	26	**1,777**
Class 3	495	–	–	–	**495**	656	–	–	62	**656**
Class 4	30	–	–	–	**30**	69	–	–	–	**69**
Class 5	21	–	–	–	**21**	64	–	–	–	**64**
Class 6	273	–	–	–	**273**	1	–	–	–	**1**
Class 7	120	–	–	–	**120**	187	–	–	–	**187**
Class 8	526	–	–	–	**526**	0	–	–	–	**0**
Class 9	–	–	–	–	**–**	620	186	–	–	**806**
Classes 10-20	–	–	–	–	**–**	–	–	–	–	**–**
Defaulted	–	–	–	–	**–**	–	–	–	–	**–**
Total	**4,954**	**–**	**–**	**–**	**4,954**	**6,774**	**186**	**–**	**88**	**6,960**

[1] fvpl = at fair value through profit and loss (in accordance with IFRSs)

Monthly reporting covers the material aspects of credit risk; it is supplemented by detailed information – which also fully covers specific credit portfolio developments (broken down by country, property and product type, risk classes, and collateral categories, for example), in line with regulatory requirements – at least on a quarterly basis. Risk concentrations are being taken into account in particular.

Trading activities are restricted to counterparties for whom the requisite limits are in place. All trades are immediately taken into account for the purposes of borrower-related limits. Compliance with limits is monitored in real time by Risk Controlling. Persons holding position responsibility are informed about relevant limits and their current usage, regularly and without delay.

In principle, Aareal Bank pursues a 'buy and manage' strategy in managing its credit portfolio – with the primary objective of holding the majority of loans extended on its balance sheet until maturity; at the same time, targeted exit measures are deployed for actively managing the portfolio and the risks involved.

In summary, during the period under review, the existing set of tools and methods continued to enable the Bank to adopt suitable risk management or risk mitigation measures, where required, without any undue delay.

Credit risk mitigation

The Bank accepts various types of collateral to reduce default risk exposure. This includes impersonal collateral, such as liens on immobile (property) and mobile assets; liens on receivables, such as rents; and third-party undertakings, such as guarantees.

As an international property finance house, Aareal Bank focuses on property when collateralising loans and advances. As a rule, loans are granted and the security interest perfected in accordance with the jurisdiction in which the respective property is located.

Mortgage lending values or fair values are set or determined in accordance with the responsibilities for decision-making on lending, and form an integral part of the lending decision. The values to be determined by the Bank are generally pegged on the valuation prepared by a valuer, which is subject to an internal plausibility check. Any diverging assessment must be substantiated in writing. In any case, the market and mortgage lending values determined by the Bank must not exceed the values assessed by independent internal or external valuers.

To mitigate credit risk, the Bank also accepts collateralisation through a pledge of shareholdings in property companies or special purpose entities not listed on a stock exchange. The Bank has set out detailed provisions governing the valuation of such collateral.

The Bank also accepts guarantees or indemnities as well as financial collateral (such as securities or payment claims) as standard forms of collateral. The collateral value of the indemnity or guarantee is determined by the guarantor's credit quality. For this purpose, the Bank differentiates between banks, public-sector banks, and other guarantors. The value of financial collateral is determined according to the type of collateral. Haircuts are generally applied when determining the value of guarantees/indemnities and financial collateral.

The defined credit processes provide for the regular review of collateral value. The risk classification is adjusted in the event of material changes in collateral value. An extraordinary review of collateral is carried out where the Bank becomes aware of information indicating a negative change in collateral value. Moreover, the Bank ensures that disbursement is only made after the agreed conditions for payment have been met. Collateral is recorded in the Bank's central credit system, including all material details.

Credit risk mitigation for trading activities

To reduce counterparty credit risk in Aareal Bank's trading business, the master agreements for financial derivatives[1] and master agreements for securities repurchase transactions (repos) used by the Bank provide for various credit risk mitigation techniques, via mutual netting framework agreements.

The master agreements for financial derivatives used by the Bank contain netting framework agreements at a single transaction level (so-called "payment netting"), and arrangements for the termination of individual transactions under a master agreement (so-called "close-out netting").

[1] Any comments below referring to the German Master Agreement on Financial Derivatives (Deutscher Rahmenvertrag für Finanztermingeschäfte – "DRV") also pertain to the master agreement issued by the International Swaps and Derivatives Association Inc. (ISDA) (the "ISDA Master Agreement"). Both agreements are standardised agreements recommended by leading associations – among others, by the Association of German Banks (Bundesverband deutscher Banken – "BdB").

In general, all master agreements are based on the principle of a common agreement. This means that, in the case of a termination, the individual claims are netted, and that only such net amount can and may be claimed with regard to the defaulted counterparty. This claim must not be affected by any insolvency, i.e. it must be legally valid and enforceable. This, in turn, means that the jurisdictions concerned must recognise the concept of a common agreement which protects the net amount of the claim from imminent access by the insolvency administrator.

Above all, the close-out netting is subject to (international) legal risks. The Bank reviews these legal risks by reference to legal opinions regarding the validity and enforceability of mutual netting framework agreements in the case of a counterparty's insolvency. These legal opinions are evaluated based on various criteria such as product type, jurisdiction of the registered office and branch office of the counterparty, individual contract supplements and other criteria, and using a database developed for this purpose. In doing so, the Bank decides for each individual transaction whether or not netting is possible. The Bank uses eligible bilateral netting framework agreements within the meaning of the CRR for all transactions with financial institutions; in many cases there are additional collateral agreements which further reduce the relevant credit risk.

The Bank enters into repo transactions both on a bilateral basis and via Eurex Clearing AG as a central counterparty. For repo transactions, depending on the counterparty, payment or delivery netting is agreed upon. Master agreements for repo transactions generally contain provisions on close-out netting. The Bank does not use the option permitted by regulatory authorities to reduce capital requirements for repo transactions.

Furthermore, counterparty credit risk is reduced through derivatives settlement via central counterparties (CCPs): Aareal Bank uses Eurex Clearing AG and LCH.Clearnet Limited.

The Bank uses an internal rating system to assess the credit quality of counterparties. Credit Transaction Management is responsible for the daily valuation of the Bank's trades, including collateral accepted or pledged, and using validated valuation procedures.

Collateral for derivative transactions is usually provided in cash. Repo transactions are usually collateralised through securities, pledged on a daily basis.

Some collateral agreements provide for higher collateral levels in the event of material downgrade to a contracting party's rating.

Country risks

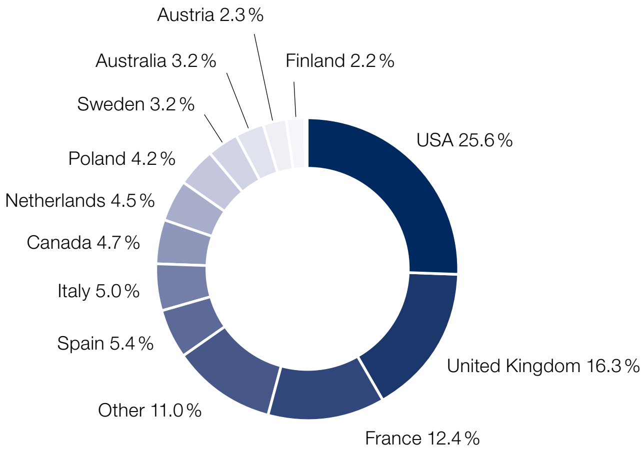
Our comprehensive approach to risk management also includes measuring and monitoring country risk exposure. When defining country risk, in addition to the risk of sovereign default or default of state entities, Aareal Bank also considers the risk that a counterparty could become unable to meet its payment obligations as a result of government action, despite being willing and able to pay, due to restrictions being imposed on making payments to creditors (transfer risk). Country risk exposure is managed using a cross-divisional process. The respective country limits are determined on the basis of a country risk assessment by the Bank's senior management. The Risk Controlling division is responsible for the continuous monitoring of country limits and limit utilisation, and for periodical reporting.

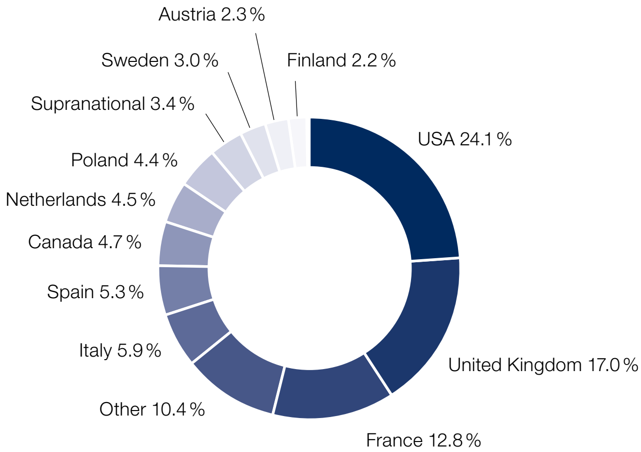
The diagram below illustrates the risk exposure by country (comprising receivables and off-balance sheet obligations) in the Bank's international business, at year-end. In the property financing business, country exposures are allocated by location of the property used as collateral. For exposures not collateralised by property, the allocation is based on the borrower's country of domicile. This reflects the exposure of the property finance business, as well as the activities of Treasury.

Breakdown of country exposure in the international business

%

31 Dec 2022 | 31 Dec 2021





Interest rate risk in the banking book

Definition

Interest rate risk in the banking book (IRRBB) is defined as the risk exposure of instruments held in the banking book which are sensitive to changes in interest rates, caused by yield curve shifts.

Specifically, for Aareal Bank this includes:

- risks arising from maturity transformation in the event of yield curve shifts (so-called gap risk), which, in turn, are broken down into:
  - risks from cash flows which are sensitive to interest rates, relative to the general yield curve (interest rate risk or repricing risk);
  - risks arising from the valuation of future cash flows, relative to the general yield curve (yield curve risk);
- risks from cash flows which are sensitive to interest rates, in terms of spreads to the general yield curve (basis risk);
- risks from explicit and implied options (option risk);
- risks from fluctuations in the value of fund assets (fund risk); and
- risks from changes in Aareal Bank's specific funding spreads (funding risk).

Risk measurement and monitoring

Risk Controlling informs the members of the Management Board responsible for Treasury and risk monitoring about the risk position and the present-value exposure to interest rate risk in the banking book on a daily basis (the 'economic value of equity' perspective). This is supplemented on a monthly basis by a presentation of potential plan deviations of income in case adverse interest rate scenarios occur (earnings perspective). The interest rate scenarios used for the measurement of potential plan deviations comprise interest rate shocks (both increases and reductions) as well as time-based increases or reductions of the interest rate projection used to determine planned interest income.

The present value VaR concept has been broadly accepted as the predominant method for measuring economic interest rate risk in the banking book. VaR quantifies risk as the maximum loss that will occur within a certain period of time, and given a defined probability.

A variance-covariance approach (delta-normal method) is used throughout the Group to determine the VaR indicator. Determined on a daily basis for the Group, the VaR figure takes into account the correlation between individual risk types. Statistical parameters used in the VaR model are calculated directly from a 250-day historical data pool maintained within the Bank. The loss potential is determined applying a 99.9 % confidence interval under the economic perspective.

By their very nature, VaR calculations are based on numerous assumptions regarding the future development of the business, and the related cash flows. Key assumptions used include current account balances and deposits at notice which are factored into calculations for a period of up to ten years (2.24 years on average), using the average residual amount of deposits observed in the past. Loans are taken into account using their fixed-interest period (for fixed-rate exposures), or using their expected maturity (variable-rate exposures). Aareal Bank Group's consolidated equity is not taken into account as a risk-mitigating item. This tends to overstate VaR, demonstrating our goal to pursue a conservative approach adopted in our risk measurement processes.

In addition to this and in line with EBA/GL/2018/02 (Guidelines on the management of interest rate risk arising from non-trading book activities), the change in net interest income is determined in the relevant interest rate shock scenarios. Net interest income equals the difference between interest income and interest expenses on all interest-bearing assets and liabilities in the banking book, including deriva-tives and off-balance sheet items in accordance with IFRSs. In contrast to a present-value analysis, net interest income is not limited to modelled earnings contributions of existing assets and liabilities as at the planning/forecast date, but additionally includes income and expenses from planned new business and renewals. Changes essentially reflect the diverging developments of forward interest rates prior and after an interest rate shock, as well as the resulting modelled impact on client behaviour.

Interest rate sensitivity

An additional instrument used to quantify interest rate risk exposure is the calculation of interest rate sensitivity, expressed by the so-called 'delta' parameter. The first step to determine this parameter requires calculating the present values of all asset and equity/liability items on the statement of financial position. In a second step, the interest rates of yield curves used for this calculation are subjected to a one basis point parallel shift up (a method known as the 'key rate method'). Delta is the present value of the profit or loss resulting from this yield curve change.

Present-value impact of an interest rate shock

The following tables show the changes in present value as prescribed by BaFin circular 06/2019, applying EBA guidelines EBA/GL/2018/02 on controlling interest rate risk in the banking book (IRRBB).

The standard test prescribed therein outlines present-value changes in the banking book in the event of a maximum 200 basis point parallel shift for each currency. As in the previous years, the ratio of the aggregate results to Aareal Bank Group's regulatory capital is clearly below the prescribed threshold of 20 %.

	31 Dec 2022		31 Dec 2021	
	-200 bp	+200 bp	-200 bp	+200 bp
€ mn				
EUR	-40	23	-23	101
GBP	15	-25	8	-16
USD	18	-14	84	-43
Other	6	-6	10	-9
Total	**-1**	**-22**	**79**	**33**
Ratio to regulatory capital requirements in ac-cordance with Basel III (%)	**0.0**	**0.7**	**2.6**	**1.1**

Furthermore, present-value changes are determined (and their ratio to Tier I capital shown) for six early-warning indicators, applying the prescribed scenarios. The ratio of the aggregate result to Aareal Bank Group's Tier I capital in accordance with Basel III is clearly below the prescribed threshold of 15 %.

€ mn	31 Dec 2022	31 Dec 2021
Parallel shock up	-28	29
Interest rate coefficient for parallel shock up (%)	1.0	1.1
Parallel shock down	4	80
Interest rate coefficient for parallel shock down (%)	0.1	3.1
Steepener shock	7	64
Interest rate coefficient for steepener shock (%)	0.3	2.4
Flattener shock	-24	-26
Interest rate coefficient for flattener shock (%)	0.9	1.0
Short-term rates shock – up	-29	-22
Interest rate coefficient for short rates shock up (%)	1.0	0.8
Short-term rates shock – down	22	81
Interest rate coefficient for short rates shock down (%)	0.8	3.1
Tier 1 capital in accordance with Basel III	**2,768**	**2,622**

Net interest income is a metric derived from the income statement. The earnings risk is measured based on the changes in net interest income of the next twelve months as a result of a parallel shift of the yield curve by 200 basis points. In this context, assumptions regarding client behaviour and the competitive environment in such a scenario are especially subject to idealised model parameters.

Pension risks

Pension risks arise from the measurement of pension obligations entered into, and of plan assets held under pension plans. Risk is miti-gated by structuring plan assets – largely a special investment fund held in trust – accordingly.

VaR, which requires sensitivity data for risk factors (representing exposure) as well as a covariance matrix of such risk factors (volatility and correlation) to map market dynamics, is calculated as the simplest stochastical model in the delta-normal approach.

Pension risks are managed directly by the Asset-Liability Committee (ALCO); for this purpose, the ALCO has also assumed the function of Investment Committee for the plan assets. Pension obligations and plan assets are subject to regular risk reviews and assessments.

Market risks

Definition

Market risks are broadly defined as the threat of losses due to changes in market parameters; this refers to market risks which are not assigned to the IRRBB. In particular, this also encompasses any type of spread risk exposure of instruments held in the banking book which are sensitive to changes in interest rates, and which are neither included in IRRBB nor in counterparty credit risk. Specifically, for Aareal Bank this includes:

- risks resulting from fluctuations of spot foreign exchange (FX) rates (spot FX risk);
- risks resulting from fluctuations of forward foreign exchange rates (forward FX risk); and
- risks from the regulatory review of the trading book (Financial Risk in the Trading Book – FRTB).

Since Aareal Bank did not pursue any trading book activities (as defined by the CRR) during the period under review, trading book risks had no relevance.

Commodities are irrelevant for the Bank's business. Currency risks are controlled through derivatives.

Additional elements of market risk are:

- valuation risks due to changes in credit spreads (credit spread risk);
- specific price risks from the bond portfolio, wherein the bonds are mainly sovereign bonds (sovereign risk);
- risks from adjustments to the credit valuation of OTC – derivatives (CVA risk).

To differentiate spread risks (credit spread risk and sovereign risk) in terms of their credit risk exposure, reported market risk is adjusted accordingly.

Risk measurement and monitoring

Risk Controlling informs the members of the Management Board responsible for Treasury and risk monitoring about the risk position and exposure to other market risks on a daily basis.

The VaR concept has been broadly accepted as the predominant method for measuring economic market risk. VaR quantifies risk as the maximum loss that will occur within a certain period of time, and given a defined probability.

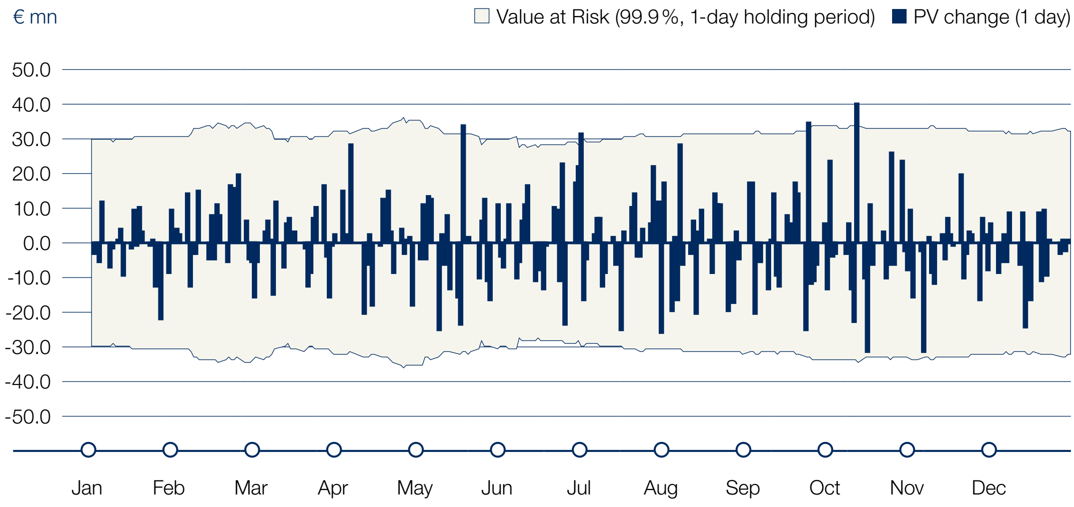
A variance-covariance approach (delta-normal method) is used to determine the aggregated VaR indicator for market risk. Determined on a daily basis for the Group, the VaR figure takes into account the correlation between individual risk types. Statistical parameters used in the VaR model are calculated directly from a historical data pool maintained within the Bank, which covers at least 250 days[1]. The loss potential is determined applying a 99.9 % confidence interval.

Backtesting

The quality of forecasts made using statistical models is checked through a monthly backtesting process. The quality of the statistical procedure used to measure risk is checked using a method referred to as binomial test, whereby daily profits and losses from market fluctuations are compared with the upper projected loss limit (VaR) forecast on the previous day (known as 'clean backtesting'). In line with the selected confidence interval of 99.9 %, only a small number of events are expected to break out of the VaR projection.

The backtesting exercise shown below comprises all risk positions subject to daily changes from the 'Market risks' category.

Present values and 1-day VaR during the course of 2022



[1] Historical data covering two years is used for the sub-risk type of credit spread risk.

No negative outliers were observed at Group level during the past 250 trading days, affirming the high forecasting quality of the VaR model we use.

Operational risks

Definition

The Bank defines operational risk as the threat of losses caused by inappropriate internal procedures, human resources and systems (or their failure), or through external events. This definition also includes legal risks. To the extent that they are caused by operational risks, ESG risk factors as well as model and reputational risks are also taken into consideration within this type of risk.

Risk strategy

The primary purpose of the risk strategy is to provide strategic guidance on the conscious and professional handling of operational risk. The strategy covers the organisational framework as well as the fundamentals of reporting related to this topic, supplementing and specifying the existing central rules set out in the Risk Appetite Framework.

To facilitate a holistic risk management of operational risk, Aareal Bank has implemented a governance structure which puts the "three lines of defence" concept into operational practice. Given that, in principle, the management approach is organised in a decentralised manner, located in the various divisions or subsidiaries, there is a distinct emphasis on a strong first line of defence which is responsible for risks on a single-risk basis. The centralised OpRisk Controlling department, which is part of the Non-Financial Risks division, monitors the first-line activities as an independent second line of defence. In this context, the general second line of defence is supplemented by specialised monitoring functions known as 'specialist second lines'.

Process risks are addressed through the internal control system (ICS). The design of Aareal Bank Group's ICS emphasises mitigating material process-inherent risks through appropriate and effective key controls which are compiled in a dedicated inventory for Aareal Bank.

The Non-Financial Risks division is responsible for monitoring compliance risks, as well as risks related to financial crime. The Group-wide objective of the compliance management system is to mitigate liability risks in the form of potential fines and penalties for the Bank or its subsidiaries and their board members. In addition, Aareal Bank Group's positive reputation as a group of companies with integrity vis-à-vis external stakeholders such as business partners, counterparties and investors is to be maintained and further strengthened. The Anti Financial Crime strategy serves to manage risks related to money laundering, terrorist financing, sanction breaches and fraud in a professional and conscious manner. It encompasses applicable qualitative standards (for example, listing business areas and sectors not served) and quantitative key risk indicators (such as thresholds for high-risk clients and politically exposed persons) for the purpose of risk monitoring.

In order to mitigate legal risks, Aareal Bank's central Legal department and decentralised legal units monitor any litigation the Bank is involved in (whether in court or out-of-court), and deal with any legal issues of fundamental importance, and provide legal advice on day-to-day business. Legal compiles all information concerning any legal disputes involving Aareal Bank Group, whether in or out of court. The Bank's decentralised operating legal entities, as well as the legal departments of subsidiaries submit quarterly reports on legal risks identified to Aareal Bank's legal department; where particular risks have occurred, such reports are submitted on an event-driven basis. When required, Aareal Bank's legal department discusses and coordinates any concrete measures with the reporting unit. The legal department reports to the Management Board, (at least) on a quarterly basis, as well as on an event-driven basis. Tax risks including related legal risks are monitored and managed separately by Aareal Bank's tax department. The tax compliance management system actively reduces the risk related to tax law compliance and fraud cases, for example by setting standardised work instructions and controls, both within the tax department and in interfaces with other divisions.

Information Security & Data Protection has central responsibility for monitoring risks affecting operational resilience. The division defines Bank-wide requirements and initiates different measures to mitigate information security risk and to achieve the level of security targeted in the Information Security Framework Directive. This includes raising awareness amongst internal and external employees through corresponding training courses and the exchange of information on cyber threats via the communication channels with ECB, BaFin and BSI. To mitigate outsourcing risk, the responsible outsourcing organisational units regularly assess the performance of external service providers, using defined criteria. The results of this process, and control measures taken, are consolidated and communicated to the Bank's Management. Business Continuity Management (BCM) mitigates business continuity risks by defining the emergency organisation, setting out emergency and crisis plans for the Bank's business processes identified as time-critical. Business will be managed in accordance with these plans in the event of an emergency or crisis.

Risk measurement and monitoring

It is the objective of the policy pursued by Aareal Bank to achieve a risk-minimising or loss-limiting effect at an early stage by employing a pro-active approach.

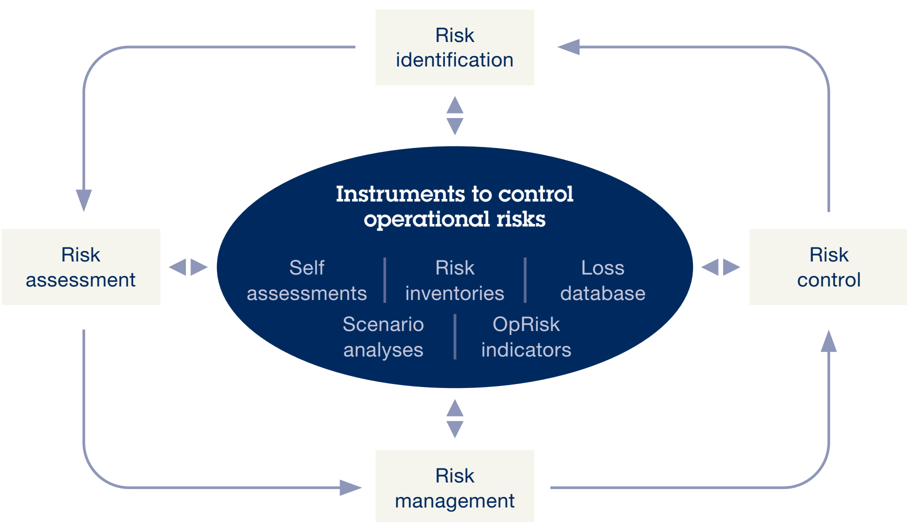
The Bank currently uses the following risk control tools to manage operational risks:

- Self-assessments: analysis thereof can provide management with an indication of any potential risks within the organisational structure;
- risk inventories and subsequent risk assessments that include a periodic systematic identification and compilation of all relevant risks and their qualitative and quantitative assessment;
- a loss database, in which relevant risk events incurred are reported, and in which they can be monitored until they are officially closed;
- operational risk indicators for all risk levels that show current threat potential using a defined 'traffic light' system;
- stress tests based on hypothetical as well as historical scenarios and sensitivity analyses of risk inventory data, carried out in order to gain indicators for developments which may potentially threaten the Bank's continued existence.

Data is collected on a decentralised basis and all material operational risks of the Group compiled centrally.

The tools described above are used to prepare the regular risk reporting to the Bank's senior management. Taken together, these tools for managing operational risks result in an integrated control circuit which leads to risk identification, evaluation, and management – through to risk control. The responsibility for implementing operative risk-reducing measures rests with those responsible for the Bank's risk management. The utilisation of freely available funds for operational risks – as part of the Bank's risk-bearing capacity – is determined using the regulatory standardised approach under Pillar I.

Management of operational risks



No material risk concentrations were evident in the 2022 financial year. Risk events are recorded in a database on an ongoing basis. The aggregate impact of such risk events during the year under review amounted to less than 5 % of the regulatory capital to be maintained for operational risks. Supplementary operational risk management tools – in particular, the monitoring of indicators, scenario analyses and the self-assessment – do not indicate potential elevated risk either.

Investment risks

Definition

Aareal Bank defines investment risk as the threat of unexpected losses incurred due to an impairment of the investment's carrying amount, or a default of loans extended to investees. The concept of investment risk also encompasses additional risks arising from contingencies vis-à-vis the relevant Group entities.

Risk measurement and monitoring

The model for investment risk was thoroughly revised, with a new model implemented in 2022. The new model breaks down investments outside the regulatory scope of consolidation into two groups, whereby risk-equivalent exposures are determined for material investments using the regulatory IRB formula. For non-material investments, equity coverage is determined using the simple risk weight function for investments in accordance with the CRR. Risk exposure for investments within the regulatory scope of consolidation is measured using the look-through principle, based on the assets of the respective investment.

The existing procedures used to measure and monitor risk exposure are supplemented by subjecting the equity portfolio to regular stress testing.

Strategy Development, as well as Finance & Controlling and Risk Controlling, are responsible for measuring and monitoring investment risk exposure.

Risk Controlling is responsible for submitting a quarterly equity investment risk report to the Bank's Management Board.

Property risks

Definition

We define property risk as the threat of unexpected losses arising from changes in the value of property held by the Bank, or by fully-consolidated subsidiaries.

Due to the special character of property risk (involving marketing risks, for example), special methods and procedures are employed to deal with investment risk. All relevant property holdings are subject to regular audits, including a review and assessment of their risk situation.

Risk measurement and monitoring

In order to measure and monitor risks, property yields are analysed for different regions and property types, and over the time horizons available: on this basis, potential yield increases for different regions and property types over a one-year horizon are determined applying a 99.9 % confidence interval. A property's risk contribution results from the difference between the current market value and the property value adjusted for the yield increase.

Business and strategic risks

Definition

Business and strategic risks are defined as potential risks of all kinds that may potentially threaten achievement of corporate objectives, and which may result (for example) from changes in the competitive environment, or from an unsuitable strategic positioning in the macro-economic environment. We distinguish between allocation risk and investment risk, whereby allocation risk is defined as a divergence of operating results due to lower-than-expected income from allocated capital that cannot be offset through reductions in costs or administrative expenses. Investment risk is defined as the risk that the Bank is unable to compensate for any divergence in operating results through the results from activities or investments in alternative business segments that generate results to the same or similar extent.

Risk measurement and monitoring

Allocation risk is already covered by various planning scenarios, and is thus incorporated in aggregate risk cover.

Investment risk is measured across segments: it is quantified assuming that additional upfront investment is required to establish an investment opportunity which was previously unavailable. Such upfront investment is assumed to represent potential risk.

Liquidity risks

Definition

Liquidity risk in the narrower sense is defined as the risk that current or future payment obligations cannot be met in full or on time. Aareal Bank Group's liquidity risk management system is designed to ensure that the Bank has sufficient cash and cash equivalents to honour its payment obligations at any future point in time. The risk management processes have been designed to cover not only the liquidity risk in the narrower sense (insolvency risk), but also market liquidity risk and refinancing risk, including cost risk which is measured and limited accordingly as a component of the IRRBB. All elements have been integrated in an overarching ILAAP, which maps liquidity risks in both the normative and the economic perspective. Within the framework of Group planning, the Bank considers not only ICAAP risk parameters, but also ILAAP risk parameters for a three-year horizon.

Risk measurement and monitoring

Treasury is responsible for managing liquidity risks, whilst Risk Controlling ensures the continuous monitoring, including a daily liquidity report submitted to Treasury, and a contribution to the monthly risk report to the entire Management Board. The following tools are used for this purpose:

Cash flow forecast
We have developed a cash flow forecast, tracking cash flows from all balance sheet items and derivatives, on a daily basis, over a ten-year period. This liquidity risk information helps to assess the Bank's short-term liquidity position, broken down by currency or product. Strategic liquidity is taken into account using this ten-year cash flow profile. We use statistical modelling to incorporate the expected cash flow profile of products without a fixed contractual lifetime.

Liquidity run-off profile
The appropriateness of the Bank's liquidity from an economic perspective is assessed using a liquidity run-off profile (liquidity risk model): the aggregate of all conservatively expected cash inflows and outflows over a three-month period is compared to the liquidity stock. This liquidity stock comprises all assets that can be liquidated at very short notice. The difference of both figures (in absolute terms) indicates excess liquidity, once all claims assumed in the run-off profile have been fulfilled through the liquidity stock. There were no liquidity shortages throughout the period under review.

Stress testing

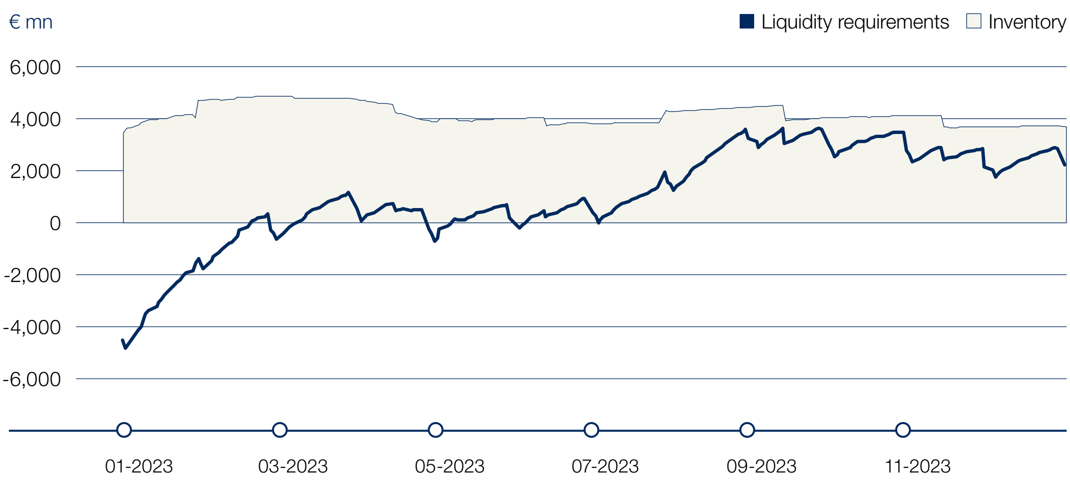
Moreover, we employ stress tests and scenario analyses to assess the impact of sudden stress events onto the Bank's liquidity situation. The various standardised scenarios used, which include historic, idiosyncratic, market-wide and combined scenarios, are evaluated on the basis of the liquidity run-off profile.

We generally consider the withdrawal of deposits from the housing industry as the most significant scenario. Even in this stress scenario, liquidity is sufficient to cover the expected liquidity needs under stress conditions.

Time to illiquidity

To safeguard adequate liquidity beyond the three-month horizon covered by the liquidity run-off profile, we use the concept of time to illiquidity as a parameter. For this purpose, a liquidity run-off profile was developed which compares liquidity requirements occurring with the liquidity stock, for a one-year period. Time to illiquidity ("TtI") denotes the remaining period (expressed in days) during which Aareal Bank Group can be regarded as sufficiently liquid, even under adverse conditions. In other words, liquidity requirements (including security add-on for adverse future events) do not exceed the liquidity stock. The calculations are based on contractual cash flows and the short-term risk assessment methodology (liquidity run-off profile), as well as the portfolio development within the current plan scenario.

The following chart shows the projected development of the liquidity stock, together with aggregate liquidity requirements (incorporating planned portfolio developments, and including security add-ons for adverse future events) until the end of 2023. The chart demonstrates that the liquidity stock will always exceed liquidity requirements, even under adverse conditions.



Further details are provided in the comments on the Bank's liquidity in the section on the "Financial position".

Funding profile

Diversifying the Bank's refinancing profile by type of investor, and by product, represents a further key aspect of our approach to liquidity risk management. Core sources of funding such as customer deposits and funds invested by institutional clients – alongside covered and uncovered bond issues – constitute the foundation of our liability profile. In this context, we refer to the comments regarding the breakdown of funding between money markets and capital markets, as set out in the description of financial position.

Concentration limits

Besides the pure measurement of risk indicators, we also monitor concentrations of liquid assets and of funding sources, determining the percentage share of the ten largest counterparties and/or positions, relative to the total portfolio.

A limit is set for each indicator in order to restrict the dependency upon individual positions or counterparties.

LCR forecast

We have developed the LCR forecast as a measurement tool designed to ensure that we maintain compliance with the regulatory Liquidity Coverage Ratio. A preview of the Liquidity Coverage Ratio is calculated over a horizon of up to three years, determining the ratio of highly liquid assets to cumulative net cash outflows for various end-of-month dates – thus identifying any potential liquidity shortfalls or reserves.

NSFR forecast

The NSFR forecast, which is a projection of the Net Stable Funding Ratio over a period of up to three years, represents another important component of our liquidity management. This measurement tool allows us to forecast the regulatory Net Stable Funding Ratio for future dates, thus identifying any potential liquidity shortfalls or reserves in terms of the NSFR at an early stage.

Long Term LAB

The long-term liquidity run-off profile (Long Term LAB) provides a forecast of the economic perspective and enables an outlook of the liquidity run-off profile (liquidity risk model) over a period of up to three years. This liquidity run-off profile compares the expected liquidity requirements and available liquidity for different scenarios at various points in time in the future; thus, any potential liquidity shortfalls or liquidity reserves arising in the future are identified with regard to the liquidity run-off profile.

Accounting-related ICS and RMS

Tasks of the accounting-related Internal Control System (ICS) and the Risk Management System (RMS)

The accounting-related Internal Control and Risk Management System includes principles, procedures and measures to ensure the effectiveness and the efficiency of internal and external accounting, in accordance with applicable legal provisions. The tasks of the accounting-related Internal Control System mainly include ensuring proper conduct of business activities, guaranteeing proper internal and external accounting, as well as ensuring compliance with relevant statutory and legal requirements applicable to the Company.

The objective of the accounting-related Risk Management System is to identify, assess and limit risks which may impede the compliance of the financial statements with applicable rules and regulations. As with any other Internal Control System, the accounting-related ICS and RMS may only provide reasonable – but not absolute – assurance with regard to achieving this objective, regardless of how much care is used to design and operate this system.

Organisation of the accounting-related ICS and RMS

The Internal Control System of Aareal Bank takes into account the principles established by the Minimum Requirements for Risk Management (MaRisk) related to the company-specific design of the ICS. The design of this Internal Control System comprises organisational and technical measures to control and monitor the Company's activities, covering all entities of Aareal Bank Group. The Management Board of Aareal Bank AG is responsible for designing, implementing, applying, further developing and reviewing an appropriate Internal Control System, in particular with regard to the accounting process. The Management Board makes decisions as regards the scope and the design of specific requirements; it has defined the responsibilities for the individual process steps in connection with accounting by means of organisational guidelines, and has delegated these responsibilities to individual organisational units.

Aareal Bank prepares its financial statements in accordance with the provisions of the German Commercial Code (Handelsgesetzbuch – "HGB") and its consolidated financial statements in accordance with International Financial Reporting Standards (IFRSs) as applicable in the European Union. The Finance & Controlling division controls accounting processes, to ensure conformity with legal requirements, as well as with any further internal and external provisions. The accounting-related requirements that have to be applied are documented in guidelines and IT requirements.

For the consolidated financial statements in accordance with IFRSs, the companies that form part of the Group create an IFRS package as at the respective reporting date. This includes financial statements prepared under IFRSs and in accordance with the IFRS Group Accounting Manual, as well as the Notes and consolidation information (intercompany balances). All packages are recorded by the Finance & Controlling division in a consolidation software and aggregated for the purpose of preparing the consolidated financial statements.

The Supervisory Board is responsible for monitoring the Management Board. Within the scope of financial reporting, it approves the single-entity financial statements of Aareal Bank AG as well as the consolidated financial statements and group management report. Measures taken by the Supervisory Board to ensure an efficient performance of its control functions include the establishment of an Audit Committee, which is primarily responsible for financial reporting issues and monitors the effectiveness of Aareal Bank's Internal Control System. It analyses and assesses the presented financial statements and internal risk reports as well as the quarterly reports submitted by Internal Audit. In addition, the Audit Committee is responsible for determining the focal points of the audit, as well as for evaluating the auditors' findings. The Audit Committee includes an expert in the fields of accounting or auditing, pursuant to section 100 (5) of the German Public Limited Companies Act (Aktiengesetz – "AktG").

Internal Audit also assumes a monitoring function not related to the process. It reports directly to the Management Board, and provides auditing and consulting services which are designed to optimise Aareal Bank's business processes with regard to accuracy, safety and efficiency. The Internal Audit division supports the Management Board by evaluating the effectiveness and appropriateness of the process-dependent Internal Control System and of the Risk Management System in general. Any detected weaknesses regarding the identification, evaluation and reduction of risks are reported and addressed within the context of specific action plans.

Internal Audit also performs Group audit functions for Aareal Bank's subsidiaries, within the context of the Group's risk management. The review of the risk management's effectiveness and appropriateness covers the risk management and risk control systems, reporting, information systems, and the accounting process. To perform its tasks, Internal Audit has full and unrestricted information rights with respect to activities, processes and IT systems of Aareal Bank AG and its subsidiaries. Internal Audit is informed on a regular basis about material changes related to the Internal Control and Risk Management System.

The review of process-integrated controls conducted by Internal Audit is based on a set of internal regulations, procedural instructions and guidelines of Aareal Bank Group. The audit activities of Internal Audit comprise all of the Group's operational and business processes, and are carried out using a risk-based approach.

The Management Board regularly assesses the appropriateness and effectiveness of the ICS and RMS. This assessment is primarily based on the result of the semi-annual ICS report and the monthly risk reporting and provides the Management Board with an overview of the key elements of Aareal Bank Group's ICS and RMS. As part of the reporting, the Management Board thus receives a summary of the assessment activities regarding the appropriateness and effectiveness of the ICS and RMS, as well as of any anomalies that were identified during these activities. The information contained in the ICS report and risk reporting are also presented to Aareal Bank AG's Supervisory Board as a report on the effectiveness of the ICS and RMS. The assessment of the ICS is based on the evaluation of the decentralised ICS officers, which includes internal and external audit results in particular. On this basis, the Management Board has no evidence that the ICS or RMS in their entirety are not appropriate or effective as at 31 December 2022.

Irrespective of this, the effectiveness of any risk management and control system is subject to an inherent restriction. Therefore, no system – even if it was evaluated as appropriate and effective – can guarantee a 100% prevention of risks or process violations under any circumstances. In addition to the ICS and RMS, and especially for those processes and procedures that, due to high momentum and a large number of new regulations, are not yet at the same stage of maturity as established processes, Aareal Bank has established a Code of Conduct for its employees. This Code of Conduct makes ethical conduct a guideline and minimum requirement of corporate action in dealing with new or unregulated matters, thus largely minimising violations of internal and external regulations.

Components of the accounting-related ICS and RMS

Within Aareal Bank, various measures related to the Bank's organisational structures and procedures help to fulfil the monitoring duties within the framework of its Internal Control System.

A prerequisite for the monitoring system to work efficiently is a Written Set of Procedural Rules governing the distribution of tasks between the individual divisions and the scope of the respective activities. The organisational structure of the Finance & Controlling division is set out in the Bank's organisational guidelines. Aareal Bank's accounting system is structured observing the principle of separation of functions, which makes for a split between operative and administrative roles, and is designed to ensure a sufficient level of control.

Various guidelines exist for activities and processes. These guidelines are set out in the Written Set of Procedural Rules of Aareal Bank and available for inspection for all affected employees. There are requirements as regards data entry and control – as well as data storage – which have to be observed in general by all of the Bank's posting units. If necessary, results are reconciled across divisions or companies. Uniform accounting methods and measurement techniques are guaranteed through guidelines applicable throughout the Group. The requirements of these Group-wide guidelines substantiate legal provisions, and are adjusted on an ongoing basis to take current standards into account. The valuation techniques used, as well as the underlying parameters, are controlled regularly, and adjusted if necessary.

In addition, the Bank's Risk Manual summarises the material elements of Aareal Bank Group's Risk Management System. Specifically, the Manual describes the organisational workflows as well as methods and instruments used in the context of risk management. In this context, reference is made to our explanations in the Risk Report.

Clearly-defined rules as regards delegation of authorities facilitating the allocation of professional responsibilities also contribute to reliable financial reporting. Any decisions taken are always based on relevant authorities. Internal controls defined on the basis of risk considerations are embedded in the accounting process. Compliance with the principle of dual control in all material processes is one of the principles for ensuring accurate accounting. Where no integrated approval system/dual control feature has been implemented in the accounting IT systems for material transactions, this has been integrated and documented in the manual process workflows.

Adherence of accounting to generally accepted accounting principles is ensured by both preventive and detective controls, as well as through a review of processed data. The preparation of the consolidated financial statements is characterised by multiple analyses and plausibility checks. Besides the evaluation of individual accounting issues, these include comparisons of periods, and between plan and actual data. Control processes have been implemented for both manual and automated accounting transactions.

In order to increase the level of control quality, all relevant divisions are involved in the reconciliation process. An example of cross-divisional reconciliation is the process for the preparation of annual and interim reports. All divisions involved must ensure and (prior to preparation by the Management Board) confirm the quality of the sections of the reports they are responsible for. This represents an additional control level for the data to be disclosed.

In terms of organisational workflows, the accounting-related Internal Control and Risk Management System is based on a comprehensive standardisation of processes and software. Aareal Bank Group uses both standard and customised software. The consolidation software provides technical support to the reconciliation of Group-internal relationships, in a clearly-defined process. The data of the units included is reported using a uniform standardised chart of accounts. The Group's accounting-related IT systems were designed in such a way that both manual controls and automatic plausibility checks are performed for material technical and procedural system steps of the applications used. The controls in relation to processing within the IT systems are also integrated in the processes, as well as being independently performed. Process-integrated controls comprise, for example, the review of error and exception reports or the regular analysis of internal service quality. In contrast, Internal Audit conducts IT reviews independently from processes.

Data and IT systems must be protected from unauthorised access. A differentiated access authorisation concept is in place for the systems used for finance and accounting, preventing manipulation of data. Access authorisations are allocated to the responsible employees, reviewed regularly, and adjusted if necessary in accordance with internal criteria.

Aareal Bank reviews its accounting-related Internal Control and Risk Management System on an ongoing basis. Necessary adjustments are made with respect to the accounting process based on the Bank's reviews. Adjustments may have to be made, for example, in connection with changes in the Group structure, to the business model, or due to new legal requirements.

Aareal Bank has to comply with legal requirements. If these requirements change, for example in the form of new laws or changes in accounting standards, the processes or IT systems will be adjusted as required in separate projects across divisions – based on a clearly-defined allocation of functions, and the accounting-related Risk Management System will be adjusted to take the amended rules into account. Current developments of statutory and legal provisions applicable for Aareal Bank are constantly monitored and communicated to the relevant divisions. This committee also initiates any required adjustments to be made to systems and processes, and reports the results to the Management Board.

Report on Expected Developments and Opportunities

Macro-economic environment

The economy and the financial and commercial property markets are exposed to a range of risks, with some downside risks intensifying or emerging over the course of 2022, while other risks have subsided. This was due, in particular, to Russia's invasion of Ukraine, which has resulted in tremendous humanitarian and economic problems. Other risks that could have a negative impact include a re-intensifying Covid-19 pandemic, despite a lessening in the severity of the disease, as well as persistently high inflation. Moreover, excessive or inadequate monetary tightening by central banks, increased public and private debt, supply chain disruptions, doubts about the cohesion of the European project, geopolitical risks as well as the consequences of the transformation of the economy towards more climate neutrality represent additional material risks.

The immediate consequences of the war in Ukraine and mutual sanctions between the West and Russia are already having a serious negative impact on many economies, which would likely be exacerbated if the conflict continues. Direct economic effects include supply chain disruptions and higher commodity prices, alongside increased uncertainty and heightening risk aversion amongst market participants, which pose a threat to growth. The war has also fuelled high inflation rates, lowering real incomes and – in conjunction with the increased cost of production and share price declines in the financial markets – burdening aggregate demand.

A re-intensification of the Covid-19 pandemic – due to high rates of new infection and virus mutations or due to vaccination programmes failing to show effect – could slow down or halt global economic activity. A reintroduction of infection control measures may have adverse consequences on demand and the services sector in particular. However, such Covid-related risks have weakened considerably.

While energy and commodity prices were the main drivers of inflation in the first half of 2022, price pressures have become increasingly broad-based, pushing inflation in many economies to its highest level in several decades. To the extent that demand in the future continues to be met by supply shortages, prices of some goods and services may continue to rise, contributing to high inflation rates and possibly to persistently higher inflation expectations.

Another uncertainty stems from the potential for excessive tightening of monetary policy by central banks, accompanied by a further significant increase in key interest rates and faster than expected balance sheet contraction, incurring potentially grave consequences for financial and property markets. For instance, bond market yields could rise significantly, as already observed in 2022, accompanied by valuation declines in equity and property markets, resulting in a loss of wealth. Ultimately, decreasing macro-economic demand and loss of confidence amongst consumers and enterprises would burden the real economy. If borrowing conditions remain restrictive over the medium term, a phase of stagnation could ensue in some economies following a recession. At the same time, however, a reaction that is too weak also constitutes a serious macro-economic risk given the pronounced levels of inflation.

Another risk is rising government indebtedness as a consequence of massive fiscal stimulus alongside the slowdown in economic growth. With the phasing out of net purchases under bond purchase programmes and the increasing monetary tightening of central banks, risk premiums – especially for highly indebted sovereigns – could rise further. Non-financial corporate debt has expanded in many advanced economies, mainly reflecting bond issuance. A renewed escalation in the pandemic situation, reduced macro-economic activity or other risks could offer grounds for downgrading the ratings of these bonds.

Global value and supply chains continue to face disruptions, although an easing was observed over the second half of 2022. If existing supply bottlenecks persist or tighten further, this would constitute a significant risk factor that would slow down economic growth as a whole, with a particular impact on production output in the manufacturing sector.

The political shift away from European cohesion poses a significant threat not only to the EU, but also to Europe, in the longer term. This refers especially to governments in Central and Eastern Europe with nationalist attitudes/tendencies. The Covid-19 pandemic, the slowing of economic growth and concerns about a recession have also elevated the risk of a rise in populism in several countries. The reform backlog and structural economic problems in some euro zone countries present further uncertainties, risk and stress factors. Although the EU's investment package is aimed at supporting these countries in particular, there is still a risk that the measures will not be quite enough to stem structural problems.

The risk of disruption to free trade is still present and could intensify again in the future. In addition, further geopolitical risks, such as cyberattacks, terrorism and sabotage of critical infrastructure, as well as political and military conflicts, could have a significant impact on markets and their participants. The effects of potential decoupling, e.g. between China and Western economies, could also dampen global growth prospects.

The efforts of many countries and companies to limit global warming require a radical transformation of the entire economy. The macro-economic impact of this transition is uncertain, and the actual effects depend on a number of factors. Similarly, this change entails costs that will likely be borne by companies and end-consumers alike. Decarbonisation, for instance, not only involves energy supply, but also requires significant changes in industry, transport, construction and agriculture. The economic transition, however, is also an opportunity – not only for climate action, but also for sectors and property markets if they manage to capitalise on the situation. In addition to the transition costs incurred in decarbonising the global economy, the costs directly attributable to climate change will also increase over the medium term. Extreme weather events, temperature fluctuations and more frequent extreme heat events are causing physical damage that will intensify over time. The extent of the increase in this physical damage will depend on how well the global community succeeds in reducing greenhouse gas emissions.

These factors in the context of overall economic development are also of relevance for the financial and capital markets, as well as property markets, as they could lead to renewed disruptions should they materialise to any significant degree.

Economy

Numerous stress factors support the view that global economic growth will be weaker in 2023 than in 2022. The path of economic development will depend on the extent to which disruptions in global supply chains continue to abate, providing supply-side relief for manufacturing and upward price pressures. Many advanced economies are expected to fall into recession, followed by a recovery from mid-2023 onwards that will be weak in historical comparison. At the beginning of the year in particular, continuing high inflation rates will reduce real household incomes and push up costs for companies, which will have a dampening effect on spending and production. Higher interest rates are also likely to weigh on aggregate demand. Likewise, demand for services is also expected to weaken, following strong gains in 2022 driven by the removal of contact restrictions. As the economy cools off, unemployment rates will also begin to climb again, though they will remain at a low level.

Real gross domestic product in the euro zone is expected to decline overall in 2023, albeit only marginally. High inflation rates and the energy crisis account for the main reasons behind a mild recession over the winter and negative economic growth in the first quarter. Particularly economies with a large industrial sector, such as Germany, should grow more slowly than the euro zone as a whole. Fiscal policy will remain expansionary, but the extent and nature of the measures will vary greatly from country to country.

In the UK, real economic growth is expected to be significantly negative for the full year 2023, led downward by a continued decline in real household incomes and dwindling private consumption. Moreover, increased borrowing costs and a tightening of fiscal policy are putting the brakes on aggregate demand.

Looking to the US, we expect growth to slow in 2023 as a whole, but unlike in the euro zone and the UK, it is still likely to be modestly positive. The combination of high inflation, monetary tightening, the slowdown of the global economy, increased unemployment and falling corporate profits will weigh on investment and private consumption. Private consumption – a mainstay of the economy in the past – will be adversely affected by the removal of income support and the shrinkage of excess savings.

China's economic development in 2023 will be characterised by weak external demand and subdued property investment. However, targeted economic policy relief and infrastructure spending, together with a recalibration of Covid measures will help to deliver positive economic growth. Comparable to China, Australia is also expected to show positive real growth in 2023 – though private consumption is expected to weaken relative to the previous year, as household budgets are severely strained by strong inflation in basic consumer goods. Exports and imports look set to continue their positive momentum, supported by the recovery of the services sector.

Financial and capital markets, monetary policy and inflation

The risks and uncertainty factors referred to above are also significant for the financial and capital markets and could once again cause disruption. Elevated inflation rates, monetary policy tightening, and increased uncertainty were reflected over the course of 2022 in higher refinancing costs, a state of affairs likely to persist in the short term depending on macro-economic and political conditions. Major central banks most recently clearly confirmed their intentions to focus on price stability, and no longer on stimulating the economy and the labour market.

In 2023, we expect the funding markets relevant for Aareal Bank to remain open, and to exhibit greater stability.

In view of the high inflation rates, and despite increased recession risks, monetary policy is expected to become even more restrictive in the coming months. Although inflationary pressure is likely to subside, the major central banks will adhere to the path of monetary tightening for the near term. By mid-2023, key rates in most advanced economies are projected to have risen to restrictive levels, while inflation rates begin to moderate towards their target levels. Accordingly, there should be an easing of pressure to raise rates further. As another instrument of monetary policy, central banks' holdings of securities will be gradually reduced throughout 2023, but this in itself should have only a limited impact on the yields of affected government bonds.

Inflation is expected to fall sharply in most economies in 2023 as sinking commodity prices, slowing economic activity and an unwinding of supply chains feed through to price pressures.

Regulatory environment

While the Covid-19 pandemic had a temporary impact on the regulatory environment, as various regulatory initiatives were postponed and temporary relief for institutions was adopted as an immediate reaction to the outbreak of the pandemic, the trend towards stricter regulatory frameworks is nevertheless expected to continue in the coming years. For instance, the finalisation of the Basel III framework, adopted by the Basel Committee's Group of Governors and Heads of Supervision (GHOS), will bring about extensive changes to the approaches used for determining risk-weighted capital requirements (a concept known as 'Basel IV'). The EU Commission submitted a proposal on this in October 2021, which will now be finalised as part of the trilogue procedure which is expected to take place in the course of 2023 according to the EU timetable. Based on the current status of negotiations, the proposed date for first-time application of the new regulation is 1 January 2025 – two years later than initially planned by the BCBS.

The EU also adopted a package of measures to overhaul its anti-money laundering and countering of terrorist financing frameworks. Aside from a new EU regulation and a revision of the applicable EU directives, it stipulates the creation of a new anti-money laundering and terrorist financing authority from 1 January 2023 onwards, which is to be fully established by 2025.

In addition, over the next few years, the regulatory environment will be increasingly defined by growing requirements with regard to sustainable business and ESG risk management. One of the main foundations here is the introduction and further expansion of the EU taxonomy for the classification of economic activities. Initial, minor disclosure requirements for ESG matters were applicable as of 31 December 2021 for the first time, with the scope increasing over time. Furthermore, the ECB conducted its first climate stress test in 2022. The requirement introduced for the first time under CRR II for large listed institutions to include qualitative and quantitative information on ESG risks in the regulatory disclosure report entered into effect on 31 December 2022.

ESG risk management will also play an increasingly important role in the context of risk management and the SREP. In addition, the supervisory authorities are also considering taking ESG factors into account when determining regulatory capital requirements.

In addition, several countries have already announced to (re-)introduce the countercyclical capital buffer previously suspended in almost all countries due to the Covid-19 pandemic. For instance, the package of macroprudential measures as resolved by the German Federal Financial Supervisory Authority (BaFin) in January 2022 provides for a reinstatement of the countercyclical capital buffer for risk exposures located in Germany as well as the first-time introduction of a sector-specific systemic risk buffer for loans collateralised by residential properties in 2023. This will result in increasing capital buffer requirements for the Bank.

Sector-specific and business developments

Structured Property Financing segment

The macro-economic risks and burdens described above are also of great relevance for the development of property markets.

Demand for commercial properties will vary in 2023, depending on the region and property type. Despite the current economic slowdown and the forecast recessions in many national economies, we continue to see a positive overall environment for property markets. Whilst higher interest rates are expected to influence investment decisions amongst buyers and sellers alike, as well as weighing on transaction volumes, the substantial accumulation of uninvested capital from investors around the world and an increasingly attractive yield level should counteract excessive downward pressure on demand. For the financing markets, the Bank anticipates that competition will persist, especially in regions and for property types that have already experienced high demand in recent years. Higher financing costs should counteract an increase in loan-to-value ratios; we thus assume stable to slightly declining LTV ratios for new business. However, improvements in the market environment could put direct pressure on margins, or result in higher loan-to-value ratios.

Particularly in light of monetary tightening, uncertainty remains for the commercial property sector. For example, the elevated cost of capital associated with rising interest rates will result in a lower valuation of commercial properties if these costs are not offset by rent increases. This is a particular risk for investors with variable interest payments or with a pending refinancing, and it intensifies as loan-to-value ratios rise. Moreover, further significant interest rate increases, for example due to excessive monetary tightening by central banks or very high inflation rates in the medium term, could put pressure on commercial property rents and cash flows through a decline in aggregate demand.

Other uncertainty factors and risks in the macro-economic environment are also relevant for commercial property markets, and various factors are expected to have an impact on how commercial property values develop in 2023. For example, increasing political uncertainty, economic downturns or investor restraint might all negatively affect property values. Despite an increasing tendency to view Covid-19 as an endemic rather than a pandemic disease, future new infections and hospitalisation rates continue to pose a risk for commercial property markets. This uncertainty relates in particular to possible new infection control measures, which are likely to have varying effects depending on the country and type of property, albeit not at the same level as in the past. A renewed tightening of contact limitations, travel restrictions or temporary business closures could have a negative impact on cash flows in 2023, particularly for hotel and retail properties. This risk, however, is assessed to be significantly lower than in previous years. Should the trend towards increased mobile working continue or even intensify, companies may decide to rent less office space. The transition to such a new way of working could exert pressure on rental prices for office properties and on the demand for office space. It can be assumed that the impact would vary depending on the market, country and property quality. On the other hand, co-working and communal working space will be increasingly sought after in a changing world of work, halting or even reversing the pre-pandemic trend of decreasing office space per employee.

For commercial property, we expect that the higher financing costs will likely impede an increase in value this year, and that market values will decline moderately on average.[1)] However, market value developments will be influenced not only by the quality and location of properties, but also increasingly by compliance with sustainability criteria (ESG).

1) It should be noted in this context that commercial property is a highly diverse asset class that can differ significantly by market, location, amenities, degree of modernisation, and other factors. The information presented here is to be understood as an overview; individual markets, sub-markets and individual properties may very well deviate from the average.

With a view to retail properties, we expect that the structural change in shopping habits will have a weakening effect on the outlook for value-driving rental revenues, depending on location and segment. Negative real income growth and weakening consumption, for example, are likely to lead to only moderate growth in rents before macro-economic conditions improve again. However, historically low unemployment rates and ample household savings should mitigate the negative impact on retail, so that we anticipate stable market values on average in 2023. It should be noted here that the retail market had already seen valuations decline in recent years. For hotel properties, also depending on location and segment, we foresee a positive development of occupancy and revenues in the next few years driven by increasing travel activity. However, the increase in yields is initially expected to have a slightly negative impact on market values before a recovery follows in subsequent forecast years.

We have a positive outlook for student housing, where demand from international students is already recovering significantly as a result of the return to face-to-face teaching. In addition, this property type is considered to possess a certain resilience, especially in times of economic uncertainty, so we expect investor interest to remain high in this segment.

For office properties, we expect market values to decline somewhat more strongly on average in 2023, as office yields increase and rental growth is expected to slow down or remain stable. This is due to potential changes in the demand for space and the increasing impact of sustainability requirements. We expect underperformance from properties that fail to comply with corporate environmental and sustainability goals along with government climate targets.

Logistics properties continue to be assessed positively, as structural demand drivers remain in place, which should lead to rising rental income in the near future. Overall demand will continue to be supported by a shift from just-in-time to just-in-case production. Companies are undertaking this shift in an attempt to counter supply chain challenges and prevent delays, leading to greater demand for warehouse space. However, rising yields on average will likely lead to slightly declining market values in the logistics sector in 2023.

As a matter of principle, it is worth noting that estimation uncertainty – concerning the economy, markets and the impact on Aareal Bank – is currently still at a high level. Therefore, in addition to our “baseline” scenario, we have simulated further potential macro-economic scenarios.

In line with current Group planning, our baseline scenario assumes the following macro-economic parameters:

in %	2022	2023	2024	2025
“Baseline” scenario				
Gross domestic product (year-on-year change in %)				
Euro zone	3.2	-0.1	2.0	2.1
US	2.0	0.1	0.9	2.1
UK	4.4	-0.9	1.5	2.7
Unemployment (%)				
Euro zone	6.7	7.2	7.1	7.0
US	3.7	4.2	4.6	4.0
UK	3.7	4.4	4.4	4.0
Long-term interest rates (10-year government bonds) (%)				
Euro zone	2.8	2.5	2.3	2.3
US	3.7	3.1	2.8	2.8
UK	3.3	3.2	2.9	2.3
Portfolio-weighted property price development (2022 basis = 100%)	100%	97%	97%	97%

In the Structured Property Financing segment, we aim to originate new business of between € 9 billion and € 10 billion for the 2023 financial year, so that Aareal Bank Group’s property financing portfolio will amount to approximately € 32 billion to € 33 billion at the end of 2023, subject to exchange rate fluctuations. To manage our portfolio and risk exposure, we also use syndications.

The forecasts are based on the assumption that the macro-economic risks and uncertainty factors described above will not materialise to a significant extent, or only in a manageable manner: otherwise, they might influence business development, for example, in terms of new business.

Banking & Digital Solutions segment

Despite the Covid-19 pandemic and the war in Ukraine, the German housing and commercial property industries are expected to continue to see solid development in 2023. The current demand pressure will see the housing market manifest itself as a landlord's market for the foreseeable future: Even with completion figures for new housing units and approval figures for building applications at a high level, the completion targets set at 400,000 units per year by the federal government are routinely not being achieved. The construction backlog thus now stands at over 800,000 housing units and will not be reduced any time soon, due to cost increases in the construction sector, a lack of available building capacity and price increases for building plots. Additional cost increases are resulting from the goal of climate neutrality, which can only be achieved through new buildings and the renovation of existing properties.

Even though the Bank's market share in the institutional housing industry is already high based on the number of residential units, we see excellent opportunities for acquiring new clients and enhancing our existing client relationships in the course of the 2023 financial year. We plan to achieve this in particular by continuing to invest in the expansion of the "Housing Industry Ecosystem", the cross-sector development of interface products, and the expansion into related ecosystems, such as companies from the utilities and waste disposal industries.

Our expectation is that, given the economy-wide rises in cost levels, companies in these sectors will have an increased interest in process optimisation measures to reduce costs. Here, we can support our clients with our solutions in automated payment transactions and with advanced digital processes.

In our view, the range of services that connect alternative digital payment solutions to existing systems – thus helping to overcome process gaps (even across industry sectors) – are particularly attractive. With the AI-supported intelligent invoicing and dunning system of our subsidiary CollectAI, acquired in 2022, we plan to support our clients in setting up digital receivables management for customers in the housing and energy industries.

Further growth is anticipated from the integrated tenant deposit guarantee product Aareal Aval and from Aareal Meter, a solution that uses mobile meter reading and subsequent data capture without disrupting traffic to provide a digital solution to a labour-intensive analogue process gap.

Against this background, we are aiming for renewed net commission income growth over the previous year (2022: € 31 million) and expect the average deposit volume from the housing industry to remain around € 13 billion, with significant net interest income as a result.

Aareon segment

Aareon will continue its growth strategy in the 2023 financial year, with the declared objective of becoming a "Rule of 40" SaaS company. This indicator is calculated as the sum of revenue growth and adjusted EBITDA margin, and is targeted to exceed 40% in order to strike a balance between growth and profitability.

Aareon's consolidated sales revenues for the 2023 financial year are expected to increase to between € 325 million and € 345 million (2022: € 308 million). The main revenue driver is recurring business with SaaS, subscription and maintenance contracts, which have been increasingly offered since 2021. Especially when using software as a service, clients benefit from the added value of a cloud solution. The continued expansion of new client business and further cross-selling of digital products to existing clients to help them grow their digital ecosystem is also contributing to revenue growth. As a result, licence business will continue to decline in 2023, as the trend towards SaaS solutions will continue. Organic growth will be complemented by inorganic growth through mergers & acquisitions in line with the corporate strategy. On the other hand, as part of our sharper focus on our core business, the subsidiary phi-Consulting GmbH, which specialises in consulting for the utilities industry, was sold in the first quarter of 2023, based on the contract signed in December, which is one reason why Professional Service revenues will increase only slightly compared to 2022. Due to strategic cost optimisation measures, costs are expected to increase only slightly in 2023. Adjusted EBITDA[1] is expected to be significantly higher than in the previous year, coming in at between € 90 million and € 100 million (2022: € 75 million). Adjustments will be around € 40 million higher than in the previous year (2022: € 23 million) and include M&A-related costs alongside an efficiency enhancement investment budget of around € 35 million.

Significant revenue drivers in the ERP business are the products Wodis Yuneo in Germany, Austria and Switzerland (the 'DACH' region), Tobias 365 in the Netherlands, Arthur Online in the UK and Momentum in Sweden. The roll-out will continue for the new product generations Wodis Yuneo and Tobias 365. Additional new customer acquisitions and an expansion of the product range will contribute to the growth of Arthur Online. Swedish Momentum, acquired in June 2022, will be consolidated for the full twelve months in the 2023 financial statements. The trend towards SaaS solutions will also continue in the Digital Solutions segment and the licence business will consequently decline. Revenue from CRM (Customer Relationship Management) products will increase, due to demand for the solutions of the acquired companies Cubic Eyes B.V., OSRE B.V. and wohnungshelden GmbH, as well as further penetration within the client base. Significant increases are also expected in SRM (Supplier Relationship Management) products with existing clients. The revenues of the remaining digital solutions will be on par with the previous year.

Strategic focus

Aareal Bank Group's strategy focuses on sustainable business success. Environmental, social and governance aspects are therefore key elements of its business strategy. In 2022, we substantiated these aspects with ESG targets. The medium-term strategic development is therefore being pursued under the guiding principle of "Aareal Next Level". The general strategic orientation will continue – with international commercial property financing on the one hand, and consulting services and digital solutions for the institutional housing sector in Europe and related industries on the other.

Based on the "Aareal Next Level" strategy, individual business activities will be developed further, in a targeted manner, in order to sharpen their own independent profiles, accelerate the Group's growth overall, and create value for shareholders and other stakeholders. Specifically, the Bank wants to continue exploiting opportunities for profitable growth.

The Structured Property Financing segment continues to focus on the controlled, risk-conscious expansion of its portfolio volume within its target range, considering ESG criteria and taking advantage of its flexible approach with regard to countries, property types and financing structures. We will continue to use syndications as one of the tools for active portfolio management. In addition, we intend to actively reduce non-performing loans (NPL) and sustainably lower the NPL ratio.

Within the Banking & Digital Solutions segment, Aareal Bank aims to expand its equity-light business in particular, and thus increase net commission income. This will be achieved principally by expanding its product offering, leveraging its USPs in payments and digital solutions, and through further strategic partnerships. The Bank aims to maintain a high average deposit volume from the housing industry.

Aareon's position as a provider of ERP Software and digital solutions for the European property industry and its partners is set to be expanded further – with the clear objective of developing Aareon into a "Rule of 40" company. Together with its partner Advent International, the Group aims to maintain the pace of Aareon's growth and further increase its profitability, through organic growth initiatives as part of the Value Creation Programme, as well as initiatives to enhance the existing product portfolio's efficiency and improve the cost/income mix for Aareon Group. An institutionalised M&A pipeline and a credit facility are in place to support inorganic growth.

Besides the growth initiatives for the three segments, Aareal Bank Group will use additional levers to sustainably raise profitability, including an optimisation of the funding mix and the capital structure. In addition, numerous measures are being implemented to enhance the efficiency of the organisational structure, processes and infrastructure.

[1] Earnings before interest, taxes, depreciation and amortisation before new products, Value Creation Programme (VCP), ventures, M&A activities and non-recurring effects

Atlantic BidCo GmbH (the “Bidder”), a bidder company indirectly held by funds managed and advised by Advent International Corporation and Centerbridge Partners as well as CPP Investment Board Europe S. à. r. l., a wholly-owned subsidiary of the Canada Pension Plan Investment Board, and further minority shareholders, announced on 30 May 2022 that it had secured 74.62 % of Aareal Bank shares after the end of the acceptance period, thus exceeding the minimum acceptance level of 60 % set out in the course of the voluntary public takeover offer. On 16 June 2022, Atlantic BidCo GmbH announced that it had secured a total of 83.8 % of Aareal Bank shares after the end of the statutory additional acceptance period. Closing of the takeover is subject to regulatory approvals and is expected to take place in spring 2023.

Future cooperation will be based on the Investment Agreement concluded between Aareal Bank and Atlantic BidCo GmbH in conjunction with the transaction. In the Investment Agreement, the Bidder commits to supporting Aareal Bank Group’s strategic ambitions to strengthen its position as a leading international provider of property financings, as well as software, digital solutions and payments services – based on the “Aareal Next Level” strategy – and to expedite growth in all of the Group’s segments. This would be facilitated by the Bidder’s extensive experience in the financial services, software and payments sectors, and by increasingly retaining profits in the next few years. Based on a business plan supported by the Bidder, this would generate significant additional funds for attractive growth opportunities in all three segments.

Group targets

Taking into account additional investments in the swift reduction of non-performing loans (NPLs) of around € 60 million and in Aareon of around € 35 million, Aareal Bank Group expects consolidated operating profit for the 2023 financial year to be between € 240 million and € 280 million (2022: € 239 million). On this basis, earnings per share (EpS) are expected to amount to between € 2.40 and € 2.80 (2022: € 2.32), while RoE after taxes should range between 5 % and 6.5 % (2022: 5.0 %). Excluding these one-off effects of just under € 100 million, operating profit is thus likely to be up to € 350 million, which was originally targeted for 2024. Yet the environment remains challenging: The impact of the war in Ukraine and the associated geopolitical and macroeconomic uncertainty remain very difficult to estimate.

Aareal Bank Group expects income to continue to rise significantly vis-à-vis the previous year. Net interest income should pick up further due to the targeted expansion of the credit portfolio, a better funding mix and positive effects of higher market interest rates on the deposit-taking business, reaching between € 730 million and € 770 million (2022: € 702 million). Net commission income is also set to rise, thanks in particular to Aareon’s growth, to between € 315 million and € 335 million (2022: € 277 million).

Loss allowance, including additional planned allowance of around € 60 million for a swift NPL reduction, is expected to be in the range of € 170 to € 210 million (2022: € 192 million). This also includes credit risk induced measurement losses of defaulted property loans, which are reflected in the net gain or loss from financial instruments (fvpl). The impact of the war in Ukraine, both in relation to our limited exposure in Russia as well as to the economic consequences of the imposed sanctions and escalated geopolitical tensions, is currently very difficult to assess.

Administrative expenses are expected to be above the previous year’s level, in a range between € 590 million and € 630 million (2022: € 571 million), due to growth and Aareon’s efficiency enhancement investment budget of around € 35 million.

In the Structured Property Financing segment, we plan to achieve a portfolio size of around € 32 billion to € 33 billion by the end of the year, market conditions permitting and subject to exchange rate fluctuations. Aareal Bank plans new business volume of € 9 billion to € 10 billion on this basis.

For the Banking & Digital Solutions segment, Aareal Bank projects growth in net commission income and an average deposit volume from the housing industry of around € 13 billion.

Aareon’s sales revenues are expected to increase to between € 325 million and € 345 million in the current year (2022: € 308 million). Adjusted EBITDA[1] is also likely to see a marked increase to between € 90 million and € 100 million (2022: € 75 million).

[1] Earnings before interest, taxes, depreciation and amortisation before new products, Value Creation Programme (VCP), ventures, M&A activities and non-recurring effects

With regard to capitalisation, Aareal Bank continues to expect a solid CET1 ratio (Basel IV phase-in) of markedly more than the standardised capital requirement of 15%, despite the planned portfolio growth and subject to further regulatory changes.

Takeover Disclosures in Accordance with Section 315a (1) of the German Commercial Code (HGB)

Composition of subscribed capital, and rights and obligations attached to shares

The composition of Aareal Bank AG's subscribed capital is shown in the Note "Equity" to the consolidated financial statements. Each share casts one vote at a General Meeting. There are no shares with special rights granting supervisory powers to any shareholder or shareholder group. The Company currently does not hold any treasury shares, which would not be entitled to vote.

Restrictions affecting voting rights or the transfer of shares

The transfer and exercise of voting rights is governed exclusively by legal restrictions. Voting rights are not limited to a certain number of shares, or of votes. All shareholders who have registered to attend a General Meeting in good time, and who have provided the Company with evidence of their shareholding and their right to vote, are entitled to attend the General Meeting, and to exercise their voting rights from all shares held and so registered. The exercise of voting rights from the shares concerned is precluded by law in the cases where section 136 of the German Public Limited Companies Act (Aktiengesetz – "AktG") applies. Where the Company holds treasury shares, section 71b of the AktG prohibits the exercise of rights vested in such shares. We are not aware of any other restrictions affecting voting rights or the transfer of shares.

Shareholdings exceeding 10% of voting rights

Details regarding any shareholdings exceeding 10% of voting rights are provided in the Note "Disclosures pursuant to section 160 (1) no. 8 of the AktG".

Shares with special rights granting the holder supervisory powers

Aareal Bank AG's Memorandum and Articles of Association do not grant any shareholder the right to nominate members to the Supervisory Board, nor are there any other shares with special rights granting the holder supervisory powers.

Type of control of voting rights regarding shares held by employees with their rights of control not being directly exercised

There are no Aareal Bank AG shares held by employees where the rights of control cannot be directly exercised.

Statutory provisions, and provisions in the Memorandum and Articles of Association regarding the appointment and removal of members of the Management Board, and regarding amendments to the Memorandum and Articles of Association

The appointment and removal of members of the Management Board of Aareal Bank AG is carried out in accordance with sections 84 and 85 of the AktG and Article 7 of the Memorandum and Articles of Association, according to which the Management Board must have a minimum of two members. The Supervisory Board shall appoint the Members of the Management Board and determine their number. The Supervisory Board may appoint deputy members, and may appoint one member of the Management Board to be the Chairman of the Management Board. The members of the Management Board are appointed for a maximum term of five years. This term of office may be renewed or extended for a maximum of five years in each case.

Pursuant to section 179 of the AktG, the Memorandum and Articles of Association may be amended by way of resolution passed by the General Meeting. Resolutions of the General Meeting regarding amendments to the Memorandum and Articles of Association are passed by a simple majority of the votes cast, or – to the extent permitted by law – by the majority of the issued share capital present at the Meeting. In accordance with section 181 (3) of the AktG, such amendments become effective upon their entry in the Commercial Register. In the event of a capital change, the Supervisory Board is authorised to modify the wording of the Articles of Association in line with the amount of the capital change (Article 5 (7) of the Memorandum and Articles of Association).

Authorisation of the Management Board to issue or repurchase shares

Authorised capital

For details regarding authorised capital, please refer to the “Equity” section in the Notes.

Conditional capital

For details regarding conditional capital, please refer to the “Equity” section in the Notes.

Authorisation to purchase treasury shares

For details regarding the authorisation to purchase and sell treasury shares, please refer to the “Equity” section in the Notes.

Material agreements which are subject to change of control clauses triggered in the event of a takeover offer

There are no material agreements which are subject to change of control clauses triggered in the event of a takeover offer. Any public offers to acquire the Company’s shares are governed exclusively by the law (including the provisions of the German Securities Acquisition and Takeover Act), and the Memorandum and Articles of Association.

Compensation agreements entered into with members of the Management Board or employees in the event of a takeover offer

For details regarding compensation agreements entered into with members of the Management Board or employees in the event of a takeover bid, please refer to the Remuneration Report.

Separate Combined Non-financial Report

The Separate Combined Non-financial Report pursuant to sections 289b (3) and 315b (3) of the HGB has been published on the Company’s website, on www.aareal-bank.com/en/responsibility/reporting-on-our-progress/.

Corporate Governance Statement

Since Aareal Bank AG is the only listed Group entity, and also the Group’s parent undertaking, only one Corporate Governance Statement will be issued.

The full Corporate Governance Statement pursuant to sections 289f and 315d of the HGB is publicly available on the Company’s website (www.aareal-bank.com/en/about-us/corporate-governance/), and in the “Transparency” section of the Group Annual Report. It contains a reference to the Remuneration Report, which is also published on the website.