Annual Report 2023

Deutsche Pfandbriefbank Group

OVERVIEW

Deutsche Pfandbriefbank Group (pbb Group)		2023	2022
Operating performance according to IFRS			
Profit before tax	in € million	90	213
Net income	in € million	91	187
Key ratios			
Cost-income ratio[1)]	in %	45.8	45.6
Return on CET1 capital before tax[2)]	in %	2.4	6.9
Return on CET1 capital after tax[2)]	in %	2.4	6.0
Earnings per share	in €	0.51	1,27
New business volume Real Estate Finance[3)]	in € billion	7.2	9.0
Balance sheet figures according to IFRS		**31.12.2023**	**31.12.2022**
Total assets	in € billion	50.9	53.0
Equity	in € billion	3,4	3,4
Financing volumes Real Estate Finance	in € billion	31.1	29.3
Key regulatory capital ratios[4)]		**31.12.2023**	**31.12.2022**
CET1 ratio	in %	15.7	16.7
Own funds ratio	in %	19.5	21.8
Leverage ratio	in %	6.2	5.9
Staff		**31.12.2023**	**31.12.2022**
Employees (on full-time equivalent basis)		806	791
Long-term issuer rating/outlook[5)6)]		**31.12.2023**	**31.12.2022**
Standard & Poor's		BBB/Negative	BBB+/Stable
Moody's Pfandbrief rating[5)6)]		**31.12.2023**	**31.12.2022**
Public sector Pfandbriefe		Aa1	Aa1
Mortgage Pfandbriefe		Aa1	Aa1

[1)] Cost-income ratio is the ratio of general and administrative expenses and net income from write-downs and write-ups on non-financial assets to operating income.
[2)] Return on CET1 capital before tax respectively after tax is the ratio of profit before tax (net income) attributable to pbb shareholders less AT1-coupon and average CET1 capital.
[3)] Including prolongations with maturities of more than one year.
[4)] Values as of 31 December 2023 after confirmation of the 2023 financial statements, less AT1-coupon. Values of 31 December 2022 after confirmation of the 2022 financial statements, less AT1-coupon and dividend payment.
[5)] Please refer to the "Report on economic position" for a detailed description of the ratings. On 14 February 2024, Standard & Poor's lowered the long-term issuer rating to BBB- with a continued negative outlook.
[6)] The ratings of unsecured liabilities may diverge from the issuer ratings.

Information due to rounding

Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Explanation of alternative performance measures

For further information regarding the definition, usefulness and calculation of alternative performance measures see "investors/financial-reports" at www.pfandbriefbank.com.

Presentation of personal designations and personal words

The masculine form is used to improve the readability of personal designations and personal words. These terms apply to all genders.

Contents

Letter from the Management Board

Dear shareholders, dear business partners,
Ladies and Gentlemen,

The 2023 financial year was challenging in many respects: the German economy failed to gain momentum, with the gross domestic product even shrinking slightly at year end and resulting in a recession on our domestic market. Even though the pace of inflation slowed, consumer prices remained well above the inflation rate of around 2% targeted by the European Central Bank. Interest rates appear to have reached a plateau, although the central banks are likely to be more reluctant to cut interest rates in the new year.

In addition to the war in Ukraine, another conflict of international proportions has broken out in the Middle East, causing great suffering for the people in the region. The conflicts will continue to have an impact on the economies within the EU and beyond in 2024. Signs of economic growth are still few and far between. Only the labour market figures suggest that the employment markets are extremely robust.

As the leading European specialist bank for commercial real estate finance, pbb was not entirely immune to the challenging market developments. The aforementioned effects had a stronger impact in the US in particular than on the European markets. Despite the resulting need for high additions to allowances for losses on loans and advances, pbb was able to generate a significant profit before tax and maintain its solid capital position.

In the 2023 financial year, pbb Group generated a profit before tax of € 90 million in this extremely challenging environment. It thus remained profitable despite all the resistance. The financing volume in the core business, Real Estate Finance, increased by € 1.8 billion to € 31.1 billion, while the volume of new business (including extensions of more than one year) totalled € 7.2 billion. At 15.7% (CET1 ratio), the core capital ratio was above the bank's requirement level. The liquidity coverage ratio (LCR) was 212% as at 31 December 2023, 112 percentage points above the 100% required by the regulatory authorities. The Bank has thus demonstrated its resilience in the most important key figures, even though profitability has suffered as a result of market developments and the high level of investment in the strategic development of the business model.

The bank has made good progress in diversifying its business model over the past year. A powerful team with many years of expertise has been built up for the future expansion of the capital-efficient commission business through the new business area of Investment Management. The first fund products will be launched in 2024. In addition, pbb has established a joint venture with project developer Groß & Partner to advise its clients as an expert on all aspects of ESG and to offer holistic solutions for green transformation. The funding base was also significantly broadened. Deposits from private clients via pbb direkt were increased to € 6.6 billion as at 31 December 2023, meaning that a large part of the target volume for the end of 2026 has already been raised.

ESG continues to play a special role for pbb. With its current ESG strategy, the Bank has adopted a comprehensive concept that supports the political goal of achieving a 1.5 degree climate alignment by 2050. In addition to optimising internal processes in order to further reduce its own environmental and social footprint, focus is primarily on the real estate loan portfolio and the resulting CO_2 emissions. The bank has started to scrutinise the portfolio closely and has now analysed almost 75% of it. This has created transparency as the basis for forward-looking measures to further develop the loan book.

We want to drive forward the transformation of the commercial property sector into a climate-neutral future and, not least, fulfil our social obligation. The topic of green finance will be an important element of the bank's strategic direction in all growth initiatives. By 2026, more than 30% of the portfolio properties we finance should meet green criteria in accordance with the pbb Green Loan Framework.

We will continue to endeavour to create sustainable added value for our shareholders while maintaining a solid financial position. However, market conditions are likely to remain challenging, especially in the first half of 2024. With its extensive real estate expertise, pbb believes it is in a position to operate profitably throughout the property cycle.

Best wishes,

Kay Wolf
Chief Executive Officer

Thomas Köntgen
Deputy Chief Executive Officer
Real Estate Finance

Pamela Hoerr
Member of the Management Board
pbb Invest

Andreas Schenk
Member of the Management Board
Chief Risk Officer

Marcus Schulte
Member of the Management Board
Chief Financial Officer

Report of the Supervisory Board

Dear shareholders,

As expected, the business enviroment in the 2023 financial year was challenging. In addition to the many geopolitical conflicts and their macroeconomic consequences, the banks and the real estate markets were particularly affected by the noticeable significant rise in interest rates. In addition, the office markets, in particular, were affected by the continuing uncertainty about the impact of the home-office trend and the resulting decline in investment activity. Pbb anticipated these challenges at an early stage and took appropriate measures. In 2023, for example, the bank continued to apply the stricter risk parameters for new business that have been in place since the start of the COVID-19 pandemic and acted only very selectively in individual sub-markets. At the same time, pbb has embarked on a comprehensive strategic programme to develop its business model and improve profitability. In addition to an even stricter price/risk selection in new business, the main pillars of the strategy include the expansion of the capital-efficient commission business through a new business segment Investment Management and the further diversification of the refinancing base through the expansion of retail deposits. At the same time, the bank is focusing on green finance and digitalisation across the board, as well as implementing a cost-cutting programme.

However, as one of the leading providers of commercial real estate finance in Europe, pbb was not entirely immune to the diffi-cult market conditions. These effects were felt more strongly in the US than in Europe. Despite the resulting need for high addi-tions to loan loss allowances, pbb was able to generate a significant positive pre-tax result and maintain its solid capital posi-tion.

The ongoing review of market developments, risk models and the bank's risk situation in close cooperation with management was a key focus of the Supervisory Board's work during the past year.

In addition, the Supervisory Board closely monitored the implementation of the aforementioned bank-wide strategy program in 2023 and regularly discussed it in detail with the Management Board. Many sub-targets have already been achieved or are progessing well. Profitability has improved in the core business with rising margins. In addition, the deposit business has been continuously expanded and average maturities have been significantly increased. By merging the public investment financing business with the Value Portfolio into a non-core segment, a stronger focus on the core business in commercial real estate financing was achieved. At the same time, the foundations were laid for increasing commission income. The new pbb invest brand was presented for the first time at EXPO REAL. With Universal Investment and Hauck Aufhäuser Lampe as service AIFMs and Amundi Germany as sales partner, preparations are underway for a real estate equity fund and a debt fund. In Green Con-sulting, the company Eco Estate GmbH was founded together with Groß & Partner to provide comprehensive advice on the sustainable transformation of real estate properties. And finally, constructive discussions and the agreement with the works council, as well as the current redesign of the IT service contracts, have created the conditions for a timely reduction in the cost base.

PERSONALIA

A key focus of the Supervisory Board in 2023 was on succession planning for the Management Board and Supervisory Board.

Dr Pamela Hoerr, who initially joined pbb as senior general manager on 17 April 2023, became a member of the Management Board of pbb on 17 January 2024, where she is responsible for Investment Management, Property Analysis & Valuation and, since 1 March 2024, also for Human Resources. Dr Pamela Hoerr has extensive expertise and many years of experience in fund and asset management for real estate from her previous positions, including at Patrizia AG and most recently on the Manage-ment Board of REAL I.S. As part of a reorganisation of the Management Board's business responsibilities and in anticipation of the scheduled termination of Andreas Arndt's Management Board activities, Marcus Schulte took over the role of CFO from Andreas Arndt in December 2023.

At an early stage, the Supervisory Board started to prepare for the succession of Andreas Arndt, whose ten years on the Man-agement Board – including eight years as CEO - were scheduled to end in 2024. As part of a formal and structured process, a large number of candidates were screened and a selection of these were interviewed by the Supervisory Board. As a result of this selection process, the Supervisory Board appointed Kay Wolf as a member of the Management Board with effect from 1 February 2024. On 1 March 2024 he assumed responsibility as CEO and the associated business segements Communications & Investor Relations, Corporate Office & Corporate Development, Legal and Internal Audit. Kay Wolf joins from Deutsche Bank AG, where he was most recently Chief Risk Officer of the Private Bank Division. He started his career at Deutsche Bank AG in 1997 as a trainee. He then held various positions in the credit business, including in London. From 2006 to 2010, he worked for one of pbb's predecessor institutions, most recently as Chief Information Officer. This was followed by various positions at Postbank AG, including Chief Credit Officer, before becoming a member of the Management Board and Chief Risk Officer of Deutsche Bank Privat- und Firmenkundenbank AG.

The Supervisory Board thanks Andreas Arndt for his extraordinary commitment over the past ten years and wishes him all the best for the future. Together with his Management Board team, he brought the bank back to the market after the financial crisis and has led pbb with a steady hand ever since, also expanding pbb's market position internationally.

The Supervisory Board also filled two vacant seats on the Supervisory Board during the past year. At several meetings, the Supervisory Board dealt in particular with succession planning for Dr Günther Bräunig, the current Chairman of the Supervisory Board of pbb, who, after many years of service to pbb, did not seek reappointment at the Annual General Meeting in 2023. Dr Günther Bräunig has been a member of pbb's Supervisory Board since 2009 and its Chairman since 2014. During his tenure, pbb's business model was fundamentally overhauled and the bank was floated on the stock exchange. Under his supervision, pbb was profitable in its core business even in turbulent times. Dr Günther Bräunig has also consistently driven forward the long-term appointment of a stable and experienced Management Board team and the competent extension and renewal of the Bank's Supervisory Board. Following the completion of a structured selection process initiated in 2022, the Supervisory Board decided in January 2023 to propose Dr Louis Hagen for election to the Supervisory Board at the Annual General Meeting. On 25 May 2023, the Annual General Meeting finally elected Dr Louis Hagen to the Supervisory Board until the end of the Annual Gen-eral Meeting in 2027. Dr Louis Hagen joined the Management Board of Münchener Hypothekenbank eG in 2009 and was ap-pointed Spokesman of the Management Board in 2010 and Chairman of the Management Board in 2016. He remained in this position until January 2023. He was also President of the Association of German Pfandbrief Banks (vdp) from 2016 to 2022. He began his career in 1977 at Bayerische Vereinsbank AG. He then completed his law studies with a doctorate. Since then, Dr Louis Hagen has been active in mortgage banking and brings this expertise to pbb.

After a long and successful tenure since 2015, Dr Thomas Duhnkrack retired from the Supervisory Board at his own request on 15 November 2023. Considerable thought was given at an early stage to identifying the most suitable candidate to fill the sub-sequent vacancy. In addition to the legal and regulatory requirements (in particular expertise, reliability, avoidance of conflicts of interest and maximum number of offices held), all considerations were based on the skills profile of the Supervisory Board and pbb's current diversity policy, i.e. the same approach as for the previous appointment of Dr Louis Hagen. On this basis, the Supervisory Board, together with the Management Board, decided to apply for the judicial appointment of Karim Bohn to the Supervisory Board, which was approved by the District Court on 30 November 2023. He fulfils the Supervisory Board's re-quirements profile to an outstanding degree due to his many years of experience in investment banking, at private equity com-panies and, in particular, his work as CFO at various real estate companies such as GAGFAH, Süddeutsche Wohnen and Patri-zia AG, and his experience makes him a valuable addition to the Supervisory Board. The court appointment runs until the end of the Annual General Meeting in 2024. The Supervisory Board will propose to the Annual General Meeting that Karim Bohn's term of office be extended.

The Supervisory Board explicitly thanks Dr Günther Bräunig and Dr Thomas Duhnkrack for their high level of commitment and their contribution to the positive development of pbb.

CORPORATE GOVERNANCE

As in previous years, the Supervisory Board continuously monitored the Management Board in the 2023 financial year and pro-vided it with regular advice on strategic management of the Company. As always, supporting ongoing business development, continuously developing the business strategy and monitoring the corresponding risks were key focuses for the supervisory and advisory activities of the Supervisory Board. Throughout the year the Supervisory Board concentrated on the ongoing reporting on strategic projects and initiatives – such as the launch of the new pbb invest segment – as well as the topics of ESG and Green Lending as well as digitalisation. As in the past, particular attention was devoted to issues concerning supervi-sion law and IT as well as the exchange with the supervisory authorities. In addition, the Supervisory Board increasingly fo-cused on and discussed the feedback and interests of shareholders.

The Supervisory Board assured itself in all cases that the management measures taken by the Management Board were lawful, appropriate, due and proper. The Management Board fulfilled its duties to provide information and informed the Supervisory Board in a regular, timely and comprehensive manner, both in writing and orally, about matters and measures relevant to the Company. This also included information on any deviations between target and actual figures or developments. The members of the Supervisory Board had sufficient opportunity at all times to critically assess the reports and proposed resolutions sub-mitted by the Management Board, and to make their own suggestions during Supervisory Board committee meetings and during the plenary sessions. The Management Board also reported regulary and on an ad hoc basis to the Chair of the Supervisory Board, as well as to the respective committee Chairs, on all material developments between meetings.

In particular, the Supervisory Board held in-depth discussions on, and reviewed the plausibility of, all business transactions material to the Company, on the basis of written and oral reports provided by the Management Board.

The Supervisory Board examined the requisite independence of the external auditors of the financial statements, Deloitte GmbH Wirtschaftsprüfungsgesellschaft ("Deloitte"), instructed Deloitte with the audit following the resolution of the Annual General Meeting, and agreed on the auditors' fee.

In principle, conflicts of interest can arise for Supervisory Board members between their Supervisory Board work for the Com-pany and their other activities, for example due to an advisory roles or directorships at a client, supplier, lender or other third party. The Supervisory Board's Rules of Procedure provide regulations for dealing with and mitigating such (imminent) conflicts of interest faced by pbb's Supervisory Board members or their related parties, in particular with regard to relationships with clients and/or relationships with other credit institutions. These include, for example, the disclosure of imminent conflicts of interest, the waiver of voting rights or non-participation in relevant discussions during meetings of the Supervisory Board or the relevant committee.

On 24 February 2023, the Supervisory Board addressed the Declaration of Compliance with the German Corporate Governance Code as amended on 28 April 2022 (www.pfandbriefbank.com/ en/investors/mandatory-publications.html). Please also refer to the pbb Group's separate Remuneration Report, which is published on the Company’s website. With respect to the requirements of the German Corporate Governance Code, in conjunction with section 111 (5) of the German Public Limited Companies Act (Aktiengesetz – "AktG") concerning the target and current quotas of the underrepresented gender on the Supervisory Board and the Management Board, please refer to the table outlining the composition of the Supervisory Board and its committees, and to the comments in the Corporate Governance Statement and the Non-financial Report.

MEETINGS OF THE SUPERVISORY BOARD

The members of the Supervisory Board in the financial year under review were:

Dr Günther Bräunig (Chairman until 25 May 2023), Dr Louis Hagen (Chairman since 25 May 2023), Hanns-Peter Storr (Deputy Chairman), Gertraud Dirscherl, Dr Thomas Duhnkrack (until 15 November 2023), Karim Bohn (since 30 November 2023), Prof. Kerstin Hennig, Susanne Klöß-Braekler, Georg Kordick, Olaf Neumann and Heike Theißing.

The Supervisory Board of pbb held ten meetings in 2023, five of which were extraordinary meetings, plus an additional two-day strategy meeting, in which the Supervisory Board addressed the business plan, the changed market conditions and challenges, and in particular further strategic measures. In 2023, the Supervisory Board also met regularly and addressed certain items on the agenda of its meetings without the participation of the Management Board in accordance with recommendation D.6 of the Ger-man Corporate Governance Code. However, the Supervisory Board will always decide on the Management Board's participa-tion in meetings on a case-by-case basis and depending on the topics to be discussed.

All ordinary meetings addressed the current business situation of pbb Group, which was discussed in detail with the Manage-ment Board in each case. The Management Board informed the Supervisory Board, regularly and in a timely manner, about pbb's financial situation and performance. During the ordinary meetings, the Supervisory Board also received reports on the risk position, risk management, new business, the liquidity situation and strategy, funding and share price developments, cur-rent regulatory issues and audits, as well as on significant events of material importance to the assessment of the Company's position, development and management. Furthermore, the Management Board continuously and comprehensively updated the Supervisory Board about IT topics, Data Governance and ESG, as well as on strategic projects such as the "P2026" program and and recent developments during the year.

In an extraordinary meeting on 10 January 2023, the Supervisory Board passed a resolution – based on the recommendation of the Executive and Nomination Committee - to propose Dr Louis Hagen for election to the Supervisory Board at the 2023 Annual General Meeting. It also agreed that - in the event that Dr Hagen is elected by the Annual General Meeting - he should succeed Dr Bräunig as Chairman of the Supervisory Board.

Furthermore, the Supervisory Board discussed and resolved on pbb's dividend strategy for 2023 to 2025.

The items discussed at the ordinary meeting on 24 February 2023 were target achievement at bank level and variable remunera-tion for the members of the Management Board for the 2022 financial year, including re-determining the variable remuneration that had been held back for the 2016 to 2021 financial years (including penalty/malus review and backtesting). Other focal points were the Variable Remuneration Plan for 2023 and the new allocation of the business responsibilities of the Management Board. The Supervisory Board also discussed pbb's recovery plan, as required by regulators, the regular update on data gov-ernance and the report on the efficiency audit, which concluded the evaluation of the Supervisory Board and Management Board for 2022. Moreover, the annual Declaration of Compliance with the Corporate Governance Code, the Supervisory Board report and the Corporate Governance Statement were adopted, and training topics within the scope of regular professional development measures for the Supervisory Board for 2023 were determined. In addition, the Supervisory Board addressed the current status of ongoing strategic projects and initiatives as well as preparations for the 2023 Annual General Meeting.

The extraordinary meeting on 3 March 2023 dealt with the dividend strategy for 2023 to 2025 and the dividend proposal to the Annual General Meeting in 2023.

In the accounts review meeting held on 17 March 2023, the consolidated financial statements for 2022 were approved and the annual financial statements for 2022 were adopted. In this context, the Supervisory Board also addressed the Non-financial Report. Moreover, the Annual General Meeting for 2023 was prepared and the relevant resolutions concerning the agenda, in-cluding the proposed resolutions submitted, in particular with regard to the appropriation of profit, the elections to the Supervi-sory Board and the appointment of the external auditors, were adopted. In addition to planning measures for the succession of the CEO function, the meeting also focused on reporting the current status of ongoing strategic projects.

The meeting of 12 May 2023 discussed the reporting on pbb Group's first quarter of 2023. The Supervisory Board discussed the remuneration reports for 2022. It also made preparations for the Annual General Meeting in 2023 and was updated on the current status of the bank's ESG initiatives and other current projects.

At the constituent meeting on 25 May 2023 held after the Annual General Meeting, the Supervisory Board elected Dr Louis Ha-gen as the new Chair of the Supervirsory Board with immediate effect. The Supervisory Board also discussed and decided on the composition of the individual Supervisory Board committees.

In an extraordinary meeting on 7 July 2023, the Supervisory Board discussed the candidates identified for the CEO succession shortlist, who presented themselves at the meeting and who also included Kay Wolf. The Supervisory Board decided to begin contract negotiations with Kay Wolf. The Supervisory Board also discussed the further development of pbb's model land-scape.

During its meeting on 8 August 2023, the Supervisory Board discussed pbb Group's interim report as at 30 June 2023, and the review of the six-month financial statements and the Management Report by the external auditors. Other matters discussed and agreed upon included the business and risk strategy and the 2023 pension adjustments for retired Management Board members. The Supervisory Board also received reports on the status of the IRBA models, the project for the tender for IT infrastructure services and the data governance.

On the basis of the debates held over the course of its annual strategy meeting on 19/20 October 2023, on 10 November 2023 the Supervisory Board discussed pbb Group's results for the third quarter 2023 and dealt with the multi-year plan and the busi-ness strategy presented by the Management Board for the financial years 2024 to 2026 as well as the IT and risk strategy for 2024. Detailed information was also provided on the transition from the Advanced Internal Ratings Based Approach (A-IRBA) to the Foundation Internal Ratings Based Approach (F-IRBA). In view of the fact that pbb's portfolios historically had a particularly low number of defaults, the transition to the F-IRBA with the implementation of Basel IV into European law is expected to be the relevant model and risk standard for the majority of the portfolio from 2025 onwards. This transition may require a phase in which standardized model parameters are applied. Likewise, the Supervisory Board prepared the examination of efficiency for both the Management and Supervisory Boards and discussed an update on ESG issues as well as the annual report of the Executive and Nomination Committee concerning current corporate governance issues. In addition, the Supervisory Board determined parameters for risk-adjusted performance measurement at bank level and approved the identification of risk takers as well as the assessment of appropriateness concerning the remuneration system. Furthermore, the Supervisory Board ad-dressed succession planning for Dr Thomas Duhnkrack and resolved to submit an application for the judicial appointment of Karim Bohn. The Supervisory Board also confirmed the appointment of Dr Pamela Hoerr to the Management Board from 17 January 2024 after she successfully completed her induction phase and received regulatory approval. In connection with this, it approved the adjusted allocation of business responsibilities within Management Board.

During an extraordinary meeting on 20 November 2023, the Supervisory Board dealt with adjustments to the multi-year plan 2024 - 2026 as well as the business and risk strategies.

SUPERVISORY BOARD COMMITTEES

During the 2023 financial year, the Supervisory Board established the following committees: Executive and Nomination Com-mittee, Audit and Digitalisation Committee, Risk Management and Liquidity Strategy Committee and Remuneration Committee.

The Executive and Nomination Committee – comprising Dr Günther Bräunig (Chairman until 25 May 2023), Dr Louis Hagen (Chairman since 25 May 2023), Dr Thomas Duhnkrack (Member until 15 November 2023) and Susanne Klöß Braekler – held nine meetings, four of which were extraordinary meetings.

The Committee addressed strategic and current regulatory issues as well as matters concerning the Management Board, for which it prepared corresponding proposals for the plenary meeting. These primarily involved achievement of the Management Board members' targets as well as the determination of their variable remuneration for 2022 (including penalty/malus review). The Committee also prepared the 2023 examination of efficiency for the Management Board as well as the Supervisory Board (in-cluding its committees). The Executive and Nomination Committee also informed the Supervisory Board about corporate gov-ernance issues and discussed the Corporate Governance Statement, including the Declaration of Compliance with the German Corporate Governance Code. The Executive and Nomination Committee also addressed the appointment of Supervisory Board committees as well as succession planning on the Supervisory Board and Management Board. In addition to the proposal to the Annual General Meeting to elect Dr Louis Hagen to the

Supervisory Board, the Committee held several meetings - including extraordinary meetings - to discuss the CEO succession and proposed to the Supervisory Board the appointment of Kay Wolf. The Committee also met to determine further training topics for the Supervisory Board in the Financial Year 2023 and to prepare pbb's Annual General Meeting on 25 May 2023. It also disussed regularly the current status of the bank's strategic initiatives and projects.

The Audit and Digitalisation Committee – comprising Gertraud Dirscherl, Dr Günther Bräunig (member until 25 May 2023), Dr Louis Hagen (member since 25 May 2023), Dr Thomas Duhnkrack (member until 15 November 2023 and Hanns-Peter Storr – held a total of five regular meetings.

During these meetings, the Committee reviewed and discussed the Annual Financial Statements and Consolidated Financial Statements for 2022, the interim reports (or interim statements) for 2023, the reports by Internal Audit and external auditors on internal and external audit findings, as well as the audit report under section 89 (1) of the German Securities Trading Act (Wertpapierhandelsgesetz – "WpHG"). In advance, the Committee also dealt with the results of the early audits of the business organisation and lending business as well as money laundering, including the key audit matters. The Committee also addressed the mandate of the external auditor (Deloitte) and its audit plan for the 2023 financial year. Furthermore, the Committee satisfied itself as to the independence of the external auditor and recommended that the Supervisory Board propose to the Annual Gen-eral Meeting to elect Deloitte as the external auditor for the 2023 financial year. In addition, the Committee discussed the impact of current regulatory issues with the Management Board and was informed about the development of ongoing audits. Further-more, regular reports were received on the internal control system and the monitoring of key controls implemented, current litiga-tion, compliance issues, data protection and IT security, special accounting issues, the results of external audits, as well as the audit plan established by Internal Audit and its implementation. Further discussions took place in two meetings with the Digital Advisory Board on the status of digitalisation measures and initiatives at the Bank.

The Risk Management and Liquidity Strategy Committee convened for five ordinary meetings. In addition, credit exposures requiring Supervisory Board approval were discussed, usually during monthly conference calls. Its members were Hanns-Peter Storr (Chairman), Dr Günther Bräunig (Member until 25 May 2023), Dr Louis Hagen (Member since 25 May 2023), Gertraud Dir-scherl and Prof. Kerstin Hennig.

At its regular meetings, the Committee supported the Supervisory Board's monitoring of risk and liquidity management; it re-viewed the Management Board's risk reporting and was involved in the credit approval process to the extent laid down in the Rules of Procedure. The Committee also regularly discussed new business developments as well as the liquidity and funding status and syndication business. During 2023, the Committee also discussed reports on sub-portfolios (including development financings); it dealt with specific loan loss allowances, the reporting of own funds in accordance with the German Solvency Regulation, country limits and asset/liability management. Moreover, the Committee held intensive discussions on the internal rating models (IRBA models), findings of the audit of the annual financial statements and the supervisory credit audits, updates to the business and risk strategy as well as developments on the real estate markets expected in the medium term. Furthermore, it focused on selected special topics such as ESG risk, business continuity management, UK and US market development and portfolio, further development of the ICAAP risk architecture, the results of the ECB's 2023 stress test and credit spread risk in the banking book. It also received updates on the appropriateness of the remuneration system.

In addition, the Committee addressed individual credit exposures on numerous occasions, usually in the form of monthly con-ference calls. These related to new business, regular re-submissions and approvals for change applications required to be submitted under the Committee's Rules of Procedure.

The Remuneration Committee – comprising Dr Günther Bräunig (Chairman until 25 May 2023), Dr Louis Hagen (Chairman since 25 May 2023), Gertraud Dirscherl, Susanne Klöß-Braekler and Heike Theißing – held five regular meetings during 2023.

The Committee discussed remuneration reports, variable remuneration for the 2022 financial year, target achievements of the Management Board members, as well as the variable remuneration plan 2023 for the Management Board. Furthermore, the Com-mittee prepared the approval of the determination of risk-taker functions, the determination of parameters for risk-adjusted per-formance measurement at Bank level, as well as the decision on the contractual parameters for the appointment of Kay Wolf to the Supervisory Board. Other key focuses of its meetings were the Bank's remuneration scheme, including its assessment of appropriateness, as well as the extension of the Remuneration Officer's term of office.

Individual members' attendance at meetings is shown in the table below. All regular meetings of the Supervisory Board and the individual committees were held as face-to-face meetings in the 2023 financial year, while the option to participate online was also offered and – to some extent – utilised ("hybrid meeting").

Supervisory Board of pbb in 2023

				Committee function and meeting attendence				
Name place of residence initial appointment	Principal activity	Supervisory Board function and meeting attendence	Attendence rate Supervisory Board meetings	Executive and Nomination Committee	Audit and Digitalisation Committee	Risk Management and Liquidity Strategy Committee	Remuneration Committee	Attendence rate Commitees
Dr Günther Bräunig Frankfurt/Main, Germany 14 August 2009	Management consultant and former Chairman of the Management Board of KfW	Chairman 5 of 5 (until 25 May 2023)	100%	Chairman 5 of 5 (until 25 May 2023)	Member 3 of 3 (until 25 May 2023)	Member 2 of 3 (until 25 May 2023)	Chairman 3 of 3 (until 25 May 2023)	93%
Dr Louis Hagen Starnberg, Germany 25 May 2023	Management consultant and former Chairman of the Management Board of Münchner Hypotheken-bank	Chairman 5 of 5 (since 25 May 2023)	100%	Chairman 4 of 4 (since 25 May 2023)	Chairman 2 of 2 (since 25 May 2023)	Member 2 of 2 (since 25 May 2023)	Chairman 2 of 2 (since 25 May 2023)	100%
Hanns-Peter Storr Schwäbisch Gmünd, Germany 12 May 2021	Entrepreneur	Deputy Chairman 10 of 10	100%		Member 5 of 5	Chairman 5 of 5		100%
Karim Bohn[1)] Augsburg, Germany 30 November 2023	CFO Canyon Bicycles GmbH	Member n/a	n/a	-	-	-	-	-
Gertraud Dirscherl Landshut, Germany 2 Februrary 2022	Entrepreneur	Member 10 of 10	100%	-	Member Chairman 5 of 5	Member 5 of 5	Member 5 of 5	100%
Dr Thomas Duhnkrack Kronberg/Taunus, Germany 21 July 2015	Entrepreneur	Member 9 of 9	100%	Member 9 of 9	Member 5 of 5	-	-	100%
Prof Dr Kerstin Hennig Schmitten, Germany 19 July 2022	University professor at EBS University (until 30.9.2023) Professor at Frankfurt School of Finance & Management (since 1.11.2023)	Member 10 of 10	100%	-	-	Member 5 of 5	-	100%
Susanne Klöß-Braekler Munich, Germany 12 May 2021	Independent supervisory and advisory board member, Investor, Senior Advisor	Member 9 of 9	100%	Member 9 of 9	-	-	Member 5 of 5	100%
Georg Kordick Poing, Germany (Employee representative) 22 Februrary 1990	Bank employee	Member 10 of 10	100%	-	-	-	-	-
Olaf Neumann Munich, Germany 12 May 2021	Bank employee	Member 8 of 8	100%	-	-	-	-	-
Heike Theißing Munich, Germany (Employee representative) 7 July 2011	Bank employee	Member 8 of 8	100%	-	-	-	Member 5 of 5	100%

1) Following the appointment of Karim Bohn with effect from 30 November 2023, no meetings of the Supervisory Board or its committees were held in the past financial year.

TRAINING AND CONTINUOUS PROFESSIONAL DEVELOPMENT

The members of the Supervisory Board assumed responsibility for undertaking any training or professional development measures necessary to fulfil their duties. The Company supported them to the extent required in this regard. Regular training sessions were held ahead of the regular Supervisory Board meetings in the form of presentations by external speakers. In 2023, members of the Supervisory Board addressed the topics of cyber risk, digital transformation, EU taxonomy as well as ESG and good Corporate Governance. This regular training programme for the entire Supervisory Board will be continued.

ANNUAL FINANCIAL STATEMENTS

Deloitte, the auditors of the annual and consolidated financial statements elected by the Annual General Meeting, audited the annual and consolidated financial statements of pbb as at 31 December 2023, including the consolidated management report, and issued them with unqualified audit opinions. The Bank has published the mandatory Non-financial Statement in a separate Non-financial Report. As part of its review obligation, the Supervisory Board availed itself of the option of a content-related external audit of the Non-financial Statement. In this context, Deloitte subjected the Non-financial Report to a limited assurance review in accordance with ISAE 3000.

Deloitte has submitted a declaration of its independence to the Supervisory Board. The financial statements documents and audit reports were submitted to all Supervisory Board members in good time. The Audit and Digitalisation Committee ad-dressed the financial statements documents at its meeting on 21 March 2024. The annual financial statements and consolidated financial statements, the combined management report as well as audit reports were discussed in detail with the Management Board and representatives of the external auditors. Following its own review, the Supervisory Board did not raise any objec-tions to the audit results submitted by the external auditors. In the accounts review meeting held on 22 March 2024, the Supervi-sory Board approved the consolidated financial statements prepared by the Management Board, and the annual financial state-ments were adopted.

The Supervisory Board would like to thank the Management Board and all of pbb's employees for their exceptional personal commitment and successful work during the 2023 financial year.

For the Supervisory Board

Dr Louis Hagen
Chairman

Combined Management Report

Fundamental Information about the Group

The management report of Deutsche Pfandbriefbank AG ("pbb") and the Group management report have been combined in accordance with section 315 (5) in conjunction with section 298 (2) of the German Commercial Code (Handelsgesetzbuch – "HGB"). Information provided in this combined management report relates – if not explicitly stated otherwise – both to pbb Group as a whole, and to pbb as an individual entity. The report also includes information referring solely to the parent entity pbb (with explanations on the basis of the German Commercial Code (HGB)). The annual report of pbb in accordance with the HGB and the combined management report are published simultaneously in the German Company Register (Unternehmensregister).

GROUP STRUCTURE

pbb Group consists primarily of the parent entity pbb. In addition, pbb has subsidiaries and investments, which are presented in the Note "pbb shareholdings".

The headquarters are located in Munich/Garching. pbb also has offices at four locations across Germany (Eschborn, Dusseldorf, Hamburg and Berlin). Outside Germany, pbb has branch offices in London, Madrid, Paris and Stockholm, as well as a representative office in New York. pbb Group distributes the vast majority of its international financing activities from these locations.

BUSINESS MODEL

In the financial year 2023, pbb Group's strategic business segment was Commercial Real Estate Finance (REF), with a focus on Pfandbrief-eligible business. The Public Investment Finance (PIF) business segment was combined with the Value Portfolio (VP) segment at the beginning of 2023 to form a non-strategic "Non-Core" (NC) segment. The business model was expanded to include the new Real Estate Investment Management division pbb invest. Geographically, the focus is on Europe and the US. pbb's significant European core markets are Germany, France, the United Kingdom, the Nordic countries, selected Central and Eastern European countries, Spain and the Benelux countries. In the US, pbb currently focuses on the metropolitan regions of New York, Washington D.C., Boston, Chicago, San Francisco, Seattle and Los Angeles.

Lending is pbb's core business: here, pbb plays an important role in supplying credit to the property industry. In the course of further anchoring ESG in the business model and in portfolio management, pbb has further intensified the financing of properties rated as "green". Accordingly, the bank will further expand green loan eligibility in new business. In particular, pbb is targeting primary client business and syndications. Besides traditional financing solutions tailored to clients' needs, pbb offers its clients derivative products for hedging risks associated with lending. pbb does not maintain a trading book for securities and derivatives portfolios held to realise short-term gains.

In order to not only offer green financing, but also to support clients in the development of their green transformation, pbb has entered into a cooperation with Groß & Partner and founded Eco Estate GmbH. Eco Estate GmbH offers green consulting and will work with clients to develop possible solutions for the transformation in the areas of ESG, smart building and taxonomy certification, and advise them on implementation options. To further embed ESG in the business model, pbb developed a sustainability roadmap, which represents pbb's ESG framework.

In the lending business, pbb either acts as the sole lender or, particularly for large-volume transactions, cooperates with financing partners from its wide networtk of banks and other partners, including insurance companies, pension funds and private equity firms. In this syndicate business, when acting as an arranger, pbb takes over the complete coordination between the syndicate members and the borrower or, in the role of an agent in connection with the management of syndicated loans.

In addition, pbb acts as an underwriter, providing financing to borrowers as a sole lender or together with other market participants, and then selling parts of these loans to interested parties within the scope of syndications.

As part of an expansion of its business model, pbb established the new division pbb invest in 2023. The objective of pbb invest is to offer property investment products (both real estate funds and real estate debt funds) with sustainable features for institutional investors. The focus is on applying and expanding pbb's core competences and networking in the commercial real estate sector when launching own investment products for distribution to (semi-)professional investors. This leads to a diversification of revenues towards a (largely) balance sheet-independent generation of provision income. The new division is intended to increase growth potential and profitability while strictly adhering to cost targets.

For its London branch, pbb has submitted an application for authorisation to the UK Financial Conduct Authority (FCA) after the orderly Brexit and the subsequent transition period, in order to be able to continue doing business in the United Kingdom even after the expiry of the so-called "Temporary Permissions Regime". Authorisation was granted by the FCA in mid-2023.

In March 2023, pbb decided to focus on its core business of Commercial Real Estate Finance as part of its Strategy 2026, and subsequently to withdraw from the public investment finance business. CAPVERIANT GmbH discontinued its operating activities in June 2023. On 27 June 2023, the Management Board of pbb resolved to merge CAPVERIANT GmbH into pbb. Legally, CAPVERIANT was merged into pbb with retroactive effect from 1 January 2023 and thus ceased to exist. The technical platform was discontinued and the customer base was transferred to the remaining provider in the market.

Strategic portfolio

In Commercial Real Estate Finance, the product range is primarily aimed at professional real estate investors (both national and international) such as real estate companies, institutional investors, real estate funds as well as - particularly in Germany - SMEs and clients with a regional focus on Germany. pbb targets complex transactions with medium-sized to large financing volumes. Financed objects mainly involve office buildings, properties for residential use, retail properties, logistics properties and hotels. Other property types are financed as portfolio additions. pbb once again considers financing retirement and nursing homes in Germany. The regional focus is on the core markets eligible for inclusion in Pfandbrief cover in Europe and certain US metropolitan area, where pbb offers both local and cross-border financing expertise. A majority of the loans granted are investment loans, i.e. loans for the acquisition or follow-up financing of existing properties with existing cash flows. Development financings (including for residential real estate in Germany) are of complementary siginificance.

Due to the current market situation, pbb is taking a very selective approach to new business. Letting and construction risks are only taken to a very limited extent.

Non-Core segment (NC)

In addition to the portfolio of the strategic business segment, pbb has a non-strategic portfolio, the so-called NC segment. In this portfolio, the previously strategic PIF portfolio was merged with the VP portfolio, which consisted almost entirely of non-dedicated financing to the public sector (budget financing). The NC segment thus combines all non-strategic public sector financing as well as transactions carried out in the past with public private partnerships and export credit financing. pbb does not enter into any new business in this segment. The portfolio generates interest income and matures in accordance with the contractual maturities. Where economically reasonable and viable, pbb also utilises potential for a faster reduction by means of portfolio or individual sales.

Consolidation & Adjustments (C&A)

IFRS 8.28 stipulates that an entity shall provide reconciliations of the reportable segments' profit/loss, assets/liabilities etc. to the respective items in the consolidated financial statements. At pbb Group, this reconciliation is carried out in the C&A column and does not comprise any operating business. For example, this column includes consolidation items arising from the elimination of intra-group relationships between pbb and its fully-consolidated subsidiary.

Funding

Loans are largely funded using matching maturities, and primarily via the Pfandbrief market, supplemented with unsecured funding. Issues are regularly placed on the international capital markets in benchmark format, and via private placements. pbb structures private placements as bearer or registered securities in accordance with investors' requirements, or in the form of fixed-rate deposits – meaning that term and interest structure can be negotiated on an individual basis. In line with the lending business, issues are predominantly conducted in euros; pbb prefers to refinance any lending in the US, the UK and Sweden directly in the respective currency. Foreign exchange swaps are thus avoided as far as possible, reducing the need for excess Pfandbrief cover to be funded on an unhedged basis.

pbb is one of the largest issuers of Mortgage Pfandbriefe measured by outstanding volume (source: Association of German Pfandbrief Banks – 2023).

The main vehicles used for unsecured funding are promissory notes, bearer bonds, and fixed-rate deposits as senior-preferred issues.

Banks, funds and insurance companies, but also central banks and government funds, are investors in debt instruments. In this segment, pbb's particular strategic focus is on developing its funding franchise, with the objective of further diversifying and expanding its investor base. The Bank has been issuing green bonds since the beginning of 2021, offering an investment opportunity for investors applying sustainability requirements.

pbb is stepping up its deposit business with private investors in Germany. The online platform pbb direkt (www.pbbdirekt.com) and third-party providers offer overnight and fixed-term deposits in euros and US dollars. This line of business has now grown to € 6.6 billion in the portfolio and is increasingly substituting unsecured capital market funding.

In the measures provided by the European Central Bank (ECB), pbb participated in the Targeted Longer Term Refinancing Operations (TLTRO III) in 2020 and 2021 due to the attractive conditions. At the end of June 2023, a further tranche of € 1.8 billion of the TLTRO III liability was repaid. This leaves only a residual liability of € 0.9 billion until 2024.

COMPETITIVE POSITION

pbb possesses a strong local presence and expertise across the entire process chain in its core markets, by means of real estate experts, property law specialists and financing experts, up to the management of loan exposures. pbb also actively deploys this local expertise to support clients with international transactions, with key decisions always being taken by the responsible Group level units at pbb's Garching headquarters near Munich.

STRATEGIC FOCUS

pbb Group's business strategy focuses on continued, value-creating business success. The assessment and appropriate pricing of risk in the lending business on the one hand, and access to the refinancing markets with adequate conditions on the other, are decisive for business success. Another key success factor is the management of the existing portfolio with the aim of recognising changing risks at an early stage and mitigating them with suitable measures.

For the financial years 2024 to 2026, pbb's Management Board has commited itself to further solidify pbb Group's profitability. In terms of earnings, the strategic focus is particularly on the business activities in the core REF segment described above. By consistently focussing on commercial real estate finance, pbb launched further strategic initiatives in 2023 in order to increasingly diversify its business model over the coming years, and to lay the foundations for future earnings growth and higher profitability. The cornerstone of both the core business and new strategic initiatives remains pbb's risk-conservative approach, based on pbb's expertise in its markets.

As part of the strategy process, pbb reviews, plans and implements measures to further develop its core business on the basis of its expertise, and to be prepared for existing and expected challenges. The common objective of the strategic measures is to achieve a sustainable strengthening of the business model with a positive contribution to profitability.

The specific strategic initiatives include the measures described below.

In terms of earnings, the strategic focus is particularly on the business activities in the core business described above and increasing their profitability. By expanding the product range, profitability is to be further increased while strictly adhering to cost targets and the desired risk profile. More green loans are to be granted, with an unchanged "focus-on-core" strategy. pbb continues to concentrate on properties in good locations with stable cash flows and low re-letting risks. We also ensure investors are professional and crisis-experienced.

pbb Group aims to become the leading partner for financing the green transformation of the Commercial Real Estate sector in Europe. Overall, pbb has identified five overarching sustainability objectives. Two of the objectives relate to pbb's business model, specifically the positioning as a transformation (re-)financier in the property industry and sustainable (re-)financing overall. Other overarching objectives relate to sustainable operational ecology and the fulfilment of regulatory requirements. In addition, holistic transparency and communication form the central basis of pbb Group's economic success and its values. pbb is expressly committed to the Paris Climate Agreement and the Sustainable Finance goals of the EU and the German Federal Government. For this reason, pbb Group is working to align its loan portfolios and business operations with the goals of the Paris Climate Agreement. With the goal of a 1.5-degree climate alignment by 2050, pbb has set itself a fundamental long-term climate target, according to which it is strategically managed. Building on this, a long-term decarbonisation pathway for the REF portfolio and a climate management concept are being established. In addition, pbb is evaluating further objectives of the Paris Climate Agreement and measures derived from it, which address further social sustainability aspects. Sustainable finance is defined as a central pillar of the holistic ESG strategy. The aim is to support the transformation of the property industry towards the general goal of climate neutrality by 2050. For pbb's long-term ESG positioning, a sustainability roadmap is being developed, which represents pbb's ESG framework. It comprises various monothematic compasses, such as the climate or social compass, which define the vision, objectives and their operationalisation. In future, ESG is to be viewed more quantitatively. Furthermore, pbb is developing a holistic climate management system to control emissions from business operations and from pbb's portfolio.

In order to fulfil pbb Group's claim to be a transformation partner and to meet the expectations of its stakeholders, pbb Group also deals intensively with the issue of sustainability within its own company. As part of a materiality analysis, the most relevant sustainability topics were identified and corresponding objectives and measures were derived. These are updated regularly. For example, the Group's own ecological footprint, i.e. in particular the CO_2 emissions resulting from its own business processes, is to be permanently and continuously reduced. In addition to sector-specific aspects, such as pbb Group's role as a transformation companion and the sustainable transformation of the business portfolio and business operations, pbb Group pays particular attention to strong corporate governance, social issues and its employees.

As a company with global operations, pbb Group is fully committed to respecting, upholding and strengthening human rights and to preventing abuses thereof. In addition to the Code of Conduct, a human rights guideline sets out a corresponding framework. pbb has been a member of the UN Global Compact since February 2022, committing itself to the ten universal principles in the areas of human rights, labour standards, environment protection and anti-corruption. As part of this commitment, pbb published a progress report for the first time in April 2022.

As a further strategic measure, pbb Group aims to increase its commission income. The first step in this direction has already been taken with the new pbb invest division. The aim is to offer property investment products with sustainable features for (semi-)professional investors. pbb invest focuses on two product series: (i) the real estate fund comprises direct property investments, initially in Germany, and sales to (semi-) professional investors in Germany, and (ii) the real estate debt fund comprises investments in commercial property financing, initially with a focus on borrowers in Europe, and sales to (semi-) professional investors in Germany. For the first real estate fund, pbb is cooperating with Universal Investment and for the first real estate debt fund with Hauck Aufhäuser Lampe, both of which serve pbb invest as investment management company/alternative investment fund manager (IMC/AIFM) for the fund business. In the future, the acquisition of a separate IMC/AIFM licence will be considered, which would require a separate legal entity (subsidiary). pbb is also examining whether possible options for inorganic growth can be considered.

In order to always have sufficient liquidity, even in the current interest rate environment, pbb Group diversifies its funding via the deposit-taking business of "pbb direkt". pbb plans to increase its deposit-taking business to a volume of € 8 billion by the end of 2026, in order to further diversify its funding base in a cost-efficient manner. The portfolio of deposits from private clients has almost doubled since the beginning of 2021 and amounted to € 6.6 billion as of 31 December 2023. To further support growth, pbb is cooperating with Raisin and Check24 in the deposit-taking business for private clients. Cooperations of this kind complement pbb's activities and are to be further expanded in the future.

In addition to the earnings side, pbb Group is also focussing on increasing its efficiency. To this end, pbb identified relevant cost drivers and further develops digitalisation. pbb has set itself the target of keeping the cost base stable, and thus bringing the cost-income ratio below 45% by the end of 2026. Around 60% of the targeted savings are to come from operating expenses and around 40% from personnel expenses. This corresponds to a gross headcount reduction of around 15% over the next three years, which is to be achieved in a socially responsible manner and by utilising the age structure.

The cost reduction measures are offset by technical and process improvements. For example, pbb's entire organisational structure was analysed for efficiency potential, and appropriate measures were derived. The greatest efficiency potential can be found in the lending process. Further process improvements were identified, such as the optimisation of committee structures for credit decisions, as well as potential redundancies between committees and cross-divisional service offerings in the credit process. In addition, pbb is also analysing the Corporate Centre functions for efficiency potential. The reorganisation of an integrated IT target picture is also being examined.

In addition to specific efficiency enhancement measures, digitalisation remains a strategic objective. For pbb, digitalisation means leveraging the potential of new technologies to focus on client needs and relationships, to improve existing processes, and to support the development of new products and services. This will expand pbb's business model by creating a digital organisation that leverages the advantages of agile methods. Having already achieved significant improvements in IT support in recent years, both through the use of the digital client portal and the start of implementation of the digitalisation of the lending process, pbb intends to continue to focus on continuous improvement through the digitalisation of further processes. pbb's objective is to optimise sub-processes based on standardisation and automation – also by using new technologies such as artificial intelligence or cloud services – and thus make them more efficient and customer-oriented. Together with pbb as a strategic partner, the software specialist for financial service providers, SAP Fioneer, is developing a digital credit workplace that is already being gradually introduced. The digital credit workplace supports the initiation and conclusion of new and the management of existing business in the front and back office while further optimising existing processes.

pbb continues to strive to be an attractive stock with above-average payout ratios. In doing so, it will maintain its current distribution policy for the time being. The distributions are based on the consolidated profit after taxes attributable to ordinary shareholders in accordance with International Financial Reporting Standards (IFRS) less the AT1 coupon. Overall, distributions are made subject to or depending on economic justifiability, macroeconomic risks in general and industry-specific risks in particular (including ESG risks), existing and anticipatable regulatory requirements and demands as well as future growth and investment measures.

INTERNAL MANAGEMENT SYSTEM

pbb Group's internal management system is pursuing a sustainable enhancement in value of the Group considering aspects of risks and regulatory requirements. The key objective is to achieve a balanced risk/return ratio. Risks should be compatible with external and internal risk-bearing capacity guidelines generating an adequate return on capital.

Monitoring and stearing are based on a consistent and integrated key performance indicator system (KPI system). The KPI system comprises the dimensions of profitability, growth in the real estate finance portfolio, risk limitation and capital. Regular plan-actual comparisons and related analyses disclose the reasons for any deviations in the key performance indicators. Current market developments, such as the change on interest rate levels, are also displayed. In addition to strategic planning for the Bank as a whole, regular medium-term projections of profitability indicator and (stress) scenario forecasts ensure the management has a comprehensive overview of the future business development.

The following financial performance indicators have been defined:

> Profit before tax is a further financial key performance indicator. The aim is to increase it both by generating higher revenues and through strict cost discipline.
> Cost discipline and efficiency are monitored using the cost-income ratio, i.e. the ratio of general and administrative expenses and net income from write-downs and write-ups of non-financial assets to operating income.
> The notional amount of the funding in the Real Estate Finance (REF) segment is a significant factor influencing the future earning power and has therefore been redefined as an additional financial key performance indicator.
> The financing volume can be controlled, above all, by the volume of new business (including prolongations with maturities of more than one year), which also represent a financial key performance indicator. A present value approach is used for managing and calculating new business.
> pbb Group's capital adequacy process (ICAAP) is based on two approaches concerning risk-bearing capacity: the normative and the economic perspective. Whilst the normative perspective is aimed at the fulfilment of all capital-related legal requirements, supervisory demands and internal objectives, on an ongoing basis, the economic perspective covers all material risks which might threaten the institution's economic viability. Both perspectives are designed to supplement each other, safeguarding pbb Group's ability to survive. The prerequisites for evidencing risk-bearing capacity in the normative perspective are the ongoing compliance with minimum regulatory requirements over a medium-term horizon, plus evidence of adequate internal capital to cover material risks exceeding such minimum requirements. In the economic perspective, risk-bearing capacity is evidenced by sufficient internal capital being available to cover potential present-value losses. Details concerning the methodology used for analysing risk-bearing capacity, and the results obtained, are provided in the Risk and Opportunity Report.
> The CET1 ratio, a key management parameter, is determined on a regular basis; it is calculated by dividing Common Equity Tier 1 (CET1) by risk-weighted assets (RWAs). In the reporting year the Advanced Internal Rating Based Approach (Advanced IRBA) was used to determine regulatory capital requirements for the far predominantly portion of the real estate portfolio and the credit risk standardised approach (CRSTA) for the remaining portfolio.

For pbb Group, sustainability in the sense of environmental, social and governance (ESG) means making a significant contribution to securing the long-term future through its actions – taking into account the consequences for all its stakeholders. pbb Group endeavours to combine long-term economic success and sustainability aspects in the best possible way. The aim is to create long-term benefits for society and the environment, while at the same time conserving natural resources.

pbb's Management Board and Supervisory Board regularly deal intensively with ESG issues. One basis for this is a system of key figures, which is continuously developed further. Regulatory and market developments are also taken into account. In the last two years, for example, the focus has been on determining the Green Asset Ratios (GAR), which will be published for the first time in the Non-financial Report for the 2023 financial year. However, from pbb Group's perspective, the GAR according to the EU taxonomy are not meaningful with regard to the actual share of environmentally sustainable assets, as there are already restrictions in terms of taxonomy-eligibility, depending on the size and capital market orientation of clients, among other things. No market practices have yet emerged for adjusted and self-defined quotas. Looking ahead, the reduction of CO_2 appears to be emerging as an important cross-company objective. The pbb Group is currently developing a climate pathway with the aim of actively steering the REF portfolio towards CO_2 reduction. pbb Group's climate pathway is geared towards limiting global warming to 1.5 degrees Celsius, calculated from the pre-industrial age to the year 2050. The exact intermediate steps towards this goal are still being finalised.

As indicators such as GAR are not very meaningful, market practice has not yet developed for other indicators and short-term interim targets still need to be set for the long-term goal of the CO2 climate path, the pbb Group has not yet defined any non-financial performance indicators within the meaning of GAS 20.105.

NON-FINANCIAL STATEMENT

Companies must assume responsibility for their actions in the environment in which they operate. The key principle of pbb Group’s corporate responsibility philosophy is that of sustainability. This means long-term, responsible actions that take the consequences for all the company’s stakeholders and for the environment into account.

pbb Group is convinced that sustainable and responsible business practices are an essential requirement for securing the future of the Company and increasing its value.

In the separate summarised non-financial report, which is not part of the combined management report, pbb Group provides more detailed information on the sustainability issues and aspects identified as material for the Company. This was prepared in accordance with the requirements of the CSR Directive Implementation Act and is also published both in the company register together with the summarised management report and on the company website (https://www.pfandbriefbank.com/fileadmin/user_upload/downloads/investor_relations/reports/2403_NFB_2023_en.pdf). The non-financial report was not audited by the auditor, but was subject to a limited assurance engagement by Deloitte GmbH Wirtschaftsprüfungsgesellschaft in accordance with ISAE 3000.

Report on Economic Position

MACROECONOMIC ENVIRONMENT

Global economic growth has slowed in 2023. The International Monetary Fund is forecasting global economic growth of just 3.1% in 2023, compared to 3.5% in the previous year. Several factors have curbed the economic development. Some reflect the long-term consequences of the pandemic and the war in Ukraine, such as higher energy prices. Others are more cyclical in nature. These include, for example, the effects of monetary policy tightening, which dampened consumption and investment, as well as the expiry of fiscal support measures. (Sources: IMF 2023, IMF 2024)

Different trends emerged between the national economies. The economic slowdown was more pronounced in industrialised countries than in emerging and developing countries. Overall, economic output in the industrialised countries grew by 1.6% in 2023 according to current estimates. Within the developed countries, the USA surprised positively with robust consumption and investment, whereas the economy in the Eurozone was disappointing. While gross domestic product (GDP) in the USA grew by 2.4% in 2023, it increased by just 0.6% in the Eurozone. (Sources: IMF 2023, IMF 2024, European Commission 2023)

In Germany, economic output fell by 0.3% in 2023, following an expansion of 1.8% in 2022. Despite the decline in inflation rates, continued high prices dampened economic activity. In addition, unfavourable financing conditions with rising interest rates and lower domestic and external demand influenced economic development in 2023 (source: Federal Statistical Office 2024)

The French economy expanded by an estimated 1.0% last year. At the beginning of the year, net exports fuelled French growth, while economic activity was dampened by domestic demand due to inflation still being above the ECB's target and high interest rates. As the year progressed, however, domestic demand became the main pillar of growth. (Source: European Commission 2023)

Spain is expected to see growth of 2.4% in 2023. In addition to strong domestic demand, foreign demand, including the large tourism sector, is a key factor behind the strong recovery in economic activity. For Italy, an increase of 0.7% is expected in 2023. (Source: European Commission 2023)

GDP is forecast to rise by 0.6% in the UK in 2023. While private consumption and capital investment were still boosting growth at the start of the year, momentum slowed significantly in the second half of the year. High prices and interest rates had an impact on consumer sentiment, while fiscal policy became increasingly restrictive. (Source: European Commission 2023)

Growth momentum in pbb's core markets in Northern and Eastern Europe also slowed significantly in 2023. In Sweden, gross domestic product contracted by 0.5%, while the Polish economy expanded by just 0.4%. High interest rates and energy prices weighed on the Swedish economy, particularly on private households and the construction sector, due to high levels of debt and overvalued house prices. A cooling of the labour market further curbed domestic demand. Polish growth was also dampened by the decline in private consumption, but also by a negative contribution from inventories. (Source: European Commission 2023)

Labour markets performed well in many regions in 2023, despite the slowdown in economic growth. The unemployment rate in the Eurozone was 6.6% in 2023, down 0.2 percentage points on the previous year. In Germany, the unemployment rate remained at an average of 3.1% during this period. In France, unemployment fell slightly from 7.3% in 2022 to 7.2% one year later, while in Spain it fell more sharply from 12.9% to 12.1% during this period. In Sweden, however, the unemployment rate increased from 7.5% to an average of 7.6% in 2023 due to the weak economic development. An increase from 3.7% to 4.3% in 2023 was also observed in the United Kingdom. In the USA, there was also a small increase from 3.6% to 3.7% during this period. (Source: European Commission 2023)

In the US, inflation stood at 3.4% in December 2023, after being over 6% at the beginning of the year. In the Eurozone, prices rose by 2.9% at the end of the year. This compares with 9.2% twelve months earlier. At the same time, the core rate of inflation in the Eurozone remained elevated at 3.4% in December, highlighting the fact that the recent easing in the overall rate is primarily due to falling energy prices. (Sources: Bureau of Labor Statistics 2024, Eurostat 2024)

The ECB raised its key interest rates significantly in several steps by 200 basis points by September 2023 in order to combat persistently high inflation. The deposit rate thus rose from 2% at the beginning of the year to 4% in September. The ECB then left interest rates constant. Since March 2023, the ECB has also been reducing its holdings from the asset purchase programme (APP) by no longer reinvesting the securities in full when they mature. Since July 2023, no reinvestments of maturities have even been made. In the US, the Federal Reserve (Fed) raised the key interest rate in several steps to a range of 5.25% to 5.50% in July and left interest rates at this level until the end of the year. The Fed has also been reducing its balance sheet since June 2022 by only partially reinvesting maturing securities. (Sources: Bloomberg, ECB 2024, Fed 2023)

In addition to the persistently tense geopolitical situation, interest rates on the financial markets were influenced in particular by the global inflation trend and the responding monetary policy. Interest rates on 10-year government bonds in the USA reached around 5% in the autumn, while interest rates on German government bonds climbed close to 3%. Towards the end of the year, interest rates on US and German government bonds fell back below 4% and 2%, respectively, driven by the prospect of a somewhat looser monetary policy in the new year. (Source: Bloomberg)

On the currency markets, the US dollar lost 3.4% against the euro over the course of the year. Much of the weakness occurred in the fourth quarter, when market expectations increased that the Fed would loosen its policy in 2024. By contrast, the British pound gained 2.1% against the European currency after losing a lot of ground in the previous year. (Source: Bloomberg)

SECTOR-SPECIFIC ENVIRONMENT

Overall Situation in the Banking Sector

The Eurozone financial sector proved to be resilient last year. Silicon Valley Bank, a US regional bank, got into difficulties in March 2023 due to serious and specific deficits in the management of its interest rate and liquidity risks. Other US regional banks with similar business models and the Swiss bank Credit Suisse were quickly hit by turbulence. However, contagion effects on the financial system remained manageable apart from temporary price losses at individual institutions and the turbulence has since subsided. However, the risks to financial stability remain elevated. Attention has shifted to the impact of tighter financial and credit conditions and the weak economic outlook on borrowers' debt servicing ability, the ongoing correction in the real estate markets and the resulting risks for banks. (Sources: Bundesbank 2023, ECB 2023)

In an environment of tighter financing conditions and increased uncertainty, commercial real estate (CRE) prices have continued to fall, with subdued market activity making price discovery more difficult. The impact of higher interest rates has been exacerbated by structurally lower demand for some CRE assets after the pandemic, such as office property. This combination of economic and structural challenges has resulted in real estate firms experiencing significant rating downgrades over the past year. Conditions were particularly difficult for property developers, who are faced with falling sales prices, shrinking order books and rising input costs. For these reasons, lenders are increasingly taking loss provisions on loans to property owners and developers, particularly for those in US CRE. This in turn leads to declining profits and rating downgrades for some lending banks. (Source: ECB 2023, Bloomberg)

In 2023, there was a further increase in the return on equity of banks in the eurozone to 10.0% in the third quarter. Bank profitability has so far benefited from higher interest rates, but the deterioration in asset quality, the decline in lending volumes and higher refinancing costs will create headwinds. (Sources: ECB 2023, ECB 2024, Sample: Significant Institutions)

Commercial Real Estate Finance

Investment volumes continued to decline in all of pbb's markets last year, for example by 45% in the USA. In addition to the interest rate environment, the weak letting market had a negative impact here. As a result of the trend towards mobile working, many companies were reluctant to look for office space, which led to higher vacancy rates. In total, these two effects caused the capital values of office properties in the USA to fall by around 6%. Office buildings in Manhattan lost around 20% in value. Older properties in secondary locations were more affected by this than new buildings.

The letting markets in Europe continue to be characterised by the changing world of work. Accordingly, letting performance declined and vacancy rates rose, which also affected older office buildings in secondary locations in particular. However, due to the low supply of new buildings and modern buildings in good and very good locations, prime rents remained stable to positive in the past year. The highest growth rates were achieved in Germany.

2023 was also a challenging year on the European investment markets, with hardly any positive news to report in the first three quarters. As in the USA, banks in Europe were unable to offer financing conditions that would enable investors to acquire properties at the required purchase prices. As a result, project developers were also unable to realise their planned sales prices, which put additional pressure on their economic situation. Many projects had already come under pressure due to the rise in construction costs and could no longer be finalised.

Overall, the investment market in Europe was extremely subdued. However, the final quarter saw rising investment turnover in the Northern European countries and in Southern Europe. Despite this, the prime yield for office property across Europe rose by around 90 basis points over the course of the year. As a result, European office buildings lost an average of 15% in value.

(Sources: PMA, JLL, CBRE, RealCapitalAnalytics)

Non-Core

Demand for public investment financing continued to grow slightly in 2023. According to data from the European Commission, the share of public investment as a percentage of gross domestic product in the EU rose from 3.2% in 2022 to 3.3% in 2023. This exceeds the levels reached in the years 2015 to 2019 (2.9%) and 2010 to 2014 (3.2%). Public investment expenditure developed differently within the EU. While the level remained unchanged in Germany and Austria (2.6% and 3.4% of GDP) and fell slightly in Spain from 2.8% to 2.7%, France was able to increase its share from 3.7% to 3.9%. Outside the EU, public investment in the UK rose from 3.1% to 3.3% of GDP.

General government finances continued to improve in 2023. The aggregate budget deficit in the EU fell slightly from 3.3% of GDP in the previous year to 3.2%, while debt fell from 84.8% of GDP in 2022 to 83.1%. The budget situation benefited from the fact that pandemic-related support measures expired completely and the costs of energy-related measures decreased. This outweighed the negative effects of the subdued economic situation and higher interest expenses. (Source: European Commission)

In 2023, the risk premiums (credit spreads) of the European periphery largely moved sideways, while a spread tightening was observed in Italy over the course of the year. A similar trend was observed with regard to yield levels. From January to September, yields on Italian, Spanish and Portuguese bonds remained within a narrow range, only to fall significantly by the end of the year. The background to this movement was the growing expectation that the ECB would switch to an interest rate cut in spring 2024. (Source: Bloomberg).

Funding Markets

In 2023, the refinancing markets continued to be dominated by the war in Ukraine and the sharp rise in inflation and its containment. In the fight against inflation, the ECB continued the course of interest rate hikes it began in 2022. After a total of ten interest rate hikes in a row, it paused interest rates in October 2023 after inflation had fallen noticeably. At the same time, the ECB gradually withdrew from its purchase programmes. The reduced demand from central banks combined with a high volume of issues resulted in significant widening of spreads on the covered bond market. Repricing in the covered bond segment and the turnaround in interest rates increased the attractiveness of the asset class and led to stronger demand from real money investors. Due to investor preferences and an inverted yield curve, the euro primary market was increasingly limited to shorter maturities. In a market environment characterised by high volatility, unsecured bank bonds recorded significant spread widening in some cases. (Sources: ECB, Bloomberg, vdp)

The rise in interest rates also made deposits more attractive for private customers. Demand from private customers for interest-bearing investments, particularly term deposits, increased noticeably. Despite increased competition in the deposit market, average funding spreads fell significantly. (Sources: ECB, Bloomberg, vdp)

COURSE OF BUSINESS

pbb Group's business development in 2023 was characterised by the prolonged crisis on the commercial real estate market. This also had an impact on the development of financial performance indicators.

At the beginning of 2023, pbb Group had forecasted profit before tax in a range between €170 million and €200 million. Due to the ongoing crisis in the real estate markets and the associated additions to loan loss provisions, the forecast range was adjusted to between €90 million and €110 million on 14 November 2023. At €90 million, profit before tax for 2023 was ultimately at the lower end of the new range.

At the beginning of the year, a forecast range of €9.0 billion to €10.0 billion was set for the new business volume Real Estate Finance. Against the background of the changed market conditions, which were characterised by a low transaction volume in the target markets, pbb Group adjusted the range to between €6.5 billion and €8.0 billion on 10 August 2023. With a volume of €7.2 billion, new business was within the current range. As the volume of new business exceeded repayments overall, the financing volume increased slightly as forecasted (€31.1 billion; 31 December 2022: €29.3 billion).

As a result of the lower than originally expected profit, the return on CET1 capital after tax of 2.4% was below the range forecasted at the beginning of the year (4.5% to 5.0%). The cost-income ratio totalled 45.8% in the reporting year as a result of higher operating income and was therefore below the forecast range of between 50% and 55%.

With regard to risk-bearing capacity, the forecasts made at the beginning of 2023 materialised. From a normative perspective, all regulatory minimum ratios were exceeded as at 31 December 2023 and the risk cover funds still available after deducting these also covered all other material risks as at the balance sheet date. From an economic perspective, the capital available to cover the risks also exceeded the economic capital requirement as at 31 December 2023.

As at 31 December 2023, the CET1 ratio was 15.7%. As forecasted, it was therefore well above the SREP ratio of around 8.4% plus the countercyclical capital buffer, which varies from country to country and therefore from portfolio to portfolio.

DEVELOPMENT IN EARNINGS

In 2023, pbb Group's profit before tax was characterised by a significant impact in net income from risk provisioning due to the effects of the real estate market crisis. As a result of this burden, pbb Group's profit before tax amounted to €90 million und was lower than in the previous year (2022: €213 million). Net income from realisations, which benefited from the disposal of financial instruments, had a particularly favourable effect. In detail, the income statement items developed as follows:

Deutsche Pfandbriefbank Group (pbb Group)

pbb Group		2023	2022
Operating performance			
Operating income	in € million	603	531
Net interest income	in € million	482	489
Net fee and commission income	in € million	3	8
Net income from financial instruments at fair value through profit or loss (Net income from fair value measurement)[1]	in € million	-	20
Net income from derecognition of financial instruments not measured at fair value through profit or loss (Net income from realisations)[1]	in € million	85	15
Net income from hedge accounting	in € million	1	-
Net other operating income	in € million	32	-1
Net income from allowances on financial assets (Net income from risk provisioning)[1]	in € million	-212	-44
General and administrative expenses	in € million	-249	-224
Expenses from bank levies and similar dues	in € million	-25	-32
Net income from write-downs and write-ups of non-financial assets	in € million	-27	-18
Profit before tax	**in € million**	**90**	**213**
Income tax	in € million	1	-26
Net income	**in € million**	**91**	**187**
Key ratios			
Earnings per share (basic and diluted)[2]	in €	0.51	1.27
Cost-income ratio	in %	45.8	45.6
Return on CET1 capital before tax	in %	2.4	6.9
Return on CET1 capital after tax	in %	2.4	6.0

[1] Solely the condensed and parenthesised line item descriptions are used subsequently.
[2] For calculation see note “Earnings per share”.

At €482 million, net interest income almost reached the previous year's figure of €489 million, with the higher current net interest income from commercial real estate financing almost completely offsetting the elimination of temporary and market interest rate-dependent effects. Both the higher average financing volume (€30.1 billion; 2022: €28.6 billion) and the higher new business margins contributed to the increase in net interest income in the commercial real estate financing business (Real Estate Finance, REF). The REF portfolio volume increased due to significantly lower early repayments (€0.9 billion; 2022: €2.2 billion), which undercut the decline in new business volume (€7.2 billion; 2022: €9.0 billion). By contrast, the extensive elimination of income from interest rate floors due to the higher market interest rate level had a negative impact on earnings. In contrast to the previous year, net interest income also benefited to a lesser extent from the interest premium of 50 basis points for the TLTRO III funding.

Net fee and commission income from non-accruable fees fell to €3 million (2022: €8 million), in particular due to the lower level of new business. Furthermore, additional commission expenses were incurred from service contracts for deposit business in connection with pbb direkt (e.g. Raisin and CHECK24).

Net income from fair value measurement was balanced (2022: €20 million) and did not include any significant individual effects. In the previous year, the net income from fair value measurement was influenced by strong market movements as a result of the outbreak of war in Ukraine and, in particular, by the higher market interest rate level.

Net income from realisations (€ 85 million; 2022: € 15 million) benefited from the sale of financial assets in the Non-Core segment, which led to a contribution to earnings of € 33 million. Taking advantage of opportunities arising from the rise in interest rates, these sales were in line with the new strategy, which provides for an accelerated, value-preserving wind-down compared to the regular portfolio run-off. It also benefited from the expiry of potential repayment claims from a past synthetic securitisation transaction of a predecessor institution of pbb. The corresponding liabilities were derecognised, resulting in income of € 24 million. In addition, income of € 24 million (before hedging costs of € 2 million) was attributable to the repurchase (tender) of own liabilities offered in June 2023. Due to the change in interest rates, these liabilities were repurchased at below par and replaced with more favourable retail deposits. At € 6 million (2022: € 18 million), however, income from early repayments of commercial property financing was below the previous year's level, as customers held the financing to an even greater extent.

Net income from hedge accounting totalled €1 million due to largely effective hedges (2022: €0 million). Interest rate fixing effects in a rising market interest rate environment offset each other over the course of the year.

Net other operating income (€32 million; 2022: €-1 million) included income of €29 million from net reversals of provisions outside of the lending business, in particular for legal risks and costs. The existence of a current obligation for these legal cases and the associated costs is no longer considered highly probable. Currency translation resulted in income of €3 million (2022: expense of €4 million).

The difficult development of the real estate market had a significant impact on net income from risk provisioning, which was significantly more negative than in the previous year at €-212 million (2022: €-44 million). Net income from risk provisioning for stage 1 and 2 financings was almost balanced at €-2 million, while stage 3 financing resulted in an expense of €211 million.

In particular, the increase in the probabilities of default for individual financings, the updating of valuation parameters and the extension of financings had an impact on net income from risk provisioning in stages 1 and 2 totalling €-63 million. With regard to the valuation parameters, the higher interest rate level in particular led to an increase in model-based credit loss allowances. In addition, a change in accounting estimates – an adjustment to the data used to derive the historical losses for determining the probabilities of default and loss given defaults – resulted in income of €23 million.

In addition, pbb Group completely reversed the management overlay of €69 million existing at the beginning of the year during the course of 2023 and recognised a new management overlay of €31 million at the end of 2023, which led to a total reduction in stage 1 and 2 allowances for losses on loans and advances of €38 million. The management overlay existing as at 31 December 2022 was recognised at that time for office real estate financings, irrespective of the country, as the valuation parameters as at 31 December 2022 did not reflect the risks and uncertainties comprehensively enough from pbb Group's perspective. In the course of 2023, however, these valuation parameters, and in particular the interest rate level, did not develop as negatively as assumed in the management overlay.

The management overlay was formed at the end of 2023 in order to reflect the emerging dynamics on the US real estate markets. This market is currently characterised by historically low transaction volumes, a sharp decline in market value and a high level of uncertainty. On the one hand, the overlay includes an adjustment of the model-based average estimated probabilities of default (PD) and loss given default (LGD) for the entire US business. For this purpose, the PDs and LGDs were derived on the basis of a long-term historical average in order to take into account experience from several economic cycles. Secondly, US property loans without indicators of impaired credit quality were collectively provided for in the amount of the expected credit losses over the term and reported as stage 2 if the last default rating was assigned more than six months ago.

Risk provisioning expenses for financings with indicators of impaired credit quality (stage 3) rose to € 211 million as a result of the crisis on the real estate markets. The additions resulted from financings that moved to stage 3 as a result of indicators that were observable for the first time, as well as from financings that had already been allocated to stage 3 in previous years. The main reason for the additional risk provisioning was a decline in the expected realisation proceeds derived from the current lower prices for comparable transactions. In terms of number and volume, real estate financings in the USA and development financings in Germany were primarily affected.

In March 2023, pbb Group announced the concretisation of its strategic profitability initiatives. Against this background, 2023 represents a first year of investment. As a consequence, general and administrative expenses increased to €249 million (2022: €224 million). The investments were reflected in particular in non-personnel expenses (€115 million; 2022: €98 million) and herein in consulting expenses. Personnel expenses were higher than in the previous year (€134 million; 2022: €126 million) due to a slightly higher headcount and regular salary adjustments. Personnel expenses also included provisions for termination benefits. The provisions are based on measures to increase efficiency and the associated job cuts of around 15% gross over the next three years, which are to be implemented in a socially responsible manner and utilising the age structure.

Expenses from bank levies and similar dues (€25 million; 2022: €32 million) included expenses of €22 million for the bank levy. In addition to a higher rate for collateral recognised directly in equity of 22.5% compared to 15% in the previous year, the lower target volume of EU-covered deposits had a positive effect. As in the previous year, the item also included expenses for the private deposit guarantee scheme (€3 million; 2022: €1 million).

Net income from write-downs and write-ups of non-financial assets (€-27 million; 2022: €-18 million) included depreciation and amortisation of tangible assets and intangible assets, which were roughly on a par with the previous year. The result was also negatively impacted by impairment losses on intangible assets. The impairment losses related to software that was no longer used in full or in part. One example of this was the software of CAPVERIANT GmbH, whose business is no longer being operated.

Income taxes (€1 million; 2022: €1 million) were attributable to current taxes (€-9 million; 2022: €-13 million) and to deferred taxes (€10 million; 2022: €-13 million). The reduction in current tax expenses is mainly due to the decline in profit before tax from € 213 million to € 90 million. The deferred tax income of € 10 million resulted primarily from an increase in the recoverability of deferred tax assets due to the expected positive development of the pbb Group in the forecast period.

Operating Segments

Segment reporting is based on management reporting results. More information on this can be found in the note on “Notes to Segment Reporting by Operating Segment”.

In March 2023, pbb Group published its strategic initiatives, which have been further developed and are backed by concrete targets. With pbb invest, the diversification of the business model will be driven forward in the future. Already in the first quarter of 2023, the Public Investment Finance (PIF) segment was merged with the Value Portfolio (VP) segment to form the non-strategic Non-Core (NC) segment. With this decision, Public Investment Finance is no longer considered strategic and no new business is concluded. No new business has been concluded in the VP segment in the past; only a very small amount of new business has been concluded in the PIF segment in recent years. At the same time, the aim is to accelerate the value-preserving reduction of the portfolio. pbb intends to focus even more strongly on the higher-margin core business of commercial property finance (Real Estate Finance, REF). The previous year's figures were adjusted in accordance with IFRS 8.29. As the two previous segments PIF and VP had no internal relationships, the new Non-Core segment results from the addition of the two previous segments PIF and VP.

Real Estate Finance (REF)

The volume of new business (including prolongations with terms of more than one year) totalled €7.2 billion (2022: €9.0 billion), of which €3.6 billion (2022: €2.7 billion) was attributable to prolongations of more than one year. Contrary to the forecast at the beginning of 2023, the REF segment did not make a significant contribution to the overall result due to the high negative net income from risk provisioning.

Real Estate Finance		2023	2022
Operating performance			
Operating income	in € million	511	460
Net interest income	in € million	434	420
Net fee and commission income	in € million	4	8
Net income from fair value measurement	in € million	-	14
Net income from realisations	in € million	44	16
Net income from hedge accounting	in € million	1	-
Net other operating income	in € million	28	2
Net income from risk provisioning	in € million	-213	-69
General and administrative expenses	in € million	-219	-196
Expenses from bank levies and similar dues	in € million	-17	-21
Net income from write-downs and write-ups of non-financial assets	in € million	-24	-16
Profit before tax	**in € million**	**38**	**158**
Key ratios			
Cost-income ratio	in %	47.6	46.1
Balance-sheet-related measures		**31.12.2023**	**31.12.2022**
Financing volumes	in € billion	31.1	29.3
Risk-weighted assets[1)]	in € billion	17.5	15.5
Equity[2)]	in € billion	2.3	2.4

[1)] Including weighted credit risk positions and capital charges for market risk positions and operational risk, using a scaling factor of 12.5.
[2)] Excluding accumulated other comprehensive income (OCI) from cash flow hedge accounting, financial assets at fair value through OCI, additional equity instruments (AT1 capital) and non-controlling interest.

Net interest income benefited from the higher average financing volume (€30.1 billion; 2022: €28.6 billion), in which the volume of early repayments in particular fell, as well as the higher new business margins. By contrast, the loss of floor income and the expiry of the interest premium for the TLTRO III funding had a negative impact on net interest income. The derecognition of a liability in connection with a past synthetic securitisation transaction and allocated income from the redemption of financial liabilities resulted in significantly higher net income from realisations. Net income from risk provisioning developed in line with the Group.

Non-Core (NC)

The financing volume fell by €2.0 billion in 2023. In addition to regular maturities, disposals contributed to the portfolio reduction lio reduction. These sales took advantage of market opportunities, which led to positive earnings contributions. Overall, the segment's profit before tax totalled €50 million (2022: €53 million).

Non-Core		2023	2022
Operating performance			
Operating income	in € million	90	69
Net interest income	in € million	46	67
Net fee and commission income	in € million	-1	-
Net income from fair value measurement	in € million	-	6
Net income from realisations	in € million	41	-1
Net income from hedge accounting	in € million	-	-
Net other operating income	in € million	4	-3
Net income from risk provisioning	in € million	1	25
General and administrative expenses	in € million	-30	-28
Expenses from bank levies and similar dues	in € million	-8	-11
Net income from write-downs and write-ups of non-financial assets	in € million	-3	-2
Profit before tax	**in € million**	**50**	**53**
Key ratios			
Cost-income ratio	in %	36.7	43.5
Balance-sheet-related measures		**31.12.2023**	**31.12.2022**
Financing volumes	in € billion	12.4	14.4
Risk-weighted assets[1]	in € billion	0.6	0.8
Equity[2]	in € billion	0.4	0.4

[1] Including weighted credit risk positions and capital charges for market risk positions and operational risk, using a scaling factor of 12.5.
[2] Excluding accumulated other comprehensive income (OCI) from cash flow hedge accounting, financial assets at fair value through OCI and additional equity instruments (AT1 capital) and non-controlling interest.

As in the REF segment, the significantly lower floor income and the discontinuation of the interest premium for the TLTRO III funding also had a negative impact on net interest income in the NC segment. The average portfolio volume also fell to €13.4 billion (2022: €15.2 billion). Net income from realisations resulted from sales of non-strategic financial assets and allocated income from redemptions of financial liabilities. General and administrative expenses and expenses from bank levies and similar dues changed in line with the Group's performance.

Consolidation & Adjustments (C&A)

C&A reconciles the segment results with the consolidated result. Besides consolidation adjustments, this includes certain income and expense items outside the operating segments' responsibility.

Consolidation & Adjustments		2023	2022
Operating performance			
Operating income	in € million	2	2
Net interest income	in € million	2	2
Net fee and commission income	in € million	-	-
Net income from fair value measurement	in € million	-	-
Net income from realisations	in € million	-	-
Net income from hedge accounting	in € million	-	-
Net other operating income	in € million	-	-
Net income from risk provisioning	in € million	-	-
General and administrative expenses	in € million	-	-
Expenses from bank levies and similar dues	in € million	-	-
Net income from write-downs and write-ups of non-financial assets	in € million	-	-
Net income from restructuring	in € million	-	-
Profit before tax	**in € million**	**2**	**2**
Balance-sheet-related measures		**31.12.2023**	**31.12.2022**
Risk-weighted assets[1)]	in € billion	0.5	0.7
Equity[2)]	in € billion	0.4	0.4

[1)] Including weighted credit risk positions and capital charges for market risk positions and operational risk, using a scaling factor of 12.5.
[2)] Excluding accumulated other comprehensive income (OCI) from cash flow hedge accounting, financial assets at fair value through OCI and additional equity instruments (AT1 capital) and non-controlling interest.

Net interest income was the only income item and arose from the investment of equity allocated to C&A.

DEVELOPMENT IN ASSETS

Assets

in € million	**31.12.2023**	**31.12.2022**
Cash reserve	2,728	1,044
Financial assets at fair value through profit or loss	944	1,075
Positive fair values of stand-alone derivatives	494	562
Debt securities	123	117
Loans and advances to customers	324	394
Other financial assets at fair value through profit or loss	3	2
Financial assets at fair value through other comprehensive income	1,475	1,692
Debt securities	1,354	1,409
Loans and advances to customers	121	283
Financial assets at amortised cost after credit loss allowances	45,228	48,734
Financial assets at amortised cost before credit loss allowances	45,811	49,121
Debt securities	4,014	5,377
Loans and advances to other banks	2,507	5,763
Loans and advances to customers	39,155	37,839
Claims from finance lease agreements	135	142
Credit loss allowances on financial assets at amortised cost	-583	-387
Positive fair values of hedge accounting derivatives	251	262
Valuation adjustment from porfolio hedge accounting (assets)	-56	-84
Tangible assets	20	27
Intangible assets	53	49
Other assets	68	58
Current income tax assets	43	31
Deferred income tax assets	129	119
Total assets	**50,883**	**53,007**

General Development in Assets

Total assets decreased compared to the end of the previous year. The cash reserve increased in particular due to cash inflows as a result of maturities of reverse repurchase agreements. In contrast, financial assets at fair value through profit or loss decreased due to syndications and an interest rate-induced decline in the market values of stand-alone derivatives. In addition, financial assets at fair value through other comprehensive income fell due to maturities and sales of (government) bonds and promissory note loans in the liquidity portfolio.

The financial assets at amortised cost decreased compared to 31 December 2022. In particular, loans and advances to other banks declined due to a significant reduction in the portfolio of reverse repurchase agreements. In addition, the decline in debt securities due to maturities of (government) bonds and the sale of municipal loans in line with the strategy led to a decline in positions, which more than offset the increase in loans and advances to customers in the strategic REF segment.

Investments

Additions to intangible assets totalled €23 million in the reporting year (2022: €18 million). In the case of internally generated software, third-party services were utilised for development purposes, including for the development of the digital credit workplace. The investments mainly related to the REF segment.

DEVELOPMENT IN FINANCIAL POSITION

Liabilities and equity

in € million	31.12.2023	31.12.2022
Financial liabilities at fair value through profit or loss	662	686
Negative fair values of stand-alone derivatives	662	686
Financial liabilities measured at amortised cost	45,913	47,672
Liabilities to other banks	6,079	7,507
Liabilities to customers	18,829	17,889
Bearer bonds	20,402	21,641
Subordinated liabilities	603	635
Negative fair values of hedge accounting derivatives	789	1,125
Valuation adjustment from porfolio hedge accounting (liabilities)	-49	-112
Provisions	117	135
Other liabilities	68	57
Current income tax liabilities	18	19
Liabilities	**47,518**	**49,582**
Equity attributable to the shareholders of pbb	3,067	3,125
Subscribed capital	380	380
Additional paid-in capital	1,637	1,637
Retained earnings	1,162	1,214
Accumulated other comprehensive income	-112	-106
from pension commitments	-70	-49
from cash flow hedge accounting	-30	-26
from financial assets at fair value trough other comprehensive income	-12	-31
Additional equity instruments (AT1 capital)	298	298
Non-controlling interest in equity	-	2
Equity	**3,365**	**3,425**
Total equity and liabilities	**50,883**	**53,007**

Liabilities

The total amount of liabilities as at 31 December 2023 was below the figure at the end of the previous year. In particular, the most significant item within liabilities, financial liabilities measured at amortised cost, decreased significantly. In this item, liabilities to other banks fell due to the predominant repayment of the TLTRO III by €1.8 billion. The volume of public Pfandbriefe, bearer bonds and other liabilities also declined. In contrast, liabilities to customers increased due to the higher volume of retail deposits (pbb direct), which are currently more cost-effective for pbb. The fair value of hedging derivatives declined due to interest rate-induced effects.

Equity

The changes in equity are presented in the “Equity” note.

Due to the current challenging situation on the commercial real estate markets and after considering the views of all relevant stakeholders, pbb will not distribute a dividend for the 2023 financial year, thereby strengthening its capitalisation.

Key Regulatory Capital Ratios

At the balance sheet date, the CET1 ratio amounted to 15.7% (31 December 2022: 16.7%), the own funds ratio to 19.5% (31 December 2022: 21.8%) and the leverage ratio to 6.2% (31 December 2022: 5.9%) (after confirmation of the 2023 financial statements less AT1 coupon). Please refer to the Risk and Opportunity Report (“Internal Capital Adequacy Assessment Process (ICAAP)” section) for further information and calculation methodology on the key regulatory capital ratios.

Liquidity

Principles and Objectives of Liquidity and Financial Management

The primary objective of pbb Group's liquidity and financial management is to secure and manage the liquidity in such a way that the financing and funding capabilities are assured at all times. Central liquidity management is carried out by raising and investing liquidity on the money and capital markets and on the interbank money market as well as central banks.

Liquidity management within pbb Group is performed centrally by pbb's Treasury division. The sales units are refinanced internally on a one-to-one basis when they enter into new business. This means that risks are bundled and centrally managed.

Asset/liability management for pbb Group is performed by the Group Asset and Liability Committee (ALCO). The maturity structure can be found in the note on "Remaining terms of certain financial assets and liabilities."

Liquidity Ratio

As at 31 December 2023, the liquidity coverage ratio (LCR) was 212% (31 December 2022: 171%) and the net stable funding ratio (NSFR) was 111% (31 December 2022: 110%).

Funding

In the 2023 financial year, pbb Group placed a new long-term funding volume of €3.3 billion (2022: €5.9 billion) on the market. This was partially offset by buy-backs totalling €0.6 billion (2022: €0.3 billion). The refinancing volume is made up of Pfandbriefe and unsecured liabilities, which were issued both in benchmark format and in the form of private placements. Pfandbriefe placed on the capital market accounted for the majority of the volume at €2.7 billion (2022: €3.4 billion). Own-use Pfandbriefe totalling the equivalent of €1.7 billion were also issued, some of which were used as collateral for repo transactions. Unsecured refinancing, which was deliberately replaced to a large extent by lower-cost deposits from private customers (pbb direct), accounted for €0.6 billion (2022: €2.5 billion), with almost all of the volume being issued as senior preferreds. The transactions were predominantly denominated in euros and on a fixed-interest basis. Open interest rate positions are generally hedged by swapping fixed interest rates for variable interest rates. In order to minimise the currency risk between assets and liabilities, bonds in USD and GBP with a value of €0.8 billion were issued in 2023. The foreign currencies were converted into euros at the exchange rate applicable at the time of issue. As part of its holistic ESG strategy, pbb issued an unsecured benchmark bond with a volume of €0.5 billion as a green bond.

In line with the new Non-Core segment, public Pfandbriefe are no longer issued on the capital market and are repurchased early if appropriate.

A further tranche of the TLTRO III liability totalling €1.8 billion was repaid at the end of June 2023. This leaves a residual liability of only €0.9 billion until 2024.

Overnight and fixed-term deposits from private investors amounted to €6.6 billion as at 31 December 2023 (31 December 2022: €4.4 billion). In addition to the cooperations already established in previous years, pbb direkt has also been marketing its product range via Raisin GmbH, the operator of the WeltSparen investment platform, since June 2023, as well as via CHECK24 since September 2023.

Ratings

The following changes took place for pbb's mandated ratings in the financial year 2023:

After Standard & Poor's (S&P) had confirmed pbb's ratings with a stable outlook on 6 October 2023, the long-term ratings were downgraded by 1 notch each on 17 November 2023, following the ad-hoc announcement "Significant increase of risk provisioning - earnings forecast reduced" on 7 November 2023 and the Q3 publication on 14 November 2023 respectively. The rating outlook was changed to negative.

	31.12.2023		31.12.2022	
	Standard & Poor's	Moody's	Standard & Poor's	Moody's
Long-term Issuer Rating/Outlook	BBB/negative	-	BBB+/stable	-
Short-term Issuer Rating	A-2	-	A-2	-
Long-term senior "preferred" unsecured debt rating[2]	BBB	-	BBB+	-
Long-term senior "non-preferred" senior unsecured debt rating[3]	BB+	-	BBB-	-
Mortgage Pfandbriefe	-	Aa1	-	Aa1
Public Sector Pfandbriefe	-	Aa1	-	Aa1

[1] The overview does not include all ratings/outlooks
[2] S&P "Senior Unsecured Debt"
[3] S&P "Senior Subordinated Debt"

Rating agencies may alter or withdraw their ratings at any time. Ratings of individual securities issued by pbb may deviate from the ratings indicated above, or an individual security may not be rated at all. For the evaluation and usage of ratings, please refer to the rating agencies' pertinent criteria and explanations, and the relevant terms of use, which are to be considered. Ratings should not serve as a substitute for personal analysis. They do not constitute a recommendation to purchase, sell or hold securities issued by pbb

Off-balance sheet commitments

Irrevocable loan commitments represent the main part of off-balance sheet obligations and amounted to €2.2 billion as at the reporting date (31 December 2022: €3.0 billion). Contingent liabilities resulted from guarantees and warranty agreements and amounted to €0.1 billion as at 31 December 2023 (31 December 2022: €0.1 billion). As at 31 December 2023, the collateral provided for the European bank levy amounted to €42 million (31 December 2022: €36 million), for the Deposit Protection Fund to € 3million (31 December 2022: €3 million) and for the Compensation Scheme of German Banks to €4 million (31 December 2022: €3 million).

MATERIAL RELATED PARTY TRANSACTIONS

No material transactions with related parties were entered into during the financial years 2023 and 2022. Please refer to the note on "Relationships with Related Parties" for more details.

SUMMARY

Despite the longer-than-expected real estate market crisis, pbb Group generated a profit before tax of €90 million in 2023 (2022: € 213 million), which was at the lower end of the range adjusted in November 2023. As at the balance sheet date, the financing volume in the strategic Real Estate Finance segment slightly exceeded the previous year's figure totalling €31.1 billion (31 December 2022: € 29.3 billion) due to the new business volume of €7.2 billion (2022: €9.0 billion) in conjunction with low early repayments.

Risk and Opportunity Report

The Risk and Opportunity Report shows the identified risks and the opportunities for the individual risk types within the framework of the implemented risk management and risk controlling system. For more general or bank-wide risks and opportunities, please refer to the Report on Expected Developments.

ORGANISATION AND PRINCIPLES OF RISK AND CAPITAL MANAGEMENT

pbb had implemented a Group-wide risk management and risk control system, which provides for uniform risk identification, measurement and limitation in accordance with section 91 (2) of the German Public Limited Companies Act (AktG) and section 25a of the German Banking Act (Kreditwesengesetz – “KWG”). pbb, at a single-entity level, applies an exemption according to section 2a (2) of the KWG. The exemption refers to the requirements concerning the risk control function pursuant to section 25a (1) sentence 3 nos. 1, 2, 3b and 3c of the KWG.

Organisation and Committees

The Management Board of pbb is responsible for the risk management system, and decides on the strategies and material issues of risk management and risk organisation at pbb Group.

The principles, methods and processes of pbb’s risk management system are specified centrally by Risk Management and Controlling, and are applied throughout pbb Group, subject to any special requirements at single-entity level. The risk management system comprises the plausible and systematic identification, analysis, valuation, management, documentation, monitoring and communication of all major risks.

The following are major components of the risk management system in the responsibility of the Management Board:
- Defining, updating and communicating business and risk strategies as the basis of business activities and risk acceptance
- Defining and improving organisation structures within pbb Group and in particular for risk management, which ensures that all major risks are managed and monitored
- Adopting credit competences as a decision-making framework along the credit processes
- Taking decisions regarding (portfolio) management measures outside the delegated competences

The Management Board notifies the Supervisory Board with regard to significant changes in the business and risk strategies as well as the risk profile of pbb Group. The Risk Management and Liquidity Strategy Committee (RLA) of the Supervisory Board is responsible for controlling the overall risk situation and for monitoring, establishing and improving an efficient risk management system, and is also responsible for the liquidity management and assurance and resolves upon necessary credit approvals for credit decisions. The Management Board notifies this committee of all increases to specific allowances and the creation of new specific allowances (impairment stage 3) in excess of €5 million and also notifies this committee at regular intervals of major exposures with higher levels of risk.

The committees detailed in the following have been set up at pbb Group level with the involvement of the respective decision-makers.

The Risk Committee (RC), consists of the CRO (Chairman), the CEO (Deputy Chairperson), the Chief Credit Officer (CCO), the Head of Risk Management & Control (RMC) and one Credit Risk Management (CRM) department head. In general, the committee meets on a monthly basis and discusses the risk development, adopts guidelines/policies, methods for risk measurement, the related parameters as well as methods of monitoring for all risk types. The RC is responsible for the development of standard guidelines of risk management and risk controlling across the Group and also monitors the development of the risk-bearing capacity, economic capital, available financial resources as well as the credit portfolio and the compliance with limits. The Risk Committee discusses the portfolio developments. Additional committees have been established beside the Risk Committee, as outlined below.

The Credit Committee is chaired by the CRO or the CCO. As a general rule, the committee meets at least once a week and takes credit decisions on new business, prolongations and material changes that fall within the scope of its authority. It also votes on all credit decisions which are in the responsibility of the Management Board or which have to be approved by the RLA. It is in the responsibility of the relevant decision-makers to ensure that the credit decisions are consistent with the prevailing business and risk strategy.

The Watchlist Committee is chaired by the CCO and meets once a month. It discusses all exposures identified by the early warning system and, if appropriate, decides on individual risk mitigating measures to be implemented by the relevant departments. Where necessary, the committee takes decisions regarding the need to transfer exposures to CRM REF Workout, which then takes the necessary restructuring or workout steps on the basis of an individual exposure strategy and also decides on returning the corresponding transaction back to standard loan management after recovery. It is then the responsibility of each relevant credit department to obtain all the requisite lending decisions for implementing measures, in line with lending authority regulations.

If there are indicators for an impairment of an exposure's credit rating (impairment stage 3) in accordance with IFRS 9, the result – after determining the extent of any such impairment – is presented to the Risk Provisioning Committee (RPC). It is chaired by the CRO. The RPC takes decisions within the scope of a pre-defined assignment of approval powers and in accordance with IFRS and the German Commercial Code (HGB).

The New Product Process Committee (NPPC) comprises representatives from the most important units reponsible for infrastructure and controls. The representatives are determined by the RC. The NPPC convenes on an event-driven basis; it is responsible to ensure that, before business commences with new products or in new markets, the resulting risks as well as the related impact on processes, controls and infrastructure are systematically analysed and duly addressed. Only after approval of new product process committee business with new products or in new markets can be started.

The Stress Test Committee is responsible for the methodology, performance and monitoring of the internal stress tests. It is chaired by the CRO. The Committee also contributes to the preparation of scenarios for the Recovery Plan which every bank is required by law to prepare.

Besides the Risk Committee, there are the Asset and Liability Committee (ALCO), chaired by the Management Board member responsible for Treasury, as well as the Legal and Regulatory Risk Committee (LRRC), chaired by the Head of Compliance. The tasks of the ALCO are: managing liquidity as well as pbb Group's balance sheet structure, defining long-term financing strategies, managing capital, regulatory capital ratios, as well as market risk exposure. The LRRC advises on legal and regulatory requirements, and may assign responsibility for implementation to business divisions, following consultation. The Outsourcing Committee, chaired by the Head of Finance deals with the implementation of regulatory and statutory requirements as well as preparation of, and compliance with, internal guidelines. Moreover, it handles the overall management and monitoring of outsourced activities.

In addition, an ESG Committee, which deals with ESG aspects and ESG risks throughout the pbb Group, is established. The ESG Committee comprises the entire Management Board and the Heads of Communications, Compliance, Human Resources, Information Technology, Property Analysis & Valuation, Credit Risk Management, Treasury, Risk Management & Control, Loan Markets, Sales Germany, plus the members of the ESG Programme Management team as well as project managers of the various ESG sub-project streams Environment (E), E(SG) Risks, Governance (G), and Social (S) and of the ESG Communications and ESG Disclosure sub-project streams. The tasks of the ESG Committee were expanded in the first half of 2023. The ESG Committee is now primarily responsible for managing the regulatory and legal requirements relating to ESG, developing an ESG business strategy and monitoring the corresponding implementation measures within pbb Group. The Committee develops ESG targets and the measures required to achieve them. The ESG Committee also deals with the development of ESG key performance indicators and the resulting management.

Organisation of Risk Management
31 December 2023

<table>
<tr><td colspan="9">Risk Management and Liquidity Strategy Committee (RLA) of the Supervisory Board</td></tr>
<tr><td colspan="9">Management Board</td></tr>
<tr><td colspan="5">Risk Committee (RC)</td><td rowspan="2">Asset and Liability Committee (ALCO)</td><td rowspan="2">Legal and Regulatory Risk Committee[1] (LRRC)</td><td rowspan="2">Outsourcing Committee (OC)</td><td rowspan="2">Environmental, Social and Governance (ESG) Committee</td></tr>
<tr><td>Credit Committee</td><td>Watchlist Committee</td><td>Risk Provisioning Committee</td><td>New Product Process Committee</td><td>Stress Test Committee</td></tr>
</table>

[1] Reporting via Compliance.

Chief Risk Officer (CRO) In addition to the above-mentioned committees, the following organisation units of the CRO, form an integral part of the risk management system:

Organisation of Chief Risk Officer (CRO)
31 December 2023

<table>
<tr><td colspan="5">Chief Risk Officer (CRO)</td></tr>
<tr><td>Risk Management & Control (RMC)</td><td>Credit Risk Management (CRM)</td><td>Projects Risk Management</td><td>Operations & Digitalisation</td><td>Compliance</td></tr>
</table>

The CRO function comprises the following monitoring and back-office units at pbb Group level:

> The division Risk Management & Control, which is amongst others responsible for monitoring market, credit, operational and liquidity risks as well as the risk-bearing capacity and which is also responsible for Group-wide uniform risk measuring methods and risk reports.

> The divisions **CRM** and **Projects Risk Management**, which are responsible for the analysis of new business and portfolio management. In addition, CRM REF also comprises the Workout unit, which is responsible for the recovery and workout of all critical exposures, and the central unit Credit Processes, which is responsible in particular for the organisation of the Credit Committee, the continuous improvement of data quality within CRM and implementation of regulatory requirements in the credit processes.

> The division Operations & Digitalisation. The Operations sub-division is responsible for the global servicing and administration of the loan portfolio (including technical implementation of loan agreements), settlement of capital markets transactions, administration and processing of the securities and derivatives portfolios, as well for handling domestic and international payments. The Digitalisation sub-division acts as a competence centre for pbb as a whole, and drives pbb's digital transformation. Among other things, the strategic focus is on the digital client interface and intelligent process automation for efficiency gains by utilising new technologies and methods, such as agile project management.

> The **Compliance** division, which influences the conduct of pbb Group, in compliance with applicable laws and regulations, through methods and procedures as well as through audit and reporting processes. Compliance is responsible in particular for regulations and controls to prevent money laundering and other criminal activities, to ensure compliance with sanctions and embargoes, and to ensure capital market compliance. It is also responsible for general compliance topics. In this manner, the Compliance function opposes any risks that can arise from non-compliance with legal rules, as well as external and internal requirements. The Compliance division is also responsible for strengthening the internal control system for the central coordination of key controls (Control Attestation Process). Compliance is represented in various committees and regularly reports to the Management Board and the Audit and Digitalisation Committee of the Supervisory Board.

In addition to the CRO function, the independent **Property Analysis & Valuation (PAV)** department and **Group Internal Audit** units complement the risk management system. PAV is responsible for the analysis and uniform valuation of properties serving as collateral, using market valuation and loan-to-value methods, as well as for the monitoring of financed developments. PAV also monitors mortgage bond cover with a separate specialised department. The area of responsibility of Group Internal Audit comprises risk-oriented regular as well as event-driven audits of processes, controls and systems. This also includes the revision of the risk management system and the internal control system.

Risk Strategy and -Policies

In conjunction with the business strategy, the risk strategy provides the basis for planning and business policy action. The risk strategy has been defined on the basis of the Group-wide risk appetite; it reflects pbb’s strategic direction as a specialist for real estate finance with a focus on Pfandbrief funding. Furthermore, the guidelines and policies, which in their entirety provide the basis for the risk management system and the risk culture, are defined in the risk strategy. Subject to any special requirements at single-entity level, the risk strategy is applicable for pbb Group’s operating segments and legal entities. It is reviewed and updated at least annually.

In line with the preparation of the business strategy, the risk strategy was adopted by the Management Board as part of the annual strategy preparation process for 2023 and approved by the Supervisory Board. In the context of pbb Group's strategic development, the Management Board approved an update of the risk strategy as at the end of June 2023. In August, it was acknowledged by the RLA and approved by the Supervisory Board. The main focus of this update was the merger of the PIF and VP segments to form the non-strategic NC segment, the intended establishment of the new Real Estate Investment Management (bundled under pbb invest) and the termination of the business activities of CAPVERIANT GmbH.

The risk strategy is operationalised via risk policies for the individual operating segments, as well as guidelines/policies, frameworks or instructions for all major risk types set out in the valid risk inventory. The individual policies are reviewed and updated regularly. They contain information on risk measurement, risk monitoring and risk management. The limit-setting process – as well as the escalation process if a limit is exceeded – are also described in the policies.

Risk Reporting

Risk reporting reflects the structure of the operating segments. The Management Board receives regular risk reports which include an extensive overview as well as detailed information concerning the risk situation for each risk type as well as other management-relevant information. The supervisory bodies are also notified of risk-relevant issues at regular intervals. In addition, special reports are prepared on an ad hoc basis or at the request of the Management Board or Supervisory Board; such special reports consider specific and acute risk issues, for instance in relation to critical markets, products or counterparties.

Risk Quantification and Risk Management

For the purposes of systematically identifying and analysing potential risks arising from the business model or pbb Group’s external environment, pbb carries out a comprehensive risk inventory at least once a year. The objective of this risk inventory is to establish a full risk profile which identifies any and all risks, provides an assessment as to whether these risks are material for the capitalisation and liquidity status, and scans them for the existence of potential risk concentrations. Where possible, risks are quantified using applicable risk models or other methods.

Risks which cannot be quantified (or only in part) are monitored and managed using dedicated capital buffers or separate management tools, as well as by way of regular, detailed reports and clearly-defined requirements such as the Compliance and Corporate Governance guidelines.

The approach to managing risk, capital and liquidity is based on the Internal Capital Adequacy Assessment Process (ICAAP) and the Internal Liquidity Adequacy Assessment Process (ILAAP), each of which is seen in a normative and an economic perspective. The normative perspective is geared towards ongoing fulfilment of all of the Bank's capital- and liquidity-related legal requirements and supervisory demands. The economic perspective covers all material risks which might threaten pbb Group's economic viability, with a focus on the present-value analysis of risks.

Besides the measurement, limitation and monitoring of risks, all risk management approaches also comprise regular reporting as well as escalation processes; they are supplemented by scenario analyses and stress testing. To adequately monitor ESG risks, pbb is working on integrating the various ESG risk factors into the relevant types of risk, including monitoring, quantification and reporting. Moreover, climate-specific stress tests and scenario analyses are continuously being further developed. Within the framework of these strategic management approaches, pbb defines its risk appetite, which sets out the scope within which pbb is prepared to assume risks. This information is used to derive input for operative management, through limit systems, committee decisions, and other management decisions.

Limit and early warning systems have been implemented, in line with the risk appetite, for each type of risk as well as across risk types, at the level of capital steering approaches. The strategy underlying the respective type of risk, together with the associated risk definition, risk calculation methods, and risk reporting systems are described in detail in the following chapters.

ORGANISATION AND PRINCIPLES OF THE INTERNAL CONTROLLING SYSTEM

The chapter “Organisation and principles of the internal controlling system” was not examined by the external auditors.

With the new Act to Strengthen Financial Market Integrity, listed public limited companies are not only required to establish an appropriate and effective risk management system (RMS) but must also establish an appropriate and effective internal control system (ICS). The RMS and ICS must comprise a compliance management system (CMS) that is aligned with the company's risk situation. These systems (RMS, ICS, CMS) are already embedded in pbb's corporate culture.

Internal control system – concept

The ICS is an integral part of the RMS. It defines all measures that detect risks and errors in the processes, support the reliability of the processes and therefore safeguard the company's available assets and compliance with legal and regulatory provisions, and that detect or avoid fraudulent actions.

In connection with the obligation to introduce a Group-wide ICS, pbb's entire Management Board is also responsible for the design, which comprises the concept, implementation, maintenance and monitoring of an appropriate and effective ICS. The ICS is fully integrated within the structural organisation and processes/workflows. It is a dynamic process that is carried out by the Supervisory Board, the Management Board and employees, and is designed to ensure that the set targets will be achieved with reasonable certainty.

Internal controls and the Three Lines of Defence model are used to ascertain that the processes are effective and efficient and in line with the strategies (especially the risk strategy). This requires a clear organisational structure, and clear and transparent embedding of tasks, competencies and responsibilities. In terms of organisational workflows, the ICS is based on an objective of largely standardising the processes and the software in use. An instructions system is in place for core activities and processes.

Implementation of organisational framework – Three Lines of Defence model

An adequate and effective ICS must be monitored internally by the Management Board. By creating the monitoring requirements, the Management Board enables the Supervisory Board to monitor the appropriateness and effectiveness of the ICS at the same time.

<table>
<tr><td colspan="3">Supervisory Board and its committees</td></tr>
<tr><td colspan="3">Management Board</td></tr>
<tr><th>First Line of Defence
(1LoD)</th><th>Second Line of Defence
(2LoD)</th><th>Third Line of Defence
(3LoD)</th></tr>
<tr><td>Real Estate Financing</td><td>RMC</td><td rowspan="5">Internal Audit</td></tr>
<tr><td>Treasury</td><td>Compliance</td></tr>
<tr><td>Loan Markets</td><td rowspan="3">Further control units</td></tr>
<tr><td>pbb invest</td></tr>
<tr><td>Further operating divisions</td></tr>
</table>

The First Line of Defence (1LoD) comprises the operating divisions. This means that risks must be prevented, or recorded and reduced, at the organisational level of the transactions. As “risk owners”, the operating divisions have primary responsibility for the operative implementation of the risk management; in other words, the identification, assessment, management, monitoring, and reduction of risks. All 1LoD employees are required to deal with risks consciously and independently within the scope of their approval powers, comply with laws and internal guidelines and therefore manage risks appropriately. To this end, they define their processes, approval powers, interfaces and separation of functions and ensure that concrete risk management measures are taken and the methodological guidelines of the Second Line of Defence implemented.

The task of the Second Line of Defence (2LoD) is to manage and monitor the risk management functions of the 1LoD. This includes determining the methods and procedures for managing risk, the requirements through guidelines/policies and frameworks, the monitoring of risks and reporting to Company management. In this context, the 2LoD is also responsible for reviewing the stage of maturity and further development of the controlling and risk management systems. Within pbb Group, the 2LoD is traditionally formed by the central functions for risk management (RMC, Compliance, Data Protection and Information Security, Outsourcing Management and IT Governance).

Group Internal Audit (GIA) forms the Third Line of Defence (3LoD) as an independent, overarching control body. Its responsibilities include risk-oriented regular and event-driven audits of processes, controls, and systems for compliance. The audit activity spans all operational and business workflows, activities and processes. This also includes the review of the effectiveness and appropriateness of the ICS and RMS (detecting weaknesses in the identification, evaluation and reduction of risks). Detailed action plans with specific deadlines are compiled and implemented to deal with any deficiencies detected. As an independent division, GIA is not integrated in the work processes, nor is it responsible for the results of the process to be audited. To ensure these tasks are carried out, GIA is given complete and unrestricted right to information about the activities and processes, as well as the IT systems. GIA also participates in meetings of the various committees, where it can also act in an advisory capacity. It is expected to provide assurances to Company management that the risks are effectively recognised, evaluated and managed. It submits reports on this at appropriate intervals, but at least quarterly, to the entire Management Board and the Audit and Digitalisation Committee of the Supervisory Board. This objective and independent auditing and advisory function allows GIA to support the Management Board and the Supervisory Board in their monitoring functions.

As a controlling and advisory body, it is the duty of the Supervisory Board to advise and monitor the Management Board. The Supervisory Board also has audit obligations and has formed an Audit and Digitalisation Committee to provide support in this regard. The members of the Audit and Digitalisation Committee can obtain information from the heads of the central divisions. The ICS is the subject of the deliberations of the Supervisory Board. The Supervisory Board must have expertise in the areas of accounting, risk management including climate and environmental risks, compliance, internal audit and corporate governance, among others. This requirement is met in pbb Group.

Compliance management system – implementation

The objective of the Compliance function is to ensure compliance with all relevant legal rules and obligations at both national and international level (legal security), Company-specific rules, guidelines/policies and instructions (process security) and ethical and moral standards and norms, and expectations (behavioural security). For this purpose, pbb has established a group-wide CMS that includes all the implemented measures, structures and processes aimed at ensuring compliance with the aforementioned rules.

The CMS forms the organisational and process framework for compliance and the effective integration of regulations and procedures in the processes. It is designed to ensure that the behaviour of the Management Board and employees is in compliance with laws and regulations, and aims to avoid material violations along with associated liability risks, penalties and reputational damage.

A culture of compliance must be promoted for the CMS to be effective. For this purpose, pbb has defined Group-wide binding rules governing the legal and ethical conduct of all employees vis-à-vis clients, business partners, and colleagues in its Code of Conduct. These rules are an essential feature of the day-to-day business. A human rights policy was also established. A whistleblowing system allows for anonymous reporting in the event of a specific suspicion regarding breaches, fraudulent or other illegal activities.

In addition, the Compliance division has established a number of transparent, internal principles in the form of guidelines, frameworks and instructions for specifying the regulations, as well as the appropriate business and client-related security systems. Specific internal requirements as well as audit and reporting processes have been implemented to prevent money laundering and other criminal actions, to ensure adherence to sanctions and embargoes, capital markets compliance, MaRisk compliance and the prevention of insider trading.

By offering revolving training courses and advisory services to employees, and carrying out control activities, the Compliance division works to firmly enshrine the rules and ensure compliance with legal requirements and other obligations considered essential, as well as with the provisions of the Compliance Management System.

Taking into consideration the compliance objectives, violations or breaches of duty in relation to the law and supervisory rules, internal provisions and guidelines, and ethical and moral standards pose the greatest risk. As these could threaten the achievement of objectives, the risks are carefully identified, evaluated and controlled on a regular basis. This facilitates the risk-oriented definition of appropriate measures for risk mitigation or minimisation, as well as the implementation of risk-based control activities.

The Compliance function follows the principle of independence (from the units it monitors) and objectivity with the right of access, information and inspection at any given time. It is integrated extensively in the company organisation and has numerous interfaces with other pbb divisions and subsidiaries (across regions). It is always entitled to participate in the Bank’s internal committees and is involved in all relevant processes.

Compliance reports regularly to the Management Board and to the Audit and Digitalisation Committee of the Supervisory Board. As a result, these bodies are always informed about current developments and issues and can ultimately convince themselves about the appropriateness and effectiveness of the CMS.

Implementation of organisational framework – Control Attestation Process

To strengthen and further expand the ICS, the Management Board has instructed the Compliance function to perform the Control Attestation Process (CAP). This process is a tried-and-tested, fundamental global management instrument aiming to centrally coordinate and review risk-oriented control activities, and related advisory services for the divisions, on an ongoing basis. It specifically involves recording all key controls, including a regular downstream confirmation, modification and review process.

For this purpose, all (central and local) divisions identify and define the material division-specific risks within their areas of responsibility, as well as the related controls, and record these in a dedicated database. Controls relating purely to ESG risks are flagged separately. After this catalogue of key controls has been determined, regular quarterly feedback is provided by the divisions to Compliance as to whether these controls are still relevant in their complete and unchanged form, or whether they had to be modified during the confirmation period, or whether deviations exist in this regard. The divisions must also confirm that key controls are implemented in this context. Compliance compiles this feedback, analyses it, monitors it via an implemented control process (spot checks of existence, design, effectiveness and completeness) and reports at regular intervals on the results on a consolidated basis to the Management Board and the Audit and Digitalisation Committee of the Supervisory Board. Non-compliance with the defined procedures can be penalised under disciplinary law. In addition to the audit activities of Compliance, GIA also evaluates and reports within the scope of its audits whether the material risks are adequately addressed through key controls, and whether key controls are implemented effectively.

Control system for the organisational structure – further control activities

Every division also conducts various other controls beyond the CAP. Divisions within the 2LoD also carry out regular controls for material risks. In the Compliance division, these risk-based control activities comprise, in particular, relevant regulatory requirements (including money laundering and other criminal activities, capital market compliance and the compliance function within the meaning of MaRisk AT). In the event that monitoring or control activities indicate deficiencies, an appropriate course of action is identified.

Dynamic structure

To ensure that risks are identified, assessed and limited as correctly and comprehensively as possible, risk management and the ICS must be dynamic and responsive to changes in the overall environment. Accordingly, the ICS is continuously checked and improved in this respect. The ICS is also adjusted to reflect new circumstances, such as changes in the structure, responsibilities and business model, or new legal requirements. In addition, the control activities performed by the 2LoD as well as audits by GIA reveal potential for improvement in terms of both the adequacy (lack of appropriate controls) and effectiveness (inadequate implementation) of controls. Compliance incidents can also lead to potential for improvement.

This routine review is also monitored by the Management Board. The necessary adjustments to processes and IT systems arising from legislative changes are implemented as required in separate projects across divisions – based on a clearly-defined allocation of functions. The ICS is also adapted to the amended regulations as part of the implementation.

APPROPRIATENESS AND EFFECTIVENESS OF THE INTERNAL CONTROL AND RISK MANAGEMENT SYSTEM

The chapter "Adequacy and Effectiveness of the internal control and risk management system" was not examined by the external auditors.

The Management Board has a statutory obligation to address the effectiveness of the internal control and risk management systems. Its actions are guided by the conviction that appropriate and effective RMS and ICS are indispensable to ensure the economic success of the pbb Group in the long term.

To meet its obligation, the Management Board (and the Supervisory Board as well as the Supervisory Board's Audit and Digitalisation Committee as control bodies) receive regular reports on the ICS, the monitoring of the key controls implemented, control system maturity and further development of the ICS. Furthermore, reports are received about the RMS maturity, audit planning (and implementation) and the GIA audit results. This enables the Management Board and the Supervisory Board/Audit and Digitalisation Committee to review and monitor the effectiveness and appropriateness of the two systems. Based on this reporting, the Management Board is not aware of any circumstances that argue against the appropriateness and effectiveness of these systems.

RISK TYPES

pbb distinguishes the following major risk types for its business activities:
- Credit risk (counterparty risk)
- Market risk
- Liquidity and Funding risk
- Operational risk
- Business and strategic risk
- Property risk
- Pension risk
- Central counterparty risk
- Environmental, social and governance risk

Credit Risk (Counterparty Risk)

Definitions
The credit risk in general is defined as the risk due to an unexpected default or decline in the market value of a receivable (loan or bond) or a derivative (alternatively of an entire portfolio of claims/derivatives). The reason for this can be either a deterioration in a country's or counterparty's creditworthiness or by a deterioration in collateralization.

The credit risk comprises the default risk, migration risk, realisation risk of defaulted customers, transfer and conversion risk, tenant risk, settlement risk, extension risk as well as concentration risk which are defined as follows in pbb Group's risk strategy:
- Default risk denotes the risk of a default occurring on receivables. This includes defaults of loans or other credit products (lending risk), or bonds and other securities (issuer risk), as well as the risk of default on receivables under derivatives contracts (counterparty risk/replacement risk) or money market transactions (repayment risk). The possible default of sovereign or regional governments is included as a special case (sovereign default risk).
- Migration risk is the risk of a loss in value of a receivable caused by rating migration. This includes both the risk of rating migrations of traditional borrowers as well as rating migration of bonds and other securities and receivables from derivatives and money market transactions. The impact of a rating migration concerning sovereign or regional governments as a special case is included, too.
- Realisation risk of defaulted customers is the risk that the risk provisioning recognised changes over the analysis period, or the risk of actual amounts realised differing from the risk provisioning.

- Transfer risk is the risk that a government or central bank restricts the use of the currency to their own country. This includes the conversion risk, which is the risk that a government or central bank declares its own currency as non-convertible. Together with the sovereign risk, the transfer and the conversion risk form the country risk.
- Tenant risk describes the risk that losses in rental income for properties will negatively influence the respective borrowers' debt service capacity. In addition, it includes the secondary concentration risk (tenant cluster risk), which arises when one and the same tenant is involved in multiple properties funded by the pbb.
- Settlement risk is defined as the risk that the pbb makes a payment or delivers an asset which has been sold to a counterparty but does not receive a payment or the purchased asset.
- Extension risk is the risk that the holding period of a credit risk related asset is extended by a maximum of one year.
- Concentration risk is defined as the risk of cluster formation in relation to a risk factor or counterparty, or a strongly correlated group of risk factors or counterparties.

Credit Risk Strategy and Principles
pbb Group has broken down the overall credit portfolio into the segments REF, Non-Core and C&A. The strategic business is attributable to commercial Real Estate Finance (REF). The risk strategy also reflects this structure.

Please refer to the information in the section "Fundamental Information about the Group" for a description of the business focus with regard to strategic portfolios, and for statements outlining the strategy adopted for the run-down portfolio.

Credit Risk Reports
The credit risk reports of pbb provide information about the following main components:

- The pbb Group Risk Report contains the development in volumes as well as relevant credit risk management indicators such as the development of the expected loss as well as the unexpected loss via value at risk (VaR). The report shows the credit risk at the level of pbb Group in the context of the overall bank risk and the risk-bearing capacity, it reports limit utilisations and violations of existing limits, and also identifies risk concentrations. Key indicators, such as the development of the exposure at default (EaD), the expected loss (EL), the credit value at risk (Credit VaR) as well as problem loans are integrated in this report and are discussed by the Management Board; the report is also submitted to the RLA of the Supervisory Board to be noted and dealt with by the RLA regularly in its meetings.
- CRM REF portfolio reporting provides a breakdown of the REF portfolio (as well as various parameters such as the expected loss in basis points) by country and asset class, and reports about critical facilities, forbearance, tenant risks and real estate sub-markets. This quarterly reporting package is made available to the CCO, the CRO, the Management Board and the RLA of the Supervisory Board.
- CRM Public Sector & Corporates Reporting reports on the Non-Core segment and C&A. For this purpose, the portfolio is analysed based on various criteria such as countries, remaining term to maturity, type of business partner or product class. Top exposures, critical facilities, forbearance and financial institutions are also reported on. The reporting package is made available to the CCO, the CRO, the Management Board and the RLA of the Supervisory Board on a semi-annual basis.
- For decisions to be made regarding new business, or regarding material changes to the credit quality of existing financings (such as a maturity extension), key financial indicators, content and analysis on a case-by-case basis are presented to, and discussed by the Credit Committee.
- In the active business, further regular reports support operational management with regard to the management and timely recognition of risks at the sub-portfolio level.
- Unusual developments which might result in a major deterioration in the risk position of an individual exposure are ad-hoc reported to a wider group up to the CRO by way of so-called "Credit Issue Notes".

Credit Risk Quantification via Economic Capital and Risk-weighted Assets according to Capital Requirements Regulation (CRR)

Credit Portfolio Model For calculating the economic capital for credit risk pbb Group uses a credit portfolio model. For details concerning this model and economic credit risk quantification, please refer to the sections “Internal Capital Adequacy Assessment Process (ICAAP)”.

Stress Testing The stress tests for economic capital in credit risk are described in greater detail in the section “Internal Capital Adequacy Assessment Process (ICAAP)”.

In addition to the stress tests for economic capital, there are also RWA reverse stress tests. These are designed to examine the extent to which a certain risk parameter (e.g. rating, loss given default (LGD), currency) may change before a minimum ratio (Common Equity Tier 1 (CET1) ratio, Tier 1 ratio or own funds ratio) is no longer met. The minimum ratios are based on the bank-specific SREP ratios. Tolerance change levels have been defined for all tested risk parameters; these levels must not be violated if the test of pbb Group is to be successfully completed.

Credit Risk Quantification according to CRR The Basel III Framework Agreement of the Basel Committee was implemented in the European context by means of the CRR. pbb applies the so-called Advanced IRBA and the Standardised Approach (STA).

Credit Risk Management and Monitoring

Credit Risk Management At the portfolio level, the intended portfolio structure is defined in the risk strategy by means of structure components. The limits are also based on the available financial resources, and include for example:
- Limiting of country risks
- Definition of strategic risk parameters (e.g. regions, financing duration)

The following reports and measures are key elements for monitoring compliance with the defined limits and the intended risk and return parameters at the portfolio level and also at the level of individual transactions:
- Analysis of portfolio developments in the Risk Committee
- Determining the credit-VaR at the portfolio level by way of a credit portfolio model and partly limiting at the segment level; analysis of concentration risks and various stress tests
- Central Group-wide monitoring of risk concentrations by way of special, regular and ad hoc evaluations, such as regional or product-specific evaluations
- Continuous analysis of the portfolio and the relevant markets by the local Credit Risk Management units
- Regular evaluation of the collateral
- Special reports for exposures which are potentially at risk (e. g. “credit issue notes”)
- Calculation of a risk-adjusted margin using the economic return after tax

Depending upon the counterparty group, Expected Loss class or exposure size at counterparty group level, the lending authority regulations determine the approval powers for new as well as existing exposures. Approval powers are assigned to individual employees in line with their individual experience and qualification.

Credit Risk Management and Monitoring At the level of individual transactions, the credit process guidelines define the necessary steps of assessing risk for new business as well as for substantial changes as prolongations or increase of credit limit and the procedures for transferring exposures to watchlist or restructuring and workout.

Core processes of credit risk management and monitoring as well as the relevant areas which are involved are described in the following:

The CRM entities carry out the initial risk analysis for new business and annual risk analysis for existing business. Probability of default (PD) and loss given default (LGD) rating tools, which are developed in the unit RMC and annually validated and calibrated, are used for valuation purposes and for preparing the credit decision in new and prolongation business. PAV provides support for analysing and valuing collateralised properties.

The Legal department, where appropriate together with external lawyers/lawyers' offices, is responsible for the contract and collateral organisation.

Defined early warning indicators are constantly monitored by CRM. If essential problems are identified, an exceptional test is performed on the credit default risk (including a review of the value of collateral) and appropriate alternative actions are identified. The cases are also presented to the Watchlist Committee. This committee decides whether they are to be included in a monthly or quarterly monitoring cycle or remain in the annual monitoring cycle.

If there are indicators for a deterioration of credit quality, the level of the stage 3 impairment is calculated in accordance with IFRS or, in the case of specific allowances, in accordance with the HGB. In the Risk Provisioning Committee, the results are discussed and, where necessary, decisions are taken with regard to creating or reversing stage 3 impairments/specific allowances.

For potential problem loans or stage 3 impaired (IFRS)/specific allowance (HGB) exposures, probability-weighted scenario analyses on the potential development of the borrower, the collateral or the relevant market are carried out as part of the calculation of risk provisions. These analyses are reviewed regularly or on an event-driven basis. Decisions to this effect are made within the scope of the pbb's valid assignment of authority.

Critical exposures (watchlist) as well as restructuring and workout cases (non-performing loans) are reported on an aggregate basis monthly in the Group Risk Report and in the Risk Committee and also, upon request, in special analyses to the Management Board and Supervisory Board.

As required by MaRisk, stage 3 risk provisioning is backtested annually. The results of the analysis are presented to the RPC for acknowledgement at the start of each new financial year.

Hedging and Minimising Risk by Collateral
In the REF segment, financing arrangements are normally backed by property charges. As part of the decision-making process in the case of new financing, the LTVs (loan-to-value) as well as the property (amongst others micro and macro location, rental situation, condition of property) and market circumstances are discussed and are also taken into consideration as part of the assessment process for individual loans. For existing exposures, this monitoring is carried out on a regular basis, at least annually.

Besides real property liens, collateral provided for financings in the REF segment also includes assignments of rental payments as well as insurance benefits; this is supported by borrowers' extensive information and reporting obligations. Apart from the property charges, only a few more selected securities are considered to be of value in the credit assessment process or in the calculation of LGD, and in particular under certain circumstances cash security, bank guarantees as well as guarantees of public-sector institutions. Corresponding risk buffers are considered in relation to foreign currency collateral, that means in a currency differing from the loan currency, in order to take account of potential exchange rate risks.

Properties in the REF business are valued using strict quality criteria. Property collateral values are determined when the loan is initially granted, and reviewed on an annual basis. With PAV, pbb maintains an independent real estate analysis unit: All staff members in the PAV department who are involved in real estate analysis are certified in accordance with ISO 17024 (HypZert standard), and have usually gained additional qualifications (such as RICS membership). This department is always involved in the initial valuation (when new loans are granted) and regular revaluations, as well as in the monitoring of values carried out at least once a year on the basis of an automatic monitoring solution in the Credit Workplace.

For development financings, regular monitoring comprises the monitoring of planning progress, budget, procurements, construction schedule, sales/letting progress and construction stage. As a rule, for complex developments, monitoring is carried out by external project monitors on the pbb's behalf, on a monthly to quarterly basis, coordinated and supervised by PAV. For less complex developments, construction progress is monitored at least every three months, by experienced and specialised internal property analysts. CRM monitors costs, thus facilitating a current overview of actual costs, as well as a cost projection for the project, which is reconciled against the results of internal monitoring (as well as external monitoring, if applicable). This allows for recognition of any divergence from project planning (and hence, project risks during construction) at an early stage.

In public investment financing, guarantees often serve as collateral (e.g. contractual guarantees/guarantees from public bodies, export credit guarantees). In addition, there are often legal framework conditions, such as the maintenance obligation (the so-called "Anstaltslast") in Germany or other direct and indirect cover mechanisms that allow recourse to a public-sector institution in the case of borrowers organised under public law. In some cases, the guarantees or legal framework conditions in the Non-Core segment are flanked by additional financing collateral and information and reporting obligations on the part of the borrower. However, this additional financing collateral is generally not recognised as valuable in the credit assessment or LGD calculation.

In Treasury, mainly cash contributions and securities are made available or accepted as collateral when trading with other banks. The collateralisation is based on standard agreements, which can be amended in individual cases if required or which can be subjected to individual review by the legal department.

Credit Portfolio
The entire credit portfolio is calculated by using the EaD.

For most products, EaD is equal to the IFRS carrying amount (including accrued interest). Committed, undrawn credit lines are additionally included in EaD with a product-specific credit conversion factor (CCF). The CCF indicates the portion of an undrawn credit line that is expected to be drawn upon within one year before a potential default. Derivatives and repo transactions are an exception since their EaD is not identical to their carrying amount but must be determined, in accordance with the CRR using a different methodology. This applies, for example, to derivatives in accordance with the SA-CRR method, which has replaced the mark-to-market method under CRR II since June 2021.

The Group’s credit portfolio had an aggregated EaD of € 51.3 billion as of 31 December 2023 (31 December 2022: € 50.0 billion).

Overview of the Total Exposure of pbb Group:
The credit portfolio is broken down into two segments:
- Real Estate Finance (REF) and
- Non-Core (NC)

The former Public Investment Finance and Value Portfolio segments were merged in the first quarter of 2023 to form the non-strategic Non-Core (NC) segment.

In addition, “Consolidation & Adjustments” shows besides the internal reconciliation and consolidation positions, the EaD for transactions which are not directly attributable to the operating segments. These are basically asset positions for asset and liability management.

EaD in C&A as of 31 December 2023 was fully attributable (100%; 31 December 2022: >99%) to EL classes 1 to 8; according to the internal classification, these are considered investment grade.

Total portfolio: EaD according to operating segments

in € billion	31.12.2023	31.12.2022	Change in € billion	Change in %
Real Estate Finance	33.0	31.0	2.0	6.5
Non-Core	13.2	15.3	-2.1	-13.7
Consolidation & Adjustments	5.1	3.7	1.4	37.8
Total	**51.3**	**50.0**	**1.3**	**2.6**

The total exposure (EaD) of the pbb Group increased by €1.3 billion as at 31 December 2023 compared with the end of the previous year. Explanations of the changes in the individual segments can be found in the detailed presentation of the respective segment. The share of EaD in the REF strategic segment increased mainly due to new business. C&A increased compared to the end of the previous year, mainly due to a higher exposure to central banks. The non-strategic NC segment decreased due to repayments, sales and maturities.

Risk Parameters The expected loss (EL) for a time period of one year is calculated for the entire exposure, with the exception of non-performing loans for which a stage 3 impairment has already been recognised. The EL is calculated using the parameters defined under Basel III, i.e. PD, LGD and EaD.

As at 31 December 2023, the EL for the pbb Group amounted to € 178 million (31 December 2022: € 149 million). The increase in EL was mainly due to rating downgrades in the REF operating segment.

pbb applies the default definition according to EBA Guideline 2016/07.

Total exposure: expected loss according to operating segments

in € million	31.12.2023	31.12.2022	Change in € million	Change in %
Real Estate Finance	176	145	31	21.4
Non-Core	2	3	-1	-33.3
Consolidation & Adjustments	-	1	-1	-
Total	**178**	**149**	**29**	**19.5**

Future developments, such as changes in the economic environment or developments concerning individual risks, may result in changes to the EL figures set out above. Furthermore, actual losses incurred may differ from expected losses.

Economic Credit Risk Capital pbb calculates economic capital for credit risk using a credit portfolio model. For details concerning credit risk quantification, please refer to the section “Internal Capital Adequacy Assessment Process (ICAAP)”.

Regional Breakdown of the Portfolio At the reporting date, the main focus of the exposure was unchanged on Western Europe. Germany continued to account for most of the overall exposure, with 41% (€21.2 billion).

The € 1.7 billion increase in EaD in Germany compared to the end of the previous year was mainly caused in C&A by a higher exposure to central banks. The reduction in France is mainly due to the repayment of a maturing security in the NC segment.

The largest item of the category “Other Europe” was the Netherlands with €1.3 billion (31 December 2022: €1.3 billion). The category “Other”, which accounted for €0.7 billion (or around 1% of the portfolio), largely comprises bonds issued by supranational organisations.

Total portfolio: EaD according to regions

in € billion	31.12.2023	31.12.2022	Change in € billion	Change in %
Germany	21.2	19.5	1.7	8.7
France	6.9	7.7	-0.8	-10.4
USA	5.2	5.0	0.2	4.0
Austria	4.6	4.7	-0.1	-2.1
United Kingdom	2.7	2.6	0.1	3.8
Other Europe[1)]	2.3	2.3	-	-
Poland	2.0	1.8	0.2	11.1
Italy	1.6	1.6	-	-
Spain	1.5	1.7	-0.2	-11.8
Sweden	1.2	0.9	0.3	33.3
Other[2)]	0.7	1.1	-0.4	-36.4
Czech Republic	0.6	0.4	0.2	50.0
Finland	0.4	0.3	0.1	33.3
Portugal	0.3	0.3	-	-
Hungary	0.2	0.2	-	-
Total	**51.3**	**50.0**	**1.3**	**2.6**

[1)] As of 31 December 2023 the category “Other Europe” comprises the Netherlands, Slovakia, Switzerland, Romania, Slovenia, Belgium, Luxembourg, Ireland, Norway, Latvia and Denmark.
[2)] As of 31 December 2023 the category “Other” comprises amongst others Supranationals, Japan and Canada.

Depending on the results of the internal rating process, maximum limits are defined for each individual country; these limits restrict pbb Group’s business activities. All country limits are monitored daily in the unit RMC.

Real Estate Finance: € 33.0 billion EaD
The REF segment comprises real estate loans and related customer derivatives. Unlike the funding volume shown in the chapter “Development in Earnings” the EaD of the REF portfolio also includes undrawn credit lines multiplied by a product-specific conversion factor.

In 2023, the REF segment recorded portfolio growth of € 2.0 billion due to new business, taking into account repayments and currency effects in the various regions. Most of the new business was generated in Germany.

Real Estate Finance: EaD according to regions

in € billion	31.12.2023	31.12.2022	Change in € billion	Change in %
Germany	14.2	13.9	0.3	2.2
USA	5.1	5.0	0.1	2.0
France	4.1	3.7	0.4	10.8
United Kingdom	2.5	2.4	0.1	4.2
Poland	1.9	1.7	0.2	11.8
Other Europe[1)]	1.8	1.7	0.1	5.9
Sweden	1.2	0.9	0.3	33.3
Czech Republic	0.6	0.4	0.2	50.0
Spain	0.5	0.5	-	-
Finland	0.4	0.3	0.1	33.3
Austria	0.3	0.3	-	-
Hungary	0.2	0.2	-	-
Italy	0.1	0.1	-	-
Total	**33.0**	**31.0**	**2.0**	**6.5**

[1)] As of 31 December 2023 the category “Other Europe” comprises the Netherlands, Switzerland, Romania, Slovakia, Luxembourg, Slovenia, Norway and Belgium.

In terms of EaD by property type, the largest increase was in the logistics/storage category, followed by residential and office buildings.

Real Estate Finance: EaD according to property type

in € billion	31.12.2023	31.12.2022	Change in € billion	Change in %
Office buildings	16.7	16.3	0.4	2.5
Residential	5.8	5.3	0.5	9.4
Logistics/Storage	5.3	4.2	1.1	26.2
Retail	3.2	3.3	-0.1	-3.0
Hotel/Leisure	1.1	1.1	-	-
Other	0.5	0.5	-	-
Mixed use	0.5	0.3	0.2	66.7
Total	**33.0**	**31.0**	**2.0**	**6.5**

At 31 December 2023, investment financings continued to dominate the portfolio (90%; 31 December 2022: 88%); development financings accounted for 10% of EaD (31 December 2022: 11%). Investment financings are defined as real estate loans, the debt servicing ability of which largely depends upon current cash flows from the property.

Real Estate Finance: EaD according to loan type

in € billion	31.12.2023	31.12.2022	Change in € billion	Change in %
Investment financing	29.7	27.4	2.3	8.4
Development financing	3.2	3.4	-0.2	-5.9
Customer derivatives	0.1	-	0.1	100.0
Other	-	0.2	-0.2	-100.0
Total	**33.0**	**31.0**	**2.0**	**6.5**

Non-Core (NC): € 13.2 billion EaD

The NC portfolio comprises pbb Group's non-strategic exposures. The previous year's figures were determined by aggregating the two former Public Investment Finance and Value Portfolio segments.

EaD in the NC segment fell by € 2.1 billion compared to the end of the previous year due to repayments, sales and maturities. The largest reduction occurred in the exposure in France. This was mainly due to the repayment of a maturing security.

Non-Core: EaD according to regions

in € billion	31.12.2023	31.12.2022	Change in € billion	Change in %
Austria	4.3	4.4	-0.1	-2.3
Germany	3.4	3.7	-0.3	-8.1
France	2.6	3.6	-1.0	-27.8
Italy	1.3	1.4	-0.1	-7.1
Spain	0.8	0.8	-	-
Other[1)]	0.3	0.8	-0.5	-62.5
Portugal	0.3	0.3	-	-
Other Europe[2)]	0.1	0.2	-0.1	-50.0
United Kingdom	0.1	0.1	-	-
Total	**13.2**	**15.3**	**-2.1**	**-13.7**

[1)] As of 31 December 2023 the category “Other” comprises mainly Supranationals, Japan and Canada.
[2)] As of 31 December 2023 the category “Other Europe” comprises mainly Belgium and the Netherlands.

EaD by counterparty structure is shown including regulatory permitted guarantees or other forms of credit support.

“Public Sector Borrowers” summarises claims against sovereign states, public-sector enterprises, and regional governments and municipalities. The definition also includes exposures guaranteed by these counterparties.

Non-Core: EaD according to counterparty structure

			Change	
in € billion	31.12.2023	31.12.2022	in € billion	in %
Public sector borrowers	12.8	14.8	-2.0	-13.5
Financial institutions[1]	0.3	0.3	-	-
Companies/Special-purpose entities[2]	0.1	0.1	-	-
Total	**13.2**	**15.3**	**-2.1**	**-13.7**

[1] Mainly Spanish covered bonds.
[2] Largely collateralised by guarantees and surety bonds.

Structured Products
pbb Group's residual holdings of Collateralised Debt Obligations guaranteed by a regional government had a notional value of €0.2 billion as at 31 December 2023 (31 December 2022: €0.2 billion) and a current fair value of €0.2 billion (31 December 2022: €0.2 billion).

Breakdown of on-balance sheet and off-balance sheet business by rating class
The following tables provide a breakdown of gross carrying amounts of non-derivative financial assets (excluding cash funds), and of default risks in irrevocable loan commitments and contingent liabilities, by internal rating class and impairment level. The breakdown is in line with pbb Group's internal rating classes. The default definition follows Article 178 of the CRR.

Breakdown of non-derivative financial assets (excluding cash funds) by internal rating class and impairment level (as at 31 December 2023)

in € million	Stage 1	Stage 2	Stage 3	FVPL	**Total**
Class 1	10,068	-	-	179	10,247
Class 2	413	-	-	0	413
Class 3	0	-	-	-	0
Class 4	420	-	-	-	420
Class 5	151	-	-	-	151
Class 6	-	-	-	-	-
Class 7	1,728	-	-	81	1,810
Class 8	1,858	-	-	3	1,860
Class 9	2,822	112	-	0	2,934
Class 10	2,851	184	-	11	3,046
Class 11	3,552	497	-	-	4,050
Class 12	5,133	608	-	107	5,848
Class 13	3,707	633	-	-	4,339
Class 14	1,542	879	-	44	2,466
Class 15	1,137	688	-	-	1,825
Class 16	629	754	-	-	1,383
Class 17	672	235	-	-	907
Class 18	572	692	-	-	1,264
Class 19	682	436	-	-	1,118
Class 20	829	339	-	25	1,193
Class 21	269	267	-	-	536
Class 22	56	134	-	-	190
Class 23	24	132	-	-	156
Class 24	-	-	-	-	-
Class 25	1	59	-	-	60
Class 26	-	21	-	-	21
Class 27	-	28	-	-	28
Defaulted	-	-	1,486	-	1,486
Total	**39,119**	**6,697**	**1,486**	**450**	**47,752**

Breakdown of non-derivative financial assets (excluding cash funds) by internal rating class and impairment level (as at 31 December 2022)

in € million	Stage 1	Stage 2	Stage 3	FVPL	**Total**
Class 1	2,348	-	-	37	2,385
Class 2	10,479	-	-	140	10,620
Class 3	261	-	-	-	261
Class 4	-	-	-	-	-
Class 5	553	-	-	-	553
Class 6	-	-	-	-	-
Class 7	1,768	-	-	-	1,768
Class 8	1,612	-	-	2	1,614
Class 9	5,721	94	-	78	5,893
Class 10	3,321	511	-	19	3,851
Class 11	4,446	1,233	-	40	5,718
Class 12	2,823	1,263	-	63	4,150
Class 13	2,088	1,254	-	42	3,385
Class 14	1,322	771	-	45	2,138
Class 15	867	788	-	22	1,677
Class 16	760	740	-	-	1,500
Class 17	859	869	-	25	1,753
Class 18	642	588	-	-	1,230
Class 19	760	498	-	-	1,258
Class 20	184	110	-	-	295
Class 21	-	101	-	-	101
Class 22	201	76	-	-	277
Class 23	-	-	-	-	-
Class 24	-	-	-	-	-
Class 25	-	43	-	-	43
Class 26	-	24	-	-	24
Class 27	-	35	-	-	35
Defaulted	-	-	833	-	833
Total	**41,017**	**8,999**	**833**	**514**	**51,362**

Breakdown of irrevocable loan commitments and contingent liabilities by internal rating class and impairment level (as at 31 December 2023)

in € million	Stage 1	Stage 2	Stage 3	**Total**
Class 1	80	-	-	80
Class 2	-	-	-	-
Class 3	-	-	-	-
Class 4	-	-	-	-
Class 5	-	-	-	-
Class 6	-	-	-	-
Class 7	-	-	-	-
Class 8	-	-	-	-
Class 9	-	-	-	-
Class 10	34	-	-	34
Class 11	83	-	-	83
Class 12	75	-	-	75
Class 13	193	18	-	211
Class 14	32	44	-	75
Class 15	88	16	-	104
Class 16	124	61	-	185
Class 17	293	2	-	295
Class 18	129	17	-	146
Class 19	316	102	-	418
Class 20	231	10	-	240
Class 21	75	37	-	111
Class 22	143	-	-	143
Class 23	-	8	-	8
Class 24	-	-	-	-
Class 25	2	5	-	6
Class 26	-	-	-	-
Class 27	-	-	-	-
Defaulted	-	-	72	72
Total	**1,896**	**320**	**72**	**2,288**

Breakdown of irrevocable loan commitments and contingent liabilities by internal rating class and impairment level (as at 31 December 2022)

in € million	Stage 1	Stage 2	Stage 3	Total
Class 1	-	-	-	-
Class 2	125	-	-	125
Class 3	-	-	-	-
Class 4	-	-	-	-
Class 5	-	-	-	-
Class 6	-	-	-	-
Class 7	-	-	-	-
Class 8	8	-	-	8
Class 9	37	-	-	37
Class 10	70	13	-	83
Class 11	188	22	-	211
Class 12	345	6	-	351
Class 13	359	2	-	361
Class 14	185	26	-	211
Class 15	138	52	-	190
Class 16	197	30	-	227
Class 17	244	52	-	295
Class 18	139	128	-	268
Class 19	438	115	-	553
Class 20	121	15	-	136
Class 21	-	-	-	-
Class 22	2	-	-	2
Class 23	-	-	-	-
Class 24	-	-	-	-
Class 25	-	8	-	8
Class 26	-	-	-	-
Class 27	-	-	-	-
Defaulted	-	-	5	5
Total	**2,595**	**469**	**5**	**3,069**

Watchlist and Non-performing Loans

Early Warning System The early warning system of the pbb Group has defined criteria respectively threshold values (triggers) for including loans in the watchlist and for being classified as restructuring or workout loans (e.g. past due payments, failure to meet financial ratios – e.g. loan-to-value [LTV], interest service coverage [ISC]). It is constantly monitored whether a trigger has been set off. In case of a corresponding indication, the credit exposure is analysed and presented to the Watchlist Committee. Taking into consideration the overall circumstances, the Watchlist Committee then decides whether a prompt transfer of the exposure to watchlist or restructuring and workout loans is appropriate. In this context and in the event of impairment triggers, the financial instruments are reviewed for credit impairment.

Indicators for Watchlist and non-performing loans (restructuring and workout loans) include amongst others:

- Watchlist Loans: Payments past due by more than 60 days or another defined early warning signal is triggered (for instance insolvency of a main tenant in the REF segment).
- Restructuring Loans: A default has occurred (for example, due to payments past due by more than 90 days, or the borrower's insolvency), or another contractual or regulatory trigger is applicable. The focus with restructuring is on active implementation of a restructuring concept – with the objective of either returning the exposure to standard loan management, or realising collateral on the market, without enforcement measures. Credit quality is consistently tested for deterioration, and stage 3 impairments (in accordance with IFRS) or specific allowances (in accordance with the HGB) are recognized if necessary. Impairments or their underlying assumptions are reviewed regularly or on an ad-hoc basis.
- Workout Loans: There are no indications that the loan can be restructured. Enforcement measures have been or will be introduced. Stage 3 impairments (in accordance with IFRS) or specific allowances (in accordance with the HGB) were recognised if necessary. Impairments or their underlying assumptions are reviewed regularly or on an ad-hoc basis.

CRM REF Workout is responsible for determining and reviewing impairments in accordance with applicable accounting standards (German Commercial Code (HGB) and IFRS).

Development of Watchlist and non-performing loans of pbb Group

EaD in € million	31.12.2023 REF	31.12.2023 NC	31.12.2023 Total[1]	31.12.2022 REF	31.12.2022 NC	31.12.2022 Total[1]	Change in € million	Change in %
Workout loans	179	-	179	106	-	106	73	68.9
Restructuring loans	1,337	19	1,356	679	50	729	627	86.0
Non-performing loans	**1,516**	**19**	**1,535**	**785**	**50**	**835**	**700**	**83.8**
Watchlist loans	**1,327**	**28**	**1,355**	**818**	**35**	**853**	**502**	**58.9**

[1] No exposure in C&A.

Watchlist and non-performing loans increased by a net €1,202 million between 31 December 2022 and 31 December 2023.

Watchlist loans increased by a total of € 502 million in the reporting period. In the REF segment, new exposures totalling € 1,026 million were transferred to intensified handling. At € 433 million, a significant proportion (around 42%) of these were US investment financings. In addition, small increases and offsetting effects from repayments totalling € 1 million had an increasing effect. In contrast, financings in the amount of € 311 million were transferred from the watchlist loan portfolio as at 31 December 2022 to the restructuring portfolio. Furthermore, a borrower in the amount of € 118 million was returned to standard loan management and a loan in the amount of € 90 million was repaid in full. Exposure in the NC segment decreased by € 7 million.

Non-performing loans increased by a net total of € 700 million in the reporting year. In the REF segment, loans totalling € 997 million were newly transferred to the unit responsible for restructuring and workout. The share earmarked for Workout totalled € 46 million. The exposure share of US loans (investment/office) in relation to the total increase was € 481 million (around 48%). In contrast, financings totalling € 175 million were transferred back to standard loan management and loans amounting to € 89 million were repaid in full. In addition, there was a net reduction in exposure totalling € 2 million, which included both increases and reductions. Within the problem loans, an exposure totalling € 16 million was transferred from restructuring to workout. In the NC segment, one borrower totalling € 26 million was transferred back to standard loan management and another exposure was reduced by € 4 million.

Credit loss allowances and Provisions

Details on credit loss allowances and provisions – including their recognition and development – can be obtained from the notes.

Opportunities

The parameters for the risk dimensions for the credit risk are defined using statistical methods on the basis of numerous historical observations. The risk measures also depend on assumptions relating to future developments of macro-economic factors as well as developments on the credit markets. These economic conditions may turn out to be more positive than anticipated; in which case, potential losses from counterparty credit risk may theoretically be lower than quantified by the risk measures. Such potentially positive developments then represent opportunities for the pbb Group which can be utilised for reducing risk.

In specific terms, there are opportunities if fewer loans in future are affected by a default in performance than is assumed as part of the risk quantification process. In future, opportunities may also result from a lower than assumed number of migrations to weaker rating classes.

There are also opportunities if the loss ratios of non-performing loans in future are lower than was assumed as part of the risk quantification process. Lower loss ratios may be triggered by various positive developments. Firstly, it is possible that the process of disposing of collateral might generate higher proceeds than was originally assumed in the risk quantification process. Secondly, it is possible that a higher percentage of non-performing loans subsequently become performing loans again without any losses than had been the case in the past.

Besides positive developments in default rates or loss ratios, opportunities may arise in connection with counterparty credit risk – theoretically, and regardless of other corporate objectives – in the event of declining portfolio exposure. This can happen, for example, if borrowers redeem or repay their loans faster than contractually expected or anticipated based on historical experience. Exposure values in the derivatives portfolio may decline where the market values of positions associated with replacement risk decrease, due to changes in certain market parameters such as interest rates or exchange rates.

Market Risk

Definition

Market risk is defined as the risk of a market value loss, or a negative change in net interest income for the period, due to volatility of the market prices of financial instruments. Transactions entered into by pbb Group are mainly exposed to the following types of market risk:

- General interest rate risk (risk from changes in market interest rates)
- Basis risk (risk from changes in tenor basis spreads or cross-currency basis spreads)
- Volatility risk (risk from changes in implied volatility)
- Credit spread risk (risk from changes in credit spreads)
- Foreign currency risk (risk from changes in foreign exchange rates)
- Concentration risk (risk of additional losses due to a non-diversified portfolio mix)

Market Risk Strategy

pbb adheres to the following fundamental principles in relation to market risks in terms of the present value perspective and of the periodic perspective:

- Transactions may be conducted exclusively in financial instruments which have successfully passed the new product process, and for which market values are either observable or determinable via a model.
- All positions entered into are subject to daily monitoring, in terms of sensitivity, Value-at-Risk and performance, which is independent from trading units.
- Interest rate risk in the banking book (IRRBB) is identified, measured, managed and monitored using both a present value approach as well as in terms of net income for the period. In this context, the present value approach is the primary approach for interest rate risk management, supplemented by the monitoring of interest rate risk of periodic interest income on a quarterly basis. In addition, credit spread risks in the banking book (CSRBB) are included in the regular risk measurement, controlling and monitoring as well.

Market Risk Management Organisation

Positions with regard to Market risk are monitored by way of a present value approach by the RMC department, which is separated from trading in the structural organisation, right through to the Management Board. The Finance department monitors the periodic interest rate risk.

Market Risk Reports

RMC prepares detailed market risk reports for senior management and operational management purposes, on a daily basis. The daily market risk report, which is primarily addressed to the Management Board, includes:

- market risk value-at-risk (VaR) and VaR limit utilisations for the entire CSRBB and IRRBB market risk (and its components of general interest rate risk, basis risk and option/volatility risk),
- sensitivities of market risk factors at various levels of detail and monitoring of sensitivity triggers and
- a presentation of the economic performance measurement and the breakdown of the economic performance by individual risk factors.

pbb provides quarterly reports on changes in effects on income, and effects on accumulated other comprehensive income (recognised directly in equity), given pre-defined interest rate scenarios and assuming a dynamically changing balance sheet, to monitor periodic interest rate risk.

Market Risk Measurement and Limits

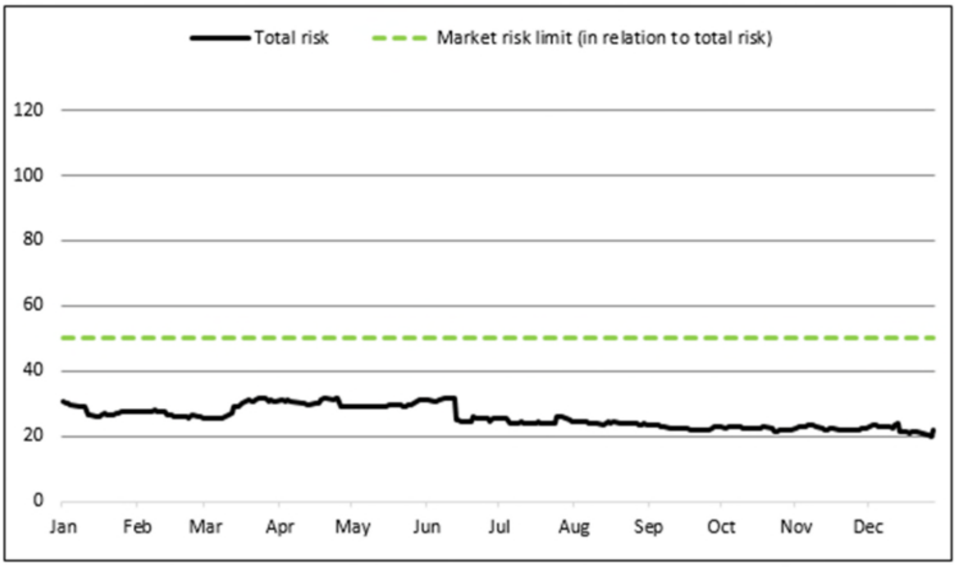
Market risk Value-at-Risk RMC determines VaR attributable to market risk, at an overall as well as partial portfolio level, on a daily basis, using a simulated model based on historical data. The VaR determination includes all positions exposed to market risks. The essential parameters of the market risk VaR model can be summarised as follows:

- The simulation model is based on a one-year market data history which is included in the simulation on an equally weighted basis.
- Individual types of market risk are aggregated to form a total VaR, which forms the basis of limit monitoring.
- For the purposes of daily operational risk management, Market risk VaR is determined using a holding period of one day and a 99% confidence interval.

At the end of December 2023, market risk VaR amounted to €22 million, taking diversification effects between the individual market risk types into consideration (year-end 2022: €30 million). The decrease in the market risk VaR was largely attributable to lower interest rate and credit spread volatilities over the course of 2023. The total market risk VaR limit was €50 million throughout 2023 (year-end 2022: €60 million).

There were no breaches of market risk VaR limits during the period under review. The following chart shows the development of market-risk-induced VaR, compared to the market risk VaR limit during the course of the year:

Market risk VaR
and market risk limit January to December 2023
in € million



Interest Rate Risk in the Banking Book The consolidated IRRBB VaR of all interest rate risk categories in the banking book (general interest rate risk, tenor basis spread risks, cross-currency basis spread risks, option risks and volatility risks) amounted to €19 million as at year-end 2023 and CSRBB VaR amounted to €8 million. As well as limiting market risk VaR, limits have been monitored daily for IRRBB VaR (limit at the end of December 2023 year-end: €30 million) and CSRBB VaR (limit at end of December 2023: €40 million).

Credit Spread Risk (CSRBB) The majority of credit spread risk is attributable to assets eligible as cover for Pfandbriefe. The Bank has risk measurement systems in place for calculating credit spread risk for all relevant exposures. The VaR limit applies to all credit spread risks for asset instruments at fair value through profit and loss (FVPL) or at fair value through other comprehensive income (FVOCI). In addition it applies to the credit spread risks of securities on the asset side, measured at amortised cost.

CSRBB gemäß EBA Guideline EBA/GL/2022/14 In accordance with the guidelines on the management of interest rate risk and credit spread risk in banking book transactions (EBA/GL/2022/14), which came into force on 31 December 2023, pbb has extended the scope of financial instruments that include credit spread risks to all transactions whose pricing depends on credit spreads observable on the market. This extends the scope of transactions in the CSRBB to almost all of pbb's assets and liabilities. In addition, pbb calculates the CSRBB VaR in accordance with the guideline using risk factors which are defined without idiosyncratic components. These changes resulted in a CSRBB VaR of € 69 million (limit: € 120 million) and a market risk VaR of € 63 million (limit: € 120 million) as at the end of December 2023.

The VaR assessment is complemented by additional tools, such as sensitivity analyses and stress testing.

Sensitivity Analyses Overnight yield curves are used for the purposes of measurement relevant to sensitivity analyses. Sensitivity analyses quantify the impact of changes in individual market parameters upon the value of positions. For instance, the credit spread sensitivity provides an indication of the change in economic present value which results from an isolated one basis point increase in the credit spreads which are relevant for measurement purposes.

Stress Testing Whilst VaR measures market risk in “normal” market conditions and does not provide a measure for potential maximum losses, internal economic stress scenarios show the market risk under more difficult or even extreme economic conditions. pbb Group employs hypothetical and historical stress scenarios for key risk drivers on a monthly and quarterly basis, to determine the impact of strong to extreme changes in market data as well as assumptions regarding client behaviour on the economic present value.

In addition to internal economic stress scenarios, the external regulatory stress scenarios relating to the supervisory outlier test are calculated and analysed.

The Management Board and the executive bodies are informed about the results of stress scenarios on a regular basis. In connection with managing interest rate risk in the banking book (including credit spread risks), the changes in present value of selected internal and external stress scenarios have also been monitored through specific limits or triggers.

Back Testing The quality of the risk measurement methods in use is checked on an ongoing basis by comparing one-day VaR figures to the actual changes occurring in the portfolio’s present value on a daily basis. For the qualitative analysis of the risk model the Basel Capital Accord’s “traffic light” system is used. For this purpose, the number of outliers detected in backtesting within a period of 250 trading days are counted. During the 250 trading days until the end of 2023, one outlier was observed, which occurred primarily due to relatively large increases in EUR swap rates in July 2023. The risk model employed by pbb therefore has “green” status, as defined in the “traffic light” system of the Basel Capital Accord.

Periodic interest rate risks pbb uses a dynamic model for measuring and monitoring periodic interest rate risks (dynamic earnings), thus simulating changes in future income statements and balance sheet developments, which will materialise if the balance sheet develops as planned, and under pre-defined interest rate scenarios. Measurement and monitoring of periodic interest rate risks was carried out at the end of each quarter, for a simulation horizon covering the following four quarters. Negative deviations from the base value were monitored, using a trigger of €60 million for effects on income, and a trigger of €100 million for effects on accumulated other comprehensive income (recognised directly in equity). Both triggers were not exceeded during the period under review.

Economic Capital for Market Risk The chapter "Internal Capital Adequacy Assessment Process (ICAAP)" provides details concerning the calculation as well as the quantification of economic capital for market risk.

Mapping and Recognition of Economic Hedges as On-balance-sheet Hedges
The concept of hedge accounting refers to specific accounting rules applicable to hedge relationships in accordance with IFRS, entered into for the purpose of neutralising the change in value of the hedged underlying transaction against the change in value of the hedging instrument to a large extent. The criteria set out in IFRS must be satisfied for a hedge to be recognised accordingly. To a certain extent, these criteria – such as the requirements relating to hedge effectiveness – are inconsistent with the methods applied to bank management. As a result, there may be differences between economic hedges and hedge relationships recognised on the balance sheet.

Market Risk Management, Monitoring and Reduction
pbb Group uses a three-pillar approach for managing and monitoring market risk:
> management of positions maintained by the Treasury
> risk measurement and monitoring compliance with triggers and limits (independent from trading units) and
> escalation processes across all decision-making bodies, right through to the Management Board

Financial derivatives are mainly used for hedging purposes.

General Interest Rate Risk General interest rate risk or gap risk amounted to €16 million at the end of December 2023. The reduction compared to the comparative figure of € 21 million at the end of 2022 is primarily due to the lower interest rate volatilities described in the section Market risk Value at Risk.

Basis Risks Basis risks refer to tenor basis spread and cross-currency basis spread risks. Tenor basis spread risks of €3 million and cross-currency basis spread risks of €2 million were shown at the reporting date (year-end 2022: €3 million tenor basis spread risks and €2 million cross-currency basis spread risks).

Volatility Risk Volatility risk amounted to €1 million at end of December 2023 (year-end 2022: €1 million).

Opportunities
As detailed above, the sensitivities result in value at risk: a possible future (economic) loss in the event of an unfavourable market development. The very same sensitivities may also result in economic gains, in the event of a positive market development. For instance, high credit spread sensitivities on the assets side represent a risk as described above. In the event of a narrowing of the relevant credit spreads, these credit spread sensitivities will yield economic profits, constituting an opportunity.

Open interest rate risk exposures (from an economic perspective) may indeed be neutral or even income-enhancing for periodic interest rate risk; this is the case for medium- to long-term fixed-rate loans on the asset-side, for example.

IBOR reform
The implementation of the IBOR reform is described in the notes.

Liquidity and Funding Risk

Definition
Liquidity risk is defined as the risk of not being able to meet the amount and/or due dates of existing or future payment obligations, in full or on time.

Internal Liquidity Adequacy Assessment Process
In accordance with the Supervisory Review and Evaluation Process (SREP), pbb has conducted an Internal Liquidity Adequacy Assessment Process (ILAAP), which was examined and approved by the Management Board. The ILAAP should ascertain that all material liquidity and funding risks can be identified, measured and monitored, and that measures to prevent a liquidity shortage are taken in good time if required.

Liquidity Risk Strategy
The Management Board determines both the risk strategy as well as the risk appetite of pbb. The liquidity risk strategy is a key component of pbb's risk strategy. It is broken down into various modules (comprising various liquidity scenarios, given certain market conditions and stress parameters). This is to ensure that pbb's short- and medium-term funding is monitored and managed by means of a limit system. The limits are defined as part of the annual business planning process, approved by the Management Board.

Organisation of Liquidity Risk Management
RMC identifies, measures, reports and monitors liquidity risk. The Treasury department, which is independent from RMC, is responsible for managing liquidity risk. The processes and methods employed are reviewed on a regular basis by the Risk Committee and the Asset Liability Committee. Liquidity Risk cannot be calculated and reported at a business segment level.

Liquidity Risk Report
Liquidity management reports are prepared daily and submitted to the entire Management Board, as well as to the Joint Supervisory Team (JST) of ECB and national competent authorities responsible for pbb. The reports contain up-to-date information on the day's liquidity situation as well as forecasts made using contractual cash flows and in recognition of future events that could potentially influence liquidity developments.

Liquidity Risk Measurement and Limits
To manage liquidity risks, pbb has established a system for measuring and limiting short-term and medium-term variances within cash flows. This incorporates both contractual as well as optional cash flows. The data is subject to regular back-testing.

The liquidity position resulting from the liquidity reserve as well as contractual and optional cash flows is measured in different scenarios, with three liquidity positions being projected on a daily basis. The projections assume:
- unchanged market and funding conditions (base scenario),
- a risk scenario (modified [historic] stress scenario) and
- liquidity stress ([historic] stress scenario).

For instance, the risk and the (historic) stress scenario simulate possible client behaviour in "stress situations". Historic time series are used to calculate 95% and 99% quantiles.

Liquidity risk triggers (early warning indicators) have been defined for a 24-month horizon in the base scenario. Limits in the risk and the (historic) stress scenario are applicable for a six- respectively three-month horizon.

The limit system consists of:
- limits relating to the liquidity stress profile (risk scenario and [historic] stress scenario); and
- triggers for the base scenario as well as the six-month bucket of (historic) stress-scenario.

In addition to reporting, pbb Group uses stress tests, conducted at regular intervals, for investigating the impact of additional stress events on the liquidity position.

Scenario analyses are performed to simulate the potential impact of crises attributable to macro-economic, monetary policy or political crises on the liquidity situation.

The scenarios are reported to the Management Board, as well as to external bodies such as the JST of ECB and national competent authorities responsible for pbb.

Liquidity Risk Monitoring and Management

Monitoring of liquidity risks is ascertained through daily reporting of the liquidity situation and a defined escalation process. A liquidity emergency plan has also been adopted in this context; this plan forms the functional and organisational framework for the handling of any liquidity shortages. The liquidity emergency plan is part of the pbb Recovery Plan and updated at least annually.

Liquidity risk management is based on various interconnected components (daily and monthly liquidity reports), which are based on a "liquidity risk tolerance" defined by the Management Board. This is to ensure that pbb Group has adequate liquidity reserves at its disposal.

Hedging and Reduction of Liquidity Risk

A risk tolerance system is in place, to limit liquidity risk. Risk tolerance is integrated in the liquidity management process by means of triggers (limit system), in order to safeguard a "survival period" for pbb Group in stressed conditions.

The limits applicable for risk tolerance are determined in line with stress scenarios, and adjusted at regular intervals.

Development of pbb Group's Risk Position

The cumulative liquidity position (liquid assets plus projected net cash flows) determined as part of the liquidity risk measurement process as at 31 December 2023 amounted to €4.9 billion for a 12-month horizon in the base scenario – unchanged compared to the previous year (based on the same projection horizon). As at 31 December 2023, the cumulative liquidity position for a six-month horizon amounted to €2.5 billion in the risk scenario (31 December 2022: €2.2 billion). The cumulative liquidity position in the stress scenario for a six-month horizon amounted to €1.5 billion as of 31 December 2023 (31 December 2022: €0.9 billion).

Regulatory Liquidity Coverage Requirements (Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR))

The Liquidity Coverage Ratio (LCR) is calculated using the ratio of the liquidity buffer (liquid assets) to net liquidity outflows during a stress period of 30 days. A minimum LCR of 100% is mandatory in regulatory liquidity reporting.

The levels determined during 2023 were at any time clearly in excess of 100%. The Liquidity Coverage Ratio as at 31 December 2023 was 212%.

A NSFR ratio of 100% must be maintained since 30 June 2021. The NSFR shows the ratio of available stable funding (ASF) and required stable funding (RSF) and is designed to secure the medium and long-term structural liquidity.

The figures determined during 2023 were clearly above the ratio required under the regulatory regime. As at 31 December 2023, the NSFR was 111%.

Funding Markets

Please refer to the chapter Development in financial position in the Report on the Economic position, for details concerning developments on funding markets and changes in funding volumes during the period under review.

Forecast Liquidity Requirement

In addition to the forecast liquidity requirement for new business activities, the extent of future liquidity requirements also depends on numerous external factors:

- Monetary policy response to the inflationary trend (sudden interest rate hikes) and geopolitical risks and their potential impact on the real economy;
- potential impact of ESG factors on credit spreads and funding opportunities;
- future developments of haircuts applied to securities for repo funding on the market, and with central banks;
- possible additional collateral requirements as a result of changing market parameters (such as interest rates and foreign exchange rates);
- developments in requirements for hedges;
- changed requirements from rating agencies regarding the necessary over-collateralisation in the cover pools;
- refinancing requirements of real estate investors

Funding Risk

The chapter “Internal Capital Adequacy Assessment Process (ICAAP)” provides details concerning funding risk as part of business and strategic risk.

Market Liquidity Risk

For financial instruments, quantitative details for a better assessment of market liquidity risk can be obtained from the presentation of the three levels of the fair value hierarchy in the notes. Generally, there is no intention to sell holdings measured at amortised cost for liquidity management purposes, as liquidity for these holdings can mainly be generated by way of including them in the cover pool, using the funding opportunities provided by the central bank, or using them in repo transactions. Market liquidity risk is included in the internal risk management process as part of market risk.

Opportunities

The cumulative liquidity position in the base scenario shown in the section "Development of pbb Group's Risk Position" basically opens up the opportunity to react flexibly, particularly with regard to potential new business.

If the external factors specified in the section “Forecast Liquidity Requirement” were to develop favourably for pbb, this would result in a lower future liquidity requirement.

Operational Risk

Definition

According to CRR pbb defines the operational risk as follows: “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk”. pbb recognises the following risks within the operational risk category: legal risk, behavioural risk, reputational risk, outsourcing risk, model risk as well as risks associated with information and communication technologies (ICT systems risk).

Strategy for Operational Risk

The priority of pbb Group’s operational risk management is to prevent operational risk events and to meet the defined risk appetite. Key cornerstones of this strategy are the early recognition, systematic recording and assessment of operational risk, taking measures for risk mitigation as well as an early management reporting. The operational risk management strategy is adopted by the Management Board on an annual basis as part of the overall risk strategy. It describes the management framework and the measures of pbb Group with regard to operational risk.

Organisation of Operational Risk Management

A consistent Group-wide framework is in place, governing responsibilities for managing operational risk based on the principle of the three lines of defence. In this context, heads of divisions – as risk owners –are responsible for managing operational risk, and for implementing risk-mitigating measures within the various business units (first line of defence). The Second Line of Defence comprises: RMC with Operational Risk (all operational risks) and Validation & Model Risk Management (model risk) as well as Information Security in the Corporate Office (ICT Security Risk), Compliance (compliance risks, conduct risk), Finance (outsourcing risk, tax risks), Business Continuity Management (BCM) in IT, Legal (legal risk) and Communications (reputational risk). Within RMC, the Operational Risk unit – as the overarching Second Line of Defence for all operational risks – is responsible for uniform processes, instruments and methods for identifying, assessing, quantifying, monitoring and reporting on operational risk. Internal Audit constitutes the third line of defence.

Risk Reports, Monitoring and Management of Operational Risk
Essential components of operational risk management are as follows: recording, reporting and analysing internal and external loss data, operational risk self-assessments (ORSA), scenario-based analysis and stress testing. A structured and central reporting system is used to inform Management Board and division heads, the Risk Committee and other supervisory bodies concerning risk events on a regular, timely and comprehensive basis. Reports are prepared both ad-hoc (where material risk events are escalated) as well as on a monthly basis (Group Risk Report), on a quarterly (Key Risk Indicator Report) or annual (Annual OpRisk Report) basis. Operational risk reporting encompasses material loss events and near-losses, top risk issues, development of risk indicators, development of capital requirements as well as the results from ORSA and scenario analyses.

Management of ICT systems risk and outsourcing risk is fully integrated into operational risk management, and thus into the pbb's risk and compliance structure. Risk management for ICT systems risk generally applies at process level. The annual protection requirement analysis, the quarterly reporting of relevant information and metrics such as the key performance indicators (KPIs) as well as the key risk indicators (KRIs), are all essential elements. Key elements of outsourcing risk management include the risk assessment of all outsourcing relationships, which is updated at least once a year for significant outsourcing and at least every three years for non-significant outsourcing, ongoing coverage by the Accountable Person for outsourcing, monitoring using suitable key risk indicators, and quarterly reporting to the Outsourcing Committee.

pbb Group uses models to quantify risks within the individual risk types, and to measure the fair value of financial instruments, which leads to model risks potentially incurred as a result of models which are incorrectly designed, implemented, or applied. To ensure that model risks are as low as possible, pbb has established a framework for model risk management.

Management of legal risk is aimed primarily at the prevention of losses which could be incurred if business activities of pbb Group are not documented with legal certainty. Structuring business activities in a manner that ensures legal certainty also serves to protect the integrity and reputation of pbb Group. In order to achieve this goal, the Legal department provides the entire pbb Group with a comprehensive, forward-looking business- and solution-oriented consultancy service. The Legal department assists business divisions by monitoring developments in the relevant legislation and case law, and reviews the effects of such developments on new and existing business. The results are discussed with the responsible divisions and/or in the Legal and Regulatory Risk Committee. The Legal Policy describes the roles and responsibilities of the Legal department within pbb Group and serves as a guideline for employees in the Legal department. Furthermore, the Legal department gives an assessment towards the Finance department whether provisions for pending legal cases have to be recognised. Moreover, the OpRisk loss database captures losses and provisions from legal risks which need to be seen in conjunction with operational risk events. Overall, legal risks are taken into consideration in the existing operational risk management framework, and are an integral part of, inter alia, the Key Risk Indicator Report, the Operational Risk Self-Assessment (ORSA), the analysis and reporting of risk events, as well as for determining economic capital.

ESG risks included in operational risk are also integrated into operational risk management.

Risk Measurement
Please refer to the chapter "Internal Capital Adequacy Assessment Process (ICAAP)" for further details on the quantification of operational risk including legal risks as well as the calculation results of the economic capital for operational risk.

In line with the Standardised Approach according to article 317 et seq. of CRR, the own funds requirement for operational risk, which is calculated at the end of each year, was € 78 million as at 31 December 2023 (31 December 2022: € 77 million).

Operational Risks Profile of pbb Group
pbb Group suffered a financial gross loss of €5.9 million from operational risks during 2023 (2022: €0.6 million). The net loss, which includes repayments, amounted to €0.6 million in 2023 (2022: €0.5 million). pbb assesses its operational risk profile as stable.

Opportunities
pbb Group aims to reduce potential operational risk to the extent possible by clearly assigning responsibilities for the management of operational risk and by continuously developing the associated governance.

Business and strategic risk

Within pbb Group, business and strategic risk is defined as the risk of negative deviations of income and expenses from the planned figures – as a result of strategic decisions, false assumptions or unexpected changes in the external framework conditions, to the extent that such deviations are not covered by other risk types, such as market risk, credit risk or operational risk. Please refer to the chapter "Internal Capital Adequacy Assessment Process (ICAAP)" for further details on the quantification as well as the calculation results of the economic capital of business and strategic risk.

Property Risk

Real estate risk is defined as the potential negative change in value in pbb's own properties due to a deterioration of the real estate market or economic framework, or a negative change in the special characteristics of the individual properties caused by vacancies, change in potential uses, structural damage, need for investment, legal and economic frameworks, and other factors.

As at 31 December 2023 as well as at 31 December 2022, pbb did not hold any own properties.

Pension risk

Pension risk is defined as the risk of incurring additional expenses due to insufficient capitalisation of pension obligations from defined benefit plans. It is considered within the scope of ICAAP. Pension risk is included in the market risk, for details, please refer to the chapter "Internal Capital Adequacy Assessment Process (ICAAP)".

Central Counterparty (CCP) risk

Central counterparty (CCP) risk defines the risk of losses caused by liability claims of the CCP against pbb, for example, in the event of the default of a clearing member. The risk is taken into account in the economic perspective, using a buffer in the available financial resources, and in the normative perspective when calculating risk-weighted assets.

Environmental, Social and Governance (ESG) risk

Definition
In accordance with the EBA Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms (EBA/REP/2021/18), the 7th MaRisk amendment and the ECB Guidelines on Climate-related and Environmental Risks, pbb Group defines ESG risk as the risk of adverse financial effects on the institution resulting from the actual or expected impact of ESG factors on the Group's counterparties, or on its invested assets. ESG factors are environmental, social or governance aspects that could have a positive or negative impact on the financial performance or solvency of a company, sovereign or individual. ESG risk also encompasses negative financial, economic and social impacts that could arise from the activities of the institution itself.

ESG risks include the following components:

- **Environmental risks:** Climate and environmental risks refer to risks of losses and negative impacts due to climate change and the destruction of the environment. The general understanding is that climate and environmental risks comprise the following two main risk drivers:
  - **Physical risk:** Physical risk refers to the financial impact of a changing climate. These impacts include more frequent extreme weather events and gradual changes in the climate, as well as environmental destruction (e.g. in the form of air and water pollution, land contamination, water stress, biodiversity loss and deforestation). A physical risk is considered to be acute if it materialises due to extreme events, such as drought, flooding or storms. If it is the result of gradual changes (such as rising temperatures, rising sea levels, water stress, biodiversity loss, changes in the use of land, destruction of natural habitats and resource scarcity), it is classified as chronic. Impacts can occur directly (e.g. as physical loss or damage or in the form of lower productivity) or indirectly, e.g. as a result of subsequent events such as supply chain disruption.
  - **Transition risk:** Transition risk describes financial losses that institutions can incur, directly or indirectly, as a result of the process of adjustment leading to a lower-carbon and more environmentally sustainable economy. This risk could materialise, for example, due to political measures adopted at very short notice to protect the climate and the environment, due to technical progress or due to changes in market sentiment and preferences.
- **Social risks:** pbb Group defines social risks as the risks of an adverse financial impact on the institution resulting from current or future effects of social factors – especially non-compliance with human and employees' rights and matters, any negative impact of business activities on society/communities in general or specifically (such as on indigenous minorities or similar groups), or from product safety and end-customers – on its counterparties or invested assets. Negative effects can also result from social factors associated with the institution's own activities.
- **Governance risks:** pbb defines governance risks as the risks of a negative financial impact on the institution resulting from current or future effects of governance factors on its counterparties or invested assets. Negative effects can also result from governance factors associated with the institution's own activities.

ESG risk identification: materiality analysis and assessment

pbb considers risks from ESG components to be a cross-sectional risk, as the respective risk factors have an impact on other types of risk. Overall ESG risk is classified as being material.

To ensure that ESG risks are given adequate consideration in the Bank's risk management processes, an identification and assessment process for ESG risk drivers was established as a firm component of the annual risk inventory and has been further developed in 2023. The requirements from the EU taxonomy (for climate and environmental aspects) and materiality considerations as defined by the CSRD were included for the first time. According to pbb's assessment, the identification and assessment process for ESG risk drivers thus covers all relevant regulations at the current stage. By identifying and describing the possible impact channels of the ESG risk factors considered, it became clear to what extent the economic and financial activities of a company are affected (financial materiality/outside-in) and how the activities of a company affect ESG factors (ecological and social materiality/inside-out) and in what time frame. The distinction between these two perspectives results from the application of the principle of "dual materiality" and thus also results in two different types of materiality.

In the materiality assessment, suitable data is used for each risk factor for the portfolio (according to pbb's assessment). For factors with available ESG risk data, a capital-related quantitative materiality threshold has already been applied. For ESG risk factors without quantitative risk assessment, there is only an expert judgement. The pbb experts surveyed for this purpose have in-depth specialist knowledge, such as the experts (for climate and environmental aspects) from the Property Analysis & Valuation division, who have E(SG) and property expertise thanks to corresponding expert training. The experts interviewed for the topics of social and governance are specialists from the HR and legal departments who are trained and qualified in their respective specialist areas. With regard to the materiality of the environmental, social and governance risk factors, the analyses of the risk inventory were interlinked with the result of the materiality analysis from the future CSRD reporting obligation for the first time, in which partial results from the CSRD workshops held for this purpose were also considered. At the time of preparing the risk inventory and the 2024 risk strategy (October 2023), the materiality analysis for the CSRD had not yet been completed.

As part of the comprehensive, systematic materiality analysis, specific risk factors with regard to physical climate and environmental risk, transition risk and governance risk were classified as material. In the area of social risk, none of the risk factors considered were identified as material.

The following table provides an overview:

Risk	Designation	Portfolio	Time horizon	Perspective
Physical risk: Acute climate hazards	Flood, storm (including cyclone, hurricane, typhoon), tornado, forest fire	REF / NC / C&A	Medium term (1-5 years)	Financially material (Outside-in)
	Heavy rain fall		Long term (> 5 years)	
	Heatwave, landslide	NC / C&A	Medium term (1-5 years)	
	Drought	NC / C&A	Long term (> 5 years)	
Physical risk: Chronic climate hazards	None			
Physical risk: Environmental factors	Soiling / contamination	REF	Short term (< 1 year)	Financially material (Outside-in) & Ecologically and socially essential (Inside-out)
	Volcanism, earthquakes	REF / NC / C&A	Short term (< 1 year)	Financially material (Outside-in)
Transitory risk factors	Low energy efficiency / high energy consumption, high CO_2 footprint (Scope 1, 2, 3 emissions)	REF / NC / C&A	Medium term (1-5 years)	Financially material (Outside-in) & Ecologically and socially essential (Inside-out)
	New sustainability and environmental regulations / CO_2 pricing	REF	Long term (> 5 years)	Financially material (Outside-in)
	Market sentiment			Financially material (Outside-in) & Ecologically and socially essential (Inside-out)
Social-risk factors	None			
Governance risk factors	Unethical corporate behaviour culture, supplier management/unethical supplier behaviour and payment practices, anti-competitive behaviour and political engagement or lobbying, corruption and bribery		Short term (< 1 year)	Financially material (Outside-in) & Ecologically and socially essential (Inside-out)

The impact on the individual risk types is analysed and assessed for ESG risk drivers identified as material. The physical and transitory risk factors recognised as material have a potential impact on credit risk. Some acute physical risk factors (heavy rainfall, storms and tornadoes) could, with a low probability and to a limited extent, lead to damage to property or disruptions to the Bank's business continuity and are therefore relevant for operational risk alongside some governance factors. There is also a potential influence of transitory, environmental and governance factors on reputational, legal and liability risks as well as business and strategic risk. No direct sustainability risks are currently recognisable for pbb's market risk as well as liquidity and funding risk.

These assessment results are based on quantitative and qualitative evaluations of the portfolio. In doing so, external location-specific risk data supplied by the insurance industry and from public hazard maps were queried and analysed, and initial materiality definitions applied.

To assess biodiversity and environmental risks, according to pbb's judgement suitable public environmental and biodiversity scores for the underlying economic sectors of our clients were quantitatively analysed for the entire portfolio. For the REF segment, a potential contribution to the loss of biodiversity through changes in the use of land was also evaluated using satellite data on the type of land coverage at the locations of the properties financed in Europe. Overall, biodiversity risks were not classified as material, both inside-out and outside-in. The materiality of the aforementioned transitory risk factors for the REF segment was determined qualitatively - by expert judgement. For the materiality assessment for the non-REF portfolio, relevant transitory risk factors were assessed in terms of their potential impact on credit risk using data-based expert judgement.

All governance and social factors were assessed using qualitative expert judgement via the newly designed CSRD workshop process, in which both experts and stakeholders judge materiality in both perspectives.

Based on the insights gained from the materiality analysis and risk inventory, the impact of climate risks was analysed using various scenarios:

- In order to systematically examine the potential vulnerability of pbb's portfolio and capital position with regard to medium-term transitory climate and environmental risks, a corresponding short-term transition scenario was defined, fully calculated and analysed within the normative and economic ICAAP perspectives, and then firmly integrated into the stress test programme.
- A combined long-term transition risk and chronic physical risk scenario was calculated in order to extend the focus to potential events that manifest themselves over a long-term period. In this scenario, the period up to 2050 was observed under different climate transition paths.
- The impact of acute physical risks was analysed in a dedicated scenario.

To calculate the impact of different stress scenarios for the banking business and to manage identified risks, specific models were used, taking into account climate-specific parameters. The results of the three climate risk scenarios have been considered in the ICAAP and ILAAP management approaches.

Overall, risk factors have been identified for environmental, social and governance aspects. These ESG risk factors have an impact on counterparty credit risk, operational risk, including potential reputational, legal and liability risks, as well as business and strategic risk. There are currently no indications of any direct sustainability risks to pbb's market risk, and its liquidity and funding risk.

pbb has taken ESG risk factors into consideration in the monitoring and reporting, as well as in stress tests and scenario analyses. ESG factors are in the process of being fully incorporated in the quantifications as part of ICAAP.

Monitoring and supervision ESG risk
pbb aims to consider sustainability aspects within all its business activities, and to minimise the risk of negative consequences due to ESG risks. To ensure comprehensive compliance in this respect, appropriate monitoring of ESG risk is essential so that immediate countermeasures can be taken if necessary.

Specific risk indicators have been defined and assigned to the individual components for monitoring the various aspects of the Group's own ESG risk (inside-out perspective). Based on a traffic light system, amber and red thresholds have been defined for these risk indicators. Risk indicator reporting is performed within the scope of the Key Risk Indicator (KRI) report for non-financial risks in the Risk Committee, to the Management Board and to the division heads on a quarterly basis. Both the ESG risk indicators and the internal targets for the various aspects of ESG risk are continuously developed, enhanced and specified.

Monitoring environmental risk (outside-in perspective) is currently focused on the aspects of avoidance of, and adaptation to, climate change associated with the properties we finance. Monitoring activities for both the REF and non-REF exposures potentially affected by physical and transition risks were launched within internal risk reporting. Additional transparency in internal reporting also provides information on market risk sensitivities related to environmental risk factors, and on ESG-related losses with regard to operational risk exposure in the REF portfolio. Internal reporting is continuously expanded in line with available data. The quarterly KRI report contains portfolio information regarding transparency based on the total "scored" share and the share of the portfolio assessed as "green".

The monitoring and management of social and governance risks focusses primarily on governance indicators, such as the prevention of money laundering and terrorist financing, compliance with financial sanctions and embargoes, and the prevention of fraud and other criminal acts, particularly the prevention of corruption. pbb Group has put appropriate safeguards in place in this respect and, in addition to a Compliance Policy and the Code of Conduct, has issued various other internal guidelines, instructions and process descriptions. Compliance is responsible for ensuring due and proper adherence to these requirements. As an investment services provider, pbb also observes a whole range of regulations and requirements, in particular to ensure appropriate client/investor protection and, consequently, also to safeguard its own reputation.

Management of ESG risks

REF The principle of environmental sustainability of the properties to be financed within the pbb Group is based on the close interlinking of the Sales, Credit and Risk Management divisions as well as the appraisers, and is part of the credit decision-making process. The analysis with regard to taxonomy conformity or defined e-criteria in accordance with the pbb Green Scoring Model with its three pillars: energy efficiency, "green building" certifications and additional sustainability criteria (e.g. distance to public transport, use of green electricity) including the decarbonisation tool, which is based on the CRREM tool, is an integral part of all new business. In addition, particular focus is placed on the opportunities for transformation into sustainable properties.

At the same time, systematic and comprehensive data on sustainability aspects is collected as part of new business and also from clients with existing financings. As at 31 December 2023, 73.6% of the real estate portfolio is now classified with a pbb "Green" scoring. Accordingly, pbb Group has gained a meaningful overview of the sustainability of its loan portfolio and the associated risks, and the basis for long-term management of ESG risks has been laid. The data collected was integrated into pbb's own IT landscape in 2023 and is continuously updated.

The entirety of the properties subject to pbb's "Green" scoring, the scores achieved, the breakdown by asset class and country, and the identification of potential risk clusters are monitored on a monthly basis. In 2023, monitoring was expanded and further developed with regard to early warning indicators and other monitoring aspects.

Non-REF The Non-REF portfolio includes the Non-Core portfolio and Consolidation & Adjustments. The ESG risk for the Non-REF portfolio is generally categorised as low.

The non-core portfolio is a wind-down portfolio and therefore, due to the low ESG risk, no active management of ESG risks is planned and is rather reduced by continuous repayments (Ø 10 years remaining term). No new business was entered into in 2023.

Consolidation & Adjustments includes internal reconciliation and consolidation positions as well as asset positions for asset and liability management. ESG risks are generally managed by analysing the creditworthiness of business partners, which includes an ESG risk assessment.

ESG risk is managed in accordance with the "3 Lines of Defence (3 LoD)" principle, with the risk owners of the various specialist departments that are particularly close to customers/public (Sales, PAV, CRM, Communications, Finance, Treasury and Corporate Office) forming the first line of defence. The second line of defence is formed by the RMC and Compliance departments with support functions from Human Resources and IT. The GIA area represents the third line of defence. The assessment register for the categorised ESG risk factors created as part of the materiality analysis is used as the basis for assigning the specialist areas and associated key controls according to the principle of the three lines of defence.

Opportunities
ESG risks generally also offer potential opportunities related to sector-specific aspects – especially by offering sustainable financing solutions (green loans), expanding activities as a transformation financier (green capex) as well as issuing green bonds. Sustainable financing solutions reduce the probability of loan defaults, increase the value of the collateral furnished and prevent potential reputational damage.

Client orientation and internal governance are further fundamental success factors for pbb in order to secure the financing portfolio, and give the Bank the opportunity to set itself apart from its peers, in positive terms, in a direct comparison.

Moreover, the qualifications and satisfaction of our employees are the main foundation for the quality of their work, and thus for the Company's potential.

The sustainability strategy is essentially an integral part of the business strategy and is designed to continue to reinforce ESG as a core brand element, minimise sustainability risks to the greatest extent possible, whilst making use of the different opportunities that arise.

INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)

Pursuant to section 91 (2) of the German Public Limited Companies Act (Aktiengesetz – "AktG") and section 25a (1) of the German Banking Act (Kreditwesengesetz – "KWG"), pbb Group is obliged to establish appropriate and effective internal procedures in order to ensure the Bank's risk-bearing capacity at all times. The Internal Capital Adequacy Assessment Process (ICAAP) is subject to regulatory review (within the framework of the SREP); it complements the regulatory procedures under Pillar 1 of the Basel III framework, as laid down in the CRR and the CRD.

Pursuant to the „ECB Guide to the internal capital adequacy assessment process (ICAAP)", published in November 2018, regulatory authorities expect banks to apply two supplementary ICAAP perspectives, one being normative and the other being economic. In line with current ICAAP methodology, the capital adequacy assessment is evaluated from a normative as well as from an economic perspective. Both perspectives are aimed at the constancy of the business and capital planning, and on the long-term viability of the pbb Group.

The normative perspective is geared towards securing the regulatory and supervisory requirements for capital and liquidity over several years. Particular focus is placed on forward-looking compliance with supervisory capital ratio requirements under expected and adverse conditions. The normative perspective also takes into account both the cross-institutional capital ratios required pursuant to the CRR and the bank-specific minimum ratios for own funds according to the ECB's SREP decision. Capital-related regulatory and legal requirements comprise the CET1 ratio, tier 1 ratio, own funds ratio, Leverage Ratio, as well as rules concerning MREL (Minimum Requirements on Own Funds and Eligible Liabilities) and large loan exposure limits.

The economic perspective is an additional, parallel management approach on an equal footing that monitors capital on an ongoing basis, with reports submitted on a monthly basis. It aims to safeguard the economic viability of the institution, and is therefore geared towards maintaining the institution's net asset value. For this purpose, all material economic risks are viewed from a present value perspective, quantified as far as possible using models, and aggregated to economic capital. Economic capital is defined as the capital required to cover the financial risks, taking into account a confidence level of 99.9% over a one-year horizon. It is calculated for all relevant types of risk, and aggregated to form total economic capital (after diversification effects). The capital available to cover total risk is calculated and compared to economic capital.

Risks identified in the risk inventory as material having an impact on capital and income - these are market risk, credit risk, business and strategic risk, operational risk and property risk - are included in the ICAAP, using models or other methods to quantify the economic capital of these risk types. Within these types of risk, there are additional material sub-risks on a granular level that were taken into account as other risks in the ICAAP during the period under review, with extension risk, settlement risk of derivatives, market risk under TLTRO III and realisation risk of defaulted customers aggregated in a single category. Since the beginning of 2023, model risk has no longer been reported under other risks, but is recognised in the respective risk types. Funding risk is included in business and strategic risk.

Over and above the risk-bearing capacity analysis, the ICAAP comprises additional management tools, including a system of limits and early-warning thresholds, as well as a comprehensive monthly monitoring and reporting process. Moreover, key indicators selected within the scope of base and stress scenarios are projected over a period of up to three years, with limits and early-warning thresholds also assigned to these figures. Limit compliance, in combination with a defined escalation process, supports the continuous safeguarding of an appropriate capitalisation.

The results of the ICAAP and of the stress tests are regularly presented to the Management Board and the Risk Committee. The content of the risk-bearing capacity analysis are discussed there – if necessary, management measures are defined.

The methods of calculating economic capital for the individual risk types, as well as risk indicators as at the reporting date, are described in greater detail in the following sub-sections, and in the chapter “Result of Risk-bearing Capacity Analysis”.

Quantification of economic capital for individual risk types

For internal assessment of the Internal Capital Adequacy Assessment Process in line with the economic perspective, economic capital for quantifiable risks is determined using models or scenario analyses, and aggregated into overall bank risk using a mathematical/statistical approach, taking specific correlations between market and counterparty credit risks into account. Thereby risks are calculated for a one-year period, using a confidence level of 99.9%.

The methods of calculating economic capital for the individual material risk types for 2023 are explained below.

Economic capital for Credit Risk
For calculating the credit risk at the portfolio level, a credit portfolio model which is based on the approach of a so-called asset value model is used. The fundamental concept used involves the repeated simulation of correlated rating migrations for borrowers, whereby the associated portfolio revaluation is used to derive a statistical distribution of losses – which is in turn used to derive economic capital in terms of unexpected losses. Economic capital quantifies the maximum unexpected loss, given a pre-defined confidence level, which may be incurred due to rating migrations (including defaults) in the lending business within a single year. Besides the loss distribution of the credit portfolio, as a significant result of this process, credit risk capital can be assigned to individual borrower units in line with the risks involved, using the so-called expected shortfall principle. This ensures a risk-adequate allocation to borrowers, and thus constitutes a major cornerstone in the risk-oriented management of the credit portfolio. During the observation period, correlations between borrowers, borrower groups and regions were updated.

Credit risk reported comprises default and migration risk, transfer and conversion risk, concentration risk and model risk. Certain elements of counterparty credit risk, such as the realisation risk of defaulted customers, settlement risk and extension risk are not reported directly as part of counterparty credit risk, but are regularly updated, constituting a component of overall risk as 'other risks'.

Economic capital for Market Risk (including Pension Risk)
The purpose of calculating economic capital for market risk is to identify potential financial losses resulting from price changes affecting all positions. For this purpose, potential non-systematic losses, derived from historical time series of certain influencing (risk) factors such as interest rates, exchange rates or credit spreads are derived from a historical period going back to 1 July 2007. The historical observation period for risk factors underlying market risk calculations therefore comprises more than ten years, ensuring that adverse economic phases for pbb are adequately taken into account and captured by the model. Ultimately, using a simulation procedure and applying sensitivities of financial instruments to risk factors, the annual loss distribution of portfolio market value is determined, which allows to determine economic capital at the set confidence level.

Economic capital for Operational Risk
Within the framework of the ICAAP, operational risk is quantified using the so-called loss distribution approach (LDA), whereby distributions for damage amounts and frequency are determined individually, using internal loss data from the loss database. External and scenario-based data is also included in the modelling approach. The full loss distribution is generated using a Monte Carlo simulation technique; diversification effects between the various sub-types of risk and modelling categories are considered. The economic capital for operational risk includes a buffer for possible model uncertainties. Furthermore, it is ensured that the economic capital figure calculated does not fall short of a specific floor. This floor is in line with the adjusted regulatory capital determined in accordance with the standardised approach pursuant to the CRR. Sub-types of operational risk which can only be partially quantified, or which cannot be quantified at all, such as for instance reputation risk, are covered by way of a capital buffer.

Economic capital for business and strategic risk
Business and strategic risk is quantified in the ICAAP by means of scenario analyses of all relevant items of the income statement. When deriving available financial resources, pbb Group does not consider any planned profits. This way, a buffer at least equivalent to the amount of positive projected results is reserved for business and strategic risk, since this type of risk is defined as the risk of potential negative deviations from planned income and expenses. In case higher than planned gains are calculated within the scope of quantifying business and strategic risk, the value of business and strategic risk exceeding the planned annual profit of pbb Group is reported as a risk amount.

Liquidity Risk in the ICAAP
Capital backing of liquidity risk in the narrower sense is not possible. Liquidity risk in the broader sense – i.e. the risk of higher funding costs for unexpected potential funding requirements, is shown in economic capital for business and strategic risk.

Result of Risk-bearing Capacity Analysis

Normative perspective
For a detailed description of the regulatory indicators measured as at the reporting date (CET1 ratio, tier 1 ratio, own funds ratio, MREL and Leverage Ratio), please refer to the chapter "Key regulatory capital ratios". The requirements for regulatory capital ratios were satisfied at any time throughout the reporting period. The future-oriented medium-term analysis of key capital ratios – as required by regulators – did not show any critical values according to the limit system, neither in the base scenario nor in the stress scenarios.

Economic perspective

in € million	31.12.2023	31.12.2022	Change
Credit risk	923	965	-42
Market risk	541	457	84
Operational risk	86	94	-8
Business and strategic risk	27	67	-40
Property risk	-	-	-
Other risks	73	69	4
Total before diversification effects	**1,650**	**1,652**	**-2**
Total after diversification effects	**1,559**	**1,563**	**-4**
Available financial resources before net hidden losses	2,794	2,854	-60
Net hidden losses	-89	-116	27
Available financial resources	**2,705**	**2,738**	**-33**
Excess capital	1,145	1,175	-30
Capital Adequacy ratio in %	173	175	-2

In the economic perspective, the overall risk after diversification effects remained constant in the reporting period. The decline in economic capital from credit risk, business and strategic risk and operational risk was more than offset by an increase in market risk and other risks. Market risk increased due to higher interest rate and credit spread risks, primarily driven by model adjustments. The increase in other risks is mainly due to higher unexpected losses of defaulted customers and the increased extension risk. A higher liquidity position led to a decline in economic capital from business and strategic risk. The reduction in economic capital in credit risk was driven by the decline in Non-core, primarily due to portfolio effects as well as rating and LGD improvements, and was only partially offset by the increase in REF due to new business and prolongations. The economic capital for operational risk is calculated at least once a year and has decreased. In addition to updating the data used in the model and taking the new Real Estate Investment Management division (pbb invest) into account, further methodological improvements were implemented, climate and environmental risk were integrated and data coverage for cyber risk was improved. pbb still continues to hold no properties during the period under review.

This contrasts with the available financial resources, which fell in the reporting period, primarily due to the dividend payment made in May 2023. Compared to the end of 2022, the surplus cover has decreased slightly and the internal capital adequacy ratio (defined as the ratio of available financial resources to diversified economic capital) has fallen. Overall, the risk-bearing capacity was also demonstrated for the economic perspective as at the reporting date.

Should credit spreads widen or credit ratings of European public debtors worsen, owing to economic or political developments, both a corresponding increase in credit risk and a reduction in available financial resources (given an increase in net hidden losses and lower equity) are to be expected, notwithstanding any countermeasures taken. A further deterioration in the real estate markets would lead to a deterioration in the rating of the corresponding debtors and thus to a higher credit risk. In addition, a deterioration in funding spreads could have a negative impact on market risk

Opportunities

A quick economic recovery would lead to tightening credit spreads and generally improved ratings. This would strengthen available financial resources further and hence, excess coverage in the ICAAP.

Stress testing

Stress tests play a major role, both from a supervisory perspective and for the Bank's internal management. All activities, developments and decisions relating to stress tests are brought together within the Risk Committee and the subordinated Stress Test Committee.

As part of an integrated approach, the impact of macroeconomic stress scenarios on the material metrics of the normative and economic perspectives was calculated for a horizon of several years during the period under review. Stress scenarios were developed, particularly in relation to the war in Ukraine and the development of inflation as well as the resulting macroeconomic developments, and the impact these events could have on the Bank was analysed. Due to the very dynamic development, these scenarios are subject to a high degree of uncertainty.

Furthermore, stress tests relating to economic capital and available financial resources are used to obtain a deeper understanding of the sensitivity of risk-bearing capacity to adverse changes in economic factors. In addition, inverse stress tests are conducted regularly. The results of these tests describe specific constellations of parameters under which the risk-bearing capacity would be at risk.

SREP

The objective of the SREP is a comprehensive analysis of institutions supervised by the ECB – comprising an assessment of the business model, risk and corporate governance, risk situation, as well as capitalisation and liquidity status.

Based on the results of the analysis as well as using benchmark comparison, the ECB may impose minimum capitalisation or liquidity requirements, over and above existing regulatory requirements. As a key result of the SREP, pbb had to maintain a minimum CET1 ratio of 8.4% in 2023 (excluding the countercyclical capital buffer, which varies by country and therefore by portfolio, and the sectoral systemic risk buffer of 0.752% in total as at 31 December 2023). This requirement consists of a Pillar 1 minimum capital requirement (4.5%), a Pillar 2 capital requirement (P2R: 2.5%) and the capital conservation buffer (CCB: 2.5%). Of the Pillar 2 capital requirement of 2.5%, around 1.4% (56.25%) must be held as Common Equity Tier 1 (CET1) capital and 1.9% (75%) as Tier 1 capital. In addition, pbb had to fulfil a total capital requirement of 13.0% in 2023 (excluding the countercyclical capital buffer, which varies by country and therefore by portfolio, and the sectoral systemic risk buffer). It comprises a Pillar 1 minimum capital requirement (8.0%), a Pillar 2 capital requirement (2.5%) and the capital conservation buffer (2.5%). pbb complied with both requirements at all times during the year under review.

The CET1 minimum capital requirement that applies also represents the threshold for mandatory calculation of a so-called maximum distributable amount (MDA). This generally limits distributions to the CET1 capital, new performance-based remuneration, and interest payments on additional Tier 1 capital (AT1 capital).

The Pillar 2 capital requirement notified to pbb in the ECB's SREP letter dated 8 December 2023 and valid since 1 January 2024 is 3%. As a result, a minimum CET1 ratio of 8.69% (excluding the countercyclical capital buffer, which varies from country to country and hence from portfolio to portfolio, and the sectoral systemic risk buffer) must be maintained from this date; in addition to the Pillar 2 capital requirement, this comprises the Pillar 1 minimum capital requirement (4.5%) and the capital conservation buffer (CCB: 2.5%). In addition, pbb has had to meet a total capital requirement of 13.5% since 1 January 2024 (excluding the countercyclical capital buffer, which varies by country and therefore by portfolio, and the sectoral systemic risk buffer). It is made up of a Pillar 1 minimum capital requirement (8.0%), a Pillar 2 capital requirement (3%) and the capital conservation buffer (2.5%).

Key Regulatory Capital Ratios

Together with the Capital Requirements Directive (CRD), the CRR forms the basis for determining regulatory capital requirements. Besides the minimum capital ratios, these regulations also govern requirements for the eligibility of capital instruments as well as the mandatory determination of regulatory capital, in line with the accounting standards used. For this reason, pbb has determined its regulatory capital ratios based on IFRS.

With the approval of the ECB, pbb Group uses the waiver rule pursuant to Article 7 (3) of the CRR; the Group is therefore exempt from determining own funds requirements at a single-entity level.

pbb Group applies the Advanced Internal Rating Based Approach (Advanced IRBA) and the Standardised Approach (STA) to determine regulatory capital requirements.

The requirements for regulatory capital ratios were satisfied at any time throughout the reporting period.

Own Funds

in € million	31.12.2023[1)]	31.12.2022[2)]
CET1	2,910	2,839
Additional Tier 1	298	298
Tier 1	3,208	3,137
Tier 2	396	566
Own Funds	**3,604**	**3,702**

[1)] After confirmation of the 2023 financial statements, less AT1-coupon.
[2)] After confirmation of the 2022 financial statements and appropriation of profits. The regulatory own funds as at 31 December 2022 were adjusted due to a correction of the deduction item for intangible assets.

Risk-weighted assets (RWA)

in € million	31.12.2023	31.12.2022
Credit risk (without Counterparty credit risk)	17,104	15,594
Counterparty credit risk	363	432
Thereof CVA Charge	119	146
Market risk	52	31
Thereof interest rate risks	-	-
Thereof foreign exchange risks	52	31
Operational risk	975	959
RWA total	**18,495**	**17,017**

Capital ratios

in %	31.12.2023[1)]	31.12.2022[2)]
CET1 Ratio	15.7	16.7
Tier 1 Ratio	17.3	18.4
Own Funds Ratio	19.5	21.8

[1)] After confirmation of the 2023 financial statements, less AT1-coupon.
[2)] After confirmation of the 2022 financial statements and appropriation of profits. The regulatory own funds as at 31 December 2022 were adjusted due to a correction of the deduction item for intangible assets.

Leverage ratio

in %	31.12.2023[1)]	31.12.2022[2)]
Leverage ratio	6.2	5.9

[1)] After confirmation of the 2023 financial statements, less AT1-coupon.
[2)] After confirmation of the 2022 financial statements and appropriation of profits.

MREL (Minimum Requirements for Own Funds and Eligible Liabilities)
Under the recovery and resolution regime (pursuant to the Bank Recovery and Resolution Directive (BRRD), which was revised within the framework of the EU Banking Package in 2019 and implemented into national law through the German Act on Restructuring and Resolution (Sanierungs- und Abwicklungsgesetz – "SAG")), institutions are required to maintain, in addition to regulatory capital, liabilities that can be converted to equity in accordance with the MREL ratio. However, there are clear limits to the ability to convert liabilities (the 'bail-in capacity'). In particular, there is the principle that no investor may be placed in a less advantageous position than is permitted under regular insolvency proceedings (the principle of 'no creditor worse off' – or NCWO). For example, this means that deposits covered by a national deposit guarantee scheme are not bail-inable and thus excluded from conversion. The Single Resolution Board (SRB) sets insti-

tution-specific requirements as part of the annual redefinition of the eligible liabilities and own funds to be held. The leverage ratio exposure amount (LRE) and the total risk exposure amount (TREA) serve as benchmarks for the regulatory minimum requirements. In addition, pbb aims to achieve an MREL ratio of at least 8% in relation to total liabilities and own funds (TLOF). This requirement was significantly exceeded in the year under review with more than € 1.7 billion (31 December 2022: € 1.6 billion).

Recovery and Resolution Planning

Recovery and Resolution Planning
A uniform bank resolution regime is a key component of European Banking Union. With the BRRD, which has harmonised recovery and resolution tools, and with the Regulation setting up the Single Resolution Mechanism ("SRM"), the legal basis therefore was established. In Germany, the BRRD and the SRM were implemented through the German Act on Restructuring and Resolution (SAG).

Recovery Planning
Pursuant to section 12 (1) of the SAG, every institution [subject to the Act] must prepare a recovery plan and submit it to the supervisory authorities. pbb's Recovery Plan is based on the Bank's accounting and financial reporting in accordance with IFRS; it takes numerous directives and regulations into account, including the BRRD, together with related directives and technical standards published by the European Banking Authority (EBA), the SRM, as well as the SAG. The objective of the Recovery Plan is to set out the measures that the institution may use in order to secure or restore its financial stability in the event of its assets, financial position and earnings materially deteriorating, in a theoretical crisis event, where such deterioration may threaten the institution's continued existence. A possible impact upon the financial sector as a whole is also considered in this context.

The monitoring of recovery indicators, as well as recovery governance, are enshrined within the organisational as well as operating structures; they form part of the Bank's overall management.

The Recovery Plan is updated at least once a year, or on an event-driven basis, taking applicable regulatory requirements into account.

Resolution Planning
In contrast to the Recovery Plan, the Wind-down Plan is conceived by the resolution authorities and not by pbb itself. In this respect, in close coordination with the EU Single Resolution Board (SRB) in Brussels and the national resolution authority (the German Federal Financial Supervisory Authority – BaFin), pbb supports these authorities in preparing the Wind-down Plan. The objective of the Wind-down Plan is to ensure pbb's capacity to enter into wind-down proceedings.

INTERNAL CONTROL SYSTEM AND RISK MANAGEMENT SYSTEM RELEVANT FOR THE CON-SOLIDATED FINANCIAL REPORTING PROCESS

Concept

The risk management system relevant for the consolidated financial reporting process comprise the principles, processes and measures used to ensure the effectiveness and efficiency of financial reporting, as well as to ensure compliance with statutory provisions. Risks that may prevent this overall objective from being achieved are identified and assessed; any risks identified are limited and their effect on the financial statements and their appropriate presentation are reviewed. The internal control system ("ICS") is an integral part of the risk management system. The implementation of controls is intended to ensure, with sufficient certainty and despite the risks identified, that the financial statements are prepared in compliance with the regulations. However, absolute certainty regarding the achievement of the objectives cannot be given completely. The ICS is fully integrated into the pbb Group's organisational structure and workflows.

pbb's Management Board prepares Consolidated Financial Statements and a Combined Management Report. In connection with the requirement to establish a Group-wide ICS, the whole Management Board of pbb is also responsible for the form – i.e. the concept, implementation, maintenance and monitoring – of an appropriate and effective ICS. All strategies are decided on by the whole Management Board on the basis of recommendations made by the CFO.

The Supervisory Board is tasked with advising and monitoring the Management Board. It also has audit and reporting-related obligations. pbb's Supervisory Board established an Audit and Digitalisation Committee to support its activities in this area. In accordance with section 100 (5) of the Aktiengesetz (AktG – German Stock Corporation Act), at least one member of the Supervisory Board must have expertise in accounting and another membermust have experience in auditing. These requirements are met.

Group Internal Audit supports the Management Board and the Supervisory Board in its control function by performing independent audits.

At 31 December 2023, the CFO was responsible for Treasury, Information Technology and Finance. The Finance division comprised the departments Accounting, Data Quality Management, Financial Reporting, (Out)Sourcing & Cost Management, Regulatory Reporting and Tax. The Finance division prepares the Consolidated Financial Statements in accordance with IFRS as applicable in the EU and provides the capital market information relevant to accounting. pbb Group companies and branches prepare their financial statements in accordance with the relevant local legal requirements. These financial statements are standardised around uniform Group accounting policies in accordance with IFRS for the purposes of Group financial reporting. Each entity included in the Consolidated Financial Statements reports its statement of financial position, income statement, and notes to a central department in Group Accounting via the consolidation software. In Group Accounting the data are validated, analysed and consolidated. For the preparation of the unconsolidated annual financial statements, the accounting policies in accordance with the German Commercial Code (Handelsgesetzbuch, HGB) applied for the financial statements of the corporate headquarters and the branch offices, and are harmonised on the basis of a HGB accounting manual.

The GFC issues recommendations to the Management Board. These include, among other things, establishing and monitoring the accounting and reporting policies as well as workflows for all units and segments. The GFC is composed of the members of the Management Board and the division heads of Finance, Risk Management & Control and Treasury.

With respect to workflows, the ICS is based on the objective of largely standardised the processes and software. Core activities and processes are governed by policies, according to which the four eye principle must be applied in all material transactions. Data and IT systems are protected against unauthorised access. In addition, certain relevant information is only made available to those employees who need it for their work. Where necessary, results are harmonised across divisions.

Implementation

In order to strengthen and further expand the ICS, pbb Group has, among other things, implemented the Control Attestation Process (CAP). As part of this process, all divisions define key controls for managing their significant risks. The key controls are reviewed and confirmed in a regular confirmation process by the divisions. In addition, the controls are reviewed in a downstream process by the Compliance and Group Internal Audit divisions.

The qualifications of the employees involved in the accounting process are ensured through appropriate selection and regular training.

There is a clear separation of functions within the Finance division. The GFC and other committees, as well as divisional meetings serve as overarching links between the different tasks. In addition, executing, accounting and administrative activities such as payment transfers and payment entries are clearly separated or subject to the four eye principle. Furthermore, the units included in the Consolidated Financial Statements report their data to a central Group department, ensuring the subsequent processing in a uniform manner.

Systems-based and non-systems-based risk management measures and internal controls are used within the workflows. At the systems level, standard software is used as far as possible to post, reconcile, check and report data so as to avoid errors. This also applies to the consolidation and the preparation of the annual report and the annual financial statements. The consolidation software supports the reconciliation of intragroup transactions at a technical level in a clearly defined process, ensuring that these transactions are eliminated correctly and in full. Data from the entities included in the Consolidated Financial Statements are reported using a uniform, standardised chart of accounts. Automated plausibility checks are performed on the data reported by subsidiaries for consolidation purposes, for example. The largest part of assets and liabilities is held by the parent company pbb. The balances carried forward are checked by the system. Extensive validation routines are also anchored in the software that is also widely used on the market to prepare the annual report and the unconsolidated financial statements. To prevent data loss, the data in the consolidation software are backed up on a daily basis and the backup is stored on tape. As a general rule, pbb Group’s software is protected against unauthorised access by a clearly defined administration concept and authorisation rules.

Alongside the systems-based measures, pbb Group has implemented manual and non-systemsbased processes. For example, the correctness and completeness of the data reported are checked using a standardised process involving variance analyses over time, among other things. In addition, the consolidated statement of financial position and the consolidated income statement are determined on a monthly basis. Projections and forecasts are also drawn up. As part of another control mechanism, the exposures involving financial instruments – and hence the vast majority of the statement of financial position – are broken down to individual transaction level based on sub-ledgers, and are reconciled with the consolidated figures. In the income statement, for example, net interest income and net fee and commission income are tracked within the context of the earnings transparency analysis, and the result from fair value measurement is tracked within the context of monthly analyses on the basis of the individual transactions in the sub-ledgers. Another reconciliation refers to the general and administrative expenses where the consolidated figure is reconciled to the individual accounts in the sub-ledger. In addition, a plausibility check using a control file is conducted regarding capital consolidation, in addition to the automated, standard system-based consolidation on individual entry level.

Mandatory accounting requirements are defined and communicated, amongst others, by the use of IFRS respectively HGB accounting manuals. These requirements, which include the analysis and interpretation of new and existing IFRS standards and interpretations, enable a group wide consistent accounting and measurement. Generally accepted valuation methodologies are employed. The procedures in place and the underlying parameters are monitored on a regular basis and adjusted if necessary.

The cross-divisional new product process and the review of existing products with veto rights by the Finance and Risk Management & Control divisions serve to ensure the standardised and systematic presentation of products in the balance sheet.. Annual and interim report preparation is another example of interdepartmental coordination. All of the divisions involved must sign off on these reports before they are officially prepared by the Management Board (subcertification process), creating an additional level of control for the products to be disclosed. All of the divisions affected agree in advance on the content of material sections of the annual and interim reports in editorial meetings.

Comprehensive data quality management (DQM) has been established within pbb Group as part of and in addition to the ICS. In organisational terms, responsibility for the entire central data governance, including data quality management, is anchored in a separate department as part of pbb Group's "2nd Line of Defence". DQM and data quality reporting make it possible to improve data quality by continuously identifying and rectifying data quality issues. Reliable, high-quality data at all levels of the pbb Group enables more reliable decisions to be made, contributing to improved risk assessment and more effective management. Data quality is measured according to four different dimensions: Completeness, Accuracy, Consistency and Timeliness. pbb Group has various means and measures in place to ensure high data quality. Indirect data quality checks and error prevention assess risks in particular and prevent data quality errors from occurring. Direct data quality checks are controls that actively check data and address existing errors. These can also be part of the ICS process. The Management Board defines its requirements for adequate data quality and promotes the associated DQM and the establishment of a data quality culture at pbb. It is also responsible for ongoing compliance with the regulatory requirements for DQM. The Management Board regularly informs the Supervisory Board about data quality, as well as the implementation status of measures adopted to improve data quality.

pbb Group takes measures to combat fraud and intentional violations that negatively impact the Group. Fraud includes theft, embezzlement, or breach of fiduciary duty, as well as intentional accounting errors in connection with the consolidated financial reporting process.

pbb Group uses IT security management to protect its data and the data of its business partners and employees. The IT systems are protected against unauthorised access or manipulation and data misuse. In addition, this ensures permanent availability and enables security of action.

Maintenance

In order to ensure that risks are identified, evaluated and limited as correctly and comprehensively as possible, pbb Group continually reviews and improves its ICS. This also involves adjustments to the ICS to reflect new circumstances, such as changes in the structure and business model of pbb Group or new satutory requirements.

The risk of fraud and intentional violations is regularly analysed in order to take defensive measures. Factors taken into account include suspicious events and changes in pbb Group's situation and that of individual employees.

Any changes to processes and IT systems required as a result of legislative amendments are implemented as separate interdepartmental projects with a clear allocation of functions. At the same time, the IKS is also adapted to the changes in the amended regulations.

Monitoring

The Group Internal Audit division is in particular responsible for checking that processes and procedures are carried out in a due and proper manner and identifying inefficiencies, irregularities or manipulation. The Group Internal Audit division also reviews the effectiveness and appropriateness of the IKS in an independent and risk-oriented manner in line with the rules set out in the Minimum Requirements for Risk Management (MaRisk), and identifies any weaknesses in risk identification, assessment and mitigation. This also includes reviewing the IT systems and the processes and controls of the Finance functions. Concrete action plans with specific deadlines are drawn up and their implementation monitored to remedy the identified shortcomings. Group Internal Audit as an independent division is not integrated into the workflow, nor is it responsible for the results of the audited process. In order to be able to carry out its duties, Group Internal Audit has a full and unrestricted right to information on activities, processes and the IT systems.

As the body responsible for supervising and advising the Management Board, the Supervisory Board may inspect and examine the Company's books and assets. In addition, the Management Board reports regularly to the Supervisory Board. Group Internal Audit reports to the whole Management Board and the Audit and Digitalisation Committee of the Supervisory Board at appropriate intervals, however, at least quarterly. The Supervisory Board discusses the IKS. The Supervisory Board appoints the auditors of the Consolidated Financial Statements, the Unconsolidated Financial Statements and the Combined Management Report. The Supervisory Board approves the Consolidated Financial Statements and the Combined Management Report prepared by the Management Board and audited by the independent auditors.

The auditors of the financial statements attend the Supervisory Board meetings relating to the financial statements and all of the meetings of Supervisory Board's Audit and Digitalisation Committee to report on the material findings of their audit including material weaknesses in the IKS. Where relevant, the auditors immediately eport findings and issues that emerge during the audit and that are material for Supervisory Board to carry out their duties. The Supervisory Board discusses the focus of the audit with the auditors in advance.

Report on Expected Developments

MACROECONOMIC FORECAST

The global economy is likely to grow at a similarly moderate rate in 2024 as in the previous year. The International Monetary Fund (IMF) expects global growth of 3.1%, following estimated growth of 3.1% in 2023. A historical comparison shows just how subdued the expected economic momentum is: from 2000 to 2019, the average growth of the global economy was 3.8%. There are two reasons for the below-average development. Firstly, the consequences of the significant tightening of monetary policy over the past two years are becoming apparent. Secondly, global inflation is only slowly abating. The IMF expects global inflation to remain high at 5.8% in 2024, after reaching an estimated 6.8% last year. The 2% inflation target set by many central banks is not expected to be reached until 2025. (Source: IMF 2024)

The prospect of a gradual decline in inflation towards 2% should allow central banks to start cutting interest rates in the course of 2024. The US Federal Reserve anticipates that it will be able to lower its key interest rates from the range of 5.25% to 5.50% at the beginning of 2024 towards 4.5% by the end of the year. At its Governing Council meeting on 25 January, the ECB confirmed that key interest rates could fall from the summer. The ECB's deposit rate currently stands at 4%. The financial markets are speculating that it could fall by around 1.5 percentage points to 2.5% by December 2024. The Bank of England last raised the base rate to 5.25% in summer 2023. The financial markets are expecting a series of interest rate cuts towards 4.25% this year. (Sources: Fed 2023, ECB 2024, Bloomberg 2024)

Lower inflation rates would strengthen consumer purchasing power, while falling interest rates would support investment activity. According to the ECB's quarterly bank lending survey published in January 2024, financial institutions expect that demand for loans for companies and consumers could increase slightly in the first quarter of 2024 for the first time since the beginning of 2022. All of this should give the economy a small boost over the course of this year. This view is shared by the financial analysts surveyed by the Centre for European Economic Research (ZEW). Their economic expectations improved again in January, which the ZEW justifies with the hope of lower key interest rates in the coming six months. However, should inflation develop differently than expected, this expectation would probably be disappointed. Risks to inflation include the tense geopolitical situation, particularly in the Middle East. This could lead to higher energy prices and freight costs and put pressure on global trade. (Sources: Bloomberg 2024, ZEW 2024)

The further development of inflation will also depend on how the labour market continues to develop. If the situation remains as robust as in 2023, this could lead to excessive wage settlements and thus boost inflation. Central banks and institutions such as the European Commission currently expect only moderate increases in unemployment rates in 2024. In the Eurozone, the unemployment rate is even expected to remain unchanged at 6.6%, while Germany is expected to see an increase of 0.1 percentage points to 3.2%. In the US and the UK, the unemployment rate could rise by 0.4 percentage points to 4.1% and 4.7% respectively. Overall, despite these expected changes, the labour market situation would still be very solid from a historical perspective. As a result, the central banks will keep a close eye on further wage developments to determine the extent to which they harbour risks for inflation. (Sources: ECB 2024, European Commission 2023)

Provided these risks do not materialise and inflation and monetary policy develop as expected, the economy should be able to expand moderately. The European Commission expects gross domestic product (GDP) in the Eurozone to grow by 1.2% in 2024. Within the Eurozone, the European Commission expects Germany's economy to grow by 0.8%, Italy's by 0.9% and France's by 1.2%. At the same time, a comparatively strong increase of 1.7% is expected in Spain. (Source: European Commission 2023)

For the USA, the European Commission expects a slowdown to 1.4% after the very strong increase of an estimated 2.4% in 2023. This is due to the effects of the restrictive monetary policy on the financial market environment and borrowing costs. Meanwhile, growth in the UK in 2024 is likely to be similarly subdued as in the previous year at 0.5%. This is due to the consequences of high interest rates and restrictive fiscal policy. (Source: European Commission 2023)

In Sweden, the European Commission is forecasting a further decline in GDP. After a slump of 0.5%, 2024 is likely to close with a further decline of 0.2%. The weak economic momentum is due to the sharp rise in interest rates and the expected deterioration in the labour market. Inflation is likely to fall to below 2% this year, which would allow the Swedish central bank to lower key interest rates slightly from the current 4%. This should give the economy some momentum later in the year. (Source: European Commission 2023)

In Eastern Europe, the European Commission expects a significant upturn in growth of 1.4% in the Czech Republic, 2.4% in Hungary and 2.7% in Poland in 2024. The main growth drivers are falling inflation and the expectation of lower interest rates. (Source: European Commission 2023).

SECTOR-SPECIFIC FORECASTS

Overall Situation in the Banking Sector

The financial sector continues to face major challenges in 2024. The sharp rise in interest rates against the backdrop of high inflation marks a turing point for the financial system, as the Bundesbank emphasises in its Financial Stability Report. The momentum of lending has slowed significantly, while the risk of asset price corrections remains high. The central bank continues to see overvaluations in the real estate market, although prices have already fallen. Risks have also increased on the commercialreal estate markets, which is reflected in the vulnerability of real estate companies, among other things. Finally, the subdued economic development suggests that the risk of losses in loan portfolios will continue to increase. (Source: Bundesbank 2023)

After all, the sector continues to face the challenge of further developing its business models. On the one hand, this involves tapping into the opportunities offered by digitalisation for the financial sector. Opportunities and risks for the sector also arise from the sustainability nexus, with its environmental, social and good corporate governance facets. And last but not least, the German economy and financial sector, which is highly interconnected internationally, is particularly challenged by geopolitical upheavals and tensions. (Source: BaFin 2024).

Real Estate Finance

The fact that the real estate market developed so weakly in 2023 was not expected at the beginning of the year. A further increase in key interest rates is not expected in 2024. This should reduce the pressure on yields and provide investors with a more secure basis for their calculations. Increases in nominal rents should also have a positive effect. The market phase offers opportunistic buyers in particular the opportunity to enter the market. As soon as the central banks start the cycle of interest rate cuts, the upturn is likely to become more widespread. Until then, it can be assumed that the investment market will move sideways at a low price level. Regardless of the property type, older properties are likely to remain under pressure. This is due to the increasing demands of users.

The USA is currently going through a difficult phase. The US economy will be burdened by the Fed's interest rate hikes in 2023, which will reach the real economy with a delay in the first half of 2024. At the same time, the positive effects of the economic and stimulus programmes launched to support the economy during COVID-19 are coming to an end. First and foremost here is private consumption, which has proven to be a pillar of the US economy thanks to the robust labour market. The US labour market is currently showing the first signs of weakness, which is likely to have a dampening effect on private consumption. Overall, the US economy is expected to cool down in the first few months of 2024. Private consumption is expected to return over the course of the year as a result of a lower inflation rate.

The recovery on the real estate markets will arrive with a certain delay. At the same time, the office markets will continue to be burdened by the ongoing developments towards hybrid working. In this context, a further decline in office rents can be expected. For pbb's markets, this is likely to be no more than 10%. The low volume of completions compared to previous years will have a particularly positive effect here.

Forecasts assume a further rise in yields for the USA. For pbb's main markets in the USA, this is likely to be a maximum of 100 basis points in 2024, measured in terms of cap rates.

For Europe, it can be assumed that yields in many markets will remain constant or at most rise slightly before falling again by 2025 at the latest.

(Sources: PMA, JLL, CBRE, RealCapitalAnalytics, Costar)

Non-Core

Demand for public investment financing is expected to continue to grow in the coming year. As the European Commission writes in its autumn forecast, the share of public investment is expected to increase from 3.0% of GDP in 2019 to 3.4% in 2024. Half of this investment will be financed from the EU budget, the other half from national budgets. In most EU member states, the proportion of the budget spent on public investment is set to increase significantly in the coming years. (Source: European Commission)

Within the EU, spending on public investment will develop in different directions in the coming year. In Germany and Austria, this share is expected to increase slightly by 0.1% to 2.7% and 3.5% of GDP respectively in 2024, while the level in France and Spain will remain unchanged (3.9% and 2.7% of GDP respectively). Outside the EU, investment spending in the UK is expected to remain at 3.3% of GDP in 2024. (Source: European Commission)

The improvement in public finances is expected to continue in the EU in 2024. A lower level of fiscal measures is expected to contribute to the aggregate budget deficit falling by 0.4 percentage points to 2.8% of GDP. At the same time, the debt level is set to fall further and is expected to reach 82.7% of GDP, compared to 83.1% in the previous year. Despite this improvement, the European Commission expects the number of member states with a budget deficit of more than 3% of GDP to remain high in 2024, as in the previous year, at 12 countries. However, this had no consequences in 2023, as the EU fiscal rules were still suspended in the previous year. (Source: European Commission)

It is uncertain whether the stability of credit spreads observed last year will continue in 2024. On the one hand, the ongoing improvement in public finances should be reflected in stable or even further narrowing risk premiums; on the other hand, the gradual phasing out of the European Central Bank's asset purchase programme ("PEPP") and the large number of global geopolitical flashpoints could lead to widening spreads. The trends for yield levels are also contradictory. On the one hand, the prospect of a looser monetary policy should contribute to a further fall in yields on the capital market. On the other hand, investors could once again turn their attention to the budgetary situation of those countries - such as Italy - that continue to have high budget deficits and excessive debt, thereby exerting pressure on yields.

Funding Markets

Macroeconomic uncertainties and geopolitical tensions are not expected to diminish in 2024 either. In addition to the prevailing conflicts in Ukraine and the Middle East and the upcoming elections in Europe and the US, the containment of inflation is likely to remain the key issue on the capital markets and the focus will be on the reactions of central banks. Now that inflation in the eurozone has peaked and weakened noticeably of late, the financial markets are already expecting the first interest rate cuts in the first half of 2024. However, depending on the inflation data, expectations of possible interest rate cuts by the ECB could be postponed. With regard to the primary markets, pbb Group expects a considerable volume of covered bonds to be brought to the market again. The asset class is likely to remain attractive for investors due to the comparatively high interest rates and the increased spread levels. As the interest rate structure normalises, issuers and investors should increasingly focus on longer maturities again. We also anticipate another high issue volume for unsecured bank bonds. Despite the challenging situation on the capital and real estate markets, refinancing on the capital market should not pose a problem for the vast majority of banks. However, it is likely to be much more difficult for issuers with a less diversified business model and high CRE exposure, particularly in the US real estate market, and will require corresponding price concessions. Demand from private customers for fixed-income investments, particularly fixed-term deposits, should generally continue against the backdrop of comparatively high interest rates. (Sources: ECB, Bloomberg, vdp)

COMPANY FORECASTS

The forecasts for pbb Group's future development represent estimates that were made on the basis of the information currently available. If the assumptions on which the forecasts are based on do not materialise or if risks and opportunities do not occur to the extent calculated, the actual results may differ significantly from the results currently expected.

Future Developments in Assets, Financial Position and Earnings

Due to the continuing macroeconomic and industry-specific uncertainties, the forecast for the key performance indicators defined in the chapter "Internal Management System" for the 2024 business year is characterised by a high degree of uncertainty. Overall, the following is forecast for the performance indicators in the 2024 financial year:

Key performance indicator	Initial position (financial year 2023)	Forecast (Financial year 2024)
New business volume Real Estate Finance (including prolongations with maturities of more than one year)	€7.2 billion	€6.0 billion to €7.0 billion
Financing volumes Real Estate Finance	€31.1 billion	€30.0 billion to €31.0 billion
Profit before tax	€90 million	significantly above the 2023 figure
Cost-income ratio	45.8%	47% to 53%
Return on CET1 capital after tax	2.4%	significantly above the 2023 figure
CET1 ratio	15.7%	14.0% to 15.0%[1)]

[1)] Based on IRBA models calibrated with standard values and CRSTA values.

The forecast of the key performance indicators is subject to a high degree of uncertainty due to the tense situation on the real estate and funding markets on the date of preparation, among other things.

The REF segment should account for the majority of profit before tax in 2024.

With regard to risk-bearing capacity, the normative perspective aims to ensure that minimum capital ratios required by the supervisory authorities are met even under an adverse economic scenario. With regard to the economic perspective, pbb Group aims to ensure that the capital available to cover the risks adequately exceeds the economic capital requirement on a sustained basis.

Opportunities and Risks

Regulatory environment
pbb Group is obliged to comply with a large number of legal and regulatory requirements and provisions. The further development of the requirements and potential supervisory measures may have a positive or negative impact on the development in assets, financial position and earnings, on capital requirements, on funding and on the business activities of pbb Group. In addition, costs are generally incurred for implementing and monitoring the requirements.

As part of the SREP, pbb was specified a minimum CET1 ratio and a minimum own funds ratio, as well as a recommendation for the capital ratios that goes beyond this. In 2024, pbb Group expects to determine the risk-weighted assets included in its solvency ratios using its own risk models calibrated to standardised risk parameters. This would result in a significant increase in RWAs and thus a reduction in the capital ratios compared with 2023. Although the ratios would be expected to exceed the SREP minimum requirements, the gap to the minimum ratios would be significantly reduced. As a consequence, pbb Group would plan, among other things, to conclude new asset-side business even more selectively than in the past, or to issue certain refinancing funds in order to strengthen the capital ratios.

A burden on the capital ratios in 2024, for example due to many loan extensions resulting from customer behaviour or the non-placement of issues that strengthen equity, could make additional measures necessary. This could have a negative impact on the earnings situation, for example on net interest income. Effects on the net assets and financial position, such as additional capital measures, are also possible.

Following the entry into force of Basel IV and approval by the supervisory authorities (expected in 2025), pbb Group intends to use the IRBA foundation approach to determine the probabilities of default included in the calculation of risk-weighted assets for the majority of commercial real estate financings. This would result in a significant increase in the capital ratios. The remaining risk positions would then be valued using the credit risk standardised approach (so-called CRSTA).

Should pbb Group not be able to utilise the IRBA foundation approach, or not as early as planned, and instead continue to determine risk-weighted assets using models calibrated to standard values, further measures to strengthen the equity ratios may become necessary. This may in turn have an impact on the net assets, financial position and results of operations.

Funding and liquidity
Funding costs increased significantly in 2023, both in general and specifically for pbb Group, which had a negative impact on net interest income. Overall, funding conditions have deteriorated. This affected collateralised funding in the form of Pfandbriefe and, to an even greater extent, unsecured securities. Among other things, the rating agency S&P adjusted the rating of the preferred senior unsecured debt to BBB with a negative outlook in November 2023 and to BBB- with a negative outlook in February 2024. The increase in pbb's funding volume had a direct positive effect.

An increase in funding costs will have an additional negative impact on net interest income. This could also make new asset-side business unattractive for pbb Group. A reduction in the market values of the assets in the cover pool, for example as a result of increased credit risk premiums, could also have a negative impact on pbb Group's secured funding instruments.

Even though pbb Group maintains a liquidity cushion and has a broad range of funding instruments at its disposal, there may be a liquidity gap in extreme cases. This may be the result of a general drying up of the funding markets. The liquidity gap may also result from specific problems of pbb Group, for example in the issue of secured or unsecured bonds or by pbb directly. Reputational losses and further rating downgrades may also be a reason for this. On the other hand, a decline in refinancing costs may favour net interest income.

Real estate markets
High inflation and the associated rise in interest rates, special effects such as the impact of mobile working in the office sector and the inclusion of sustainability aspects weighed on the real estate markets in 2023. The transaction volume was significantly below the level of previous years. The market also saw salvage acquisitions in isolated cases as a result of non-performing financing, particularly in the USA.

In pbb Group's view, a recovery and stabilisation of the real estate markets will require in particular a sustained recovery of the financing markets, falling inflation rates, foreseeable effects of mobile working and a calming of the tension between online and retail. If the real estate markets do not stabilise and recover, or only with a delay, this may have a negative impact on pbb Group's results of operations. pbb Group could be forced to grant concessions to borrowers, such as deferrals or waivers. In addition, it might be necessary to take collateral as salvage acquisitions on its own balance sheet. There is a risk that loan defaults will be higher than the risk provisions recognised. Conversely, a faster and significant recovery of the markets may lead to risk provisions being reversed and recognised in income. (Source: JLL)

Politics and geopolitical tensions
Geopolitical developments remain fraught with risk. The conflicts existing in 2023, such as the Russian war against Ukraine or the Israel-Gaza war, could escalate further and spread to other countries. Elections such as those in the USA could change the geopolitical landscape. Terrorist attacks could lead to additional uncertainty.

Geopolitical tensions may lead to distortions on the markets relevant for pbb Group, with negative effects on its development in assets, financial position and earnings. A further escalation of wars or an expansion to other countries may have a further negative impact on economic developments. Stricter sanctions could also have a negative impact. As a result, the financial strength of pbb Group's financing clients could be significantly weakened, resulting in impairment losses and a lack of demand for financing. Furthermore, impairments of the fair values of pbb Group's assets or other negative effects may result. (Sources: WTO, DW).

Economy
The global economy grew at a below-average rate in 2023 compared to the past. German economic output has even contracted. A continued weak economy could lead to higher provisioning requirements, lower fair values of financial assets and a lower volume of new business for the pbb Group, thus burdening the development in earnings. Persistent supply bottlenecks or increased inflation, for example, could also have a dampening effect on the economy. By contrast, a positive economic development in the euro zone, and particularly in Germany, would probably have a favourable effect on the development in earnings, as pbb Group would only have to make moderate provisioning for the assumption of credit risks, for example, and the fair values of financial assets could increase. (Sources: ifo, IMF).

National debt
Since the beginning of the euro crisis in 2009 and 2010 at the latest, the state of public finances in Europe has become a much-noticed topic and has remained so ever since. Most recently, the COVID-19 pandemic, the economic implications of the pandemic and the economic aid provided by the EU have made the topic much more explosive. As a consequence of high levels of debt, the rating of public-sector budgets may deteriorate or they may even become insolvent. For pbb Group, this may result in a need for credit loss allowances and payment defaults in the non-strategic Non-Core segment. In addition, the budget gap in Germany and other countries harbours a risk for economic development, which may also have a negative impact on pbb Group's economic development. (Sources: Federal Statistical Office, ifo).

Environmental risks and climate change
Governments around the world have taken steps to make the transition to a lower-carbon and more circular economy in order to mitigate climate change. This transformation harbours both opportunities and risks for the economy in general, and for pbb Group specifically.

Damage to property caused by environmental destruction and climate change can have considerable consequences for the real economy and the financial system. This can lead to, for example, increasing damage to buildings or other assets held as collateral for financings, caused by flooding, storms, drought or other natural disasters. Although pbb Group's clients are required to insure the physical collateral on which the financings are based, negative effects on the Group's development in assets, financial position and earnings cannot be ruled out (source: ECB).

Increasingly, the sustainability of real estate has an impact on value when leased and sold. Higher value adjustment requirements may therefore arise in the case of non-sustainable properties (source: Energy Efficiency Financial Institutions Group).

The necessary transformation towards becoming more sustainable will presumably lead to considerable financial and capital requirements. Risks may arise, for example, in the form of impairments on pbb Group's loans and advances if borrowers are unable to fund these requirements from their own income. However, the transformation can also generate business opportunities. Examples on the assets side include financings for sustainable buildings or energy-efficient refurbishments, which pbb Group already offers through green loans. On the liabilities side, additional issuance of green bonds can create opportunities.

Interest Rates
If market interest rates in the euro zone continue to rise, a higher interest burden could make it more difficult for pbb Group's clients to service their payment obligations on time. The reason for this is that some customers are unable to increase their income, for example in the form of rents, to the same extent as their expenses increase in the form of interest. As a result, pbb Group may need to recognise higher allowances for losses on loans and advances. These increases in allowances for losses on loans and advances may significantly overcompensate for the positive effects of a higher interest rate level, such as the higher interest income from the investment of the liquidity reserve and own funds.

Competition
A decline in the intensity of competition can generally have a positive effect on interest margins and thus on the development in earnings. However, a sharp market slump combined with low transaction volumes for commercial real estate can also lead to significantly lower sales prices. As a consequence, there may be an economic need to extend financing. As a further consequence, the need for impairments on pbb Group's financings may increase. Another factor influencing pbb Group's competitive strength may be a deterioration in its reputation, for example as a result of negative news in the media.

A change in the market situation can also be caused by company takeovers. This can result in changed business models with increased and decreased market activity. This may also affect pbb Group if it acquires companies or is itself acquired.

Strategic Initiatives
pbb Group plans to increasingly diversify its business model over the coming years, thereby broadening the foundation for future earnings and profit growth. In addition to further organic growth in the core business and an even stricter price/risk selection in new business, important strategic pillars include the significant expansion of the capital-efficient commission business through Investment Management, and the further diversification of the funding base by expanding retail deposits. In all of this, pbb is focusing on the topics of green finance and digitalisation. A comprehensive cost-cutting programme is being implemented in parallel.

The strategic initiatives bundled in the P2026 programme are intended to sustainably increase pbb Group's profitability. However, as with all projects and programmes, there is a risk that key components cannot be successfully implemented. In this case, there may be a negative impact on pbb Group's profitability.

Digitalisation
In view of increasing cost competition in the banking environment, intensified by so-called fintech and proptech companies, and in order to tap new sources of income, digital business processes and models are moving into the focus of pbb Group. Nevertheless, digitalisation may give rise to opportunities and risks for the Group's development in assets, financial position and earnings in the future, depending in particular on the success of digital business models and further developments in information technology. One example is the digital credit workplace that pbb Group is developing. This is intended to support the initiation and conclusion of new exposures, as well as the management of existing exposures in the front and back office, whilst further optimising existing processes and increasing the scalability of processes. If the project is implemented successfully, pbb Group will benefit from efficiency opportunities and competitive advantages, whereas failure may lead to costs.

IT and IT Security
The operability and security of the information systems is a high priority for pbb Group. The aim is to operate the IT systems constantly and to prevent unauthorised access to the system and data inventories. The employees of pbb Group may only access data which they need for the tasks assigned to them. Should the risk of loss of confidentiality, integrity and authenticity of data materialise, for example through (cyber) attacks, this may lead to manipulation and/or an uncontrolled outflow of data, a loss of reputation and thus a negative impact on pbb Group's development in assets, financial position and earnings.

pbb Group has outsourced some of its IT operations to a service provider. It is planned to operate these functionalities itself in the future. This will save costs. The so-called outsourcing risk is eliminated, but there is a risk of independently caused disruptions in IT operations and IT security.

Human Resources
In recent years, pbb Group has been able to attract highly qualified employees and managers. A modern and flexible working environment, a wide range of training and personnel development programmes as well as attractive remuneration and fringe benefits contribute to long-term employee retention. However, risks from staff departures and the associated loss of knowledge cannot be ruled out. The reduction in positions as part of the P2026 strategic programme, for example, could also lead to unintended employee departures.

In order to continue to successfully recruit employees, pbb Group is increasingly focussing on the recruitment and development of young talent and has developed an employer brand that makes greater use of modern recruitment channels. Nevertheless, the general shortage of skilled labour may have a negative impact.

Negative developments in the area of human resources, for example due to a deterioration in pbb Group's reputation, can cause disruptions in business processes and a lack of innovation, and consequently lead to higher costs, for example for recruiting and retaining employees.

pbb Group utilises external service providers for certain activities. These outsourcing arrangements can save costs. However, they may also give rise to operating risks which may burden the results of operations.

Legal and tax matters
It is possible that court decisions may turn out differently than expected by pbb Group, with the result that the outflow of resources may deviate positively or negatively from the provisions recognised. This risk also includes tax audits by tax authorities, which may lead to additional/reduced taxable income. Depending on the type of deviation, this may result in opportunities or risks for pbb Group's development in earnings.

Bank Levy
pbb Group has taken the opportunity to pay contributions to the European bank levy, the Deposit Protection Fund and the Compensation Scheme of German Banks not exclusively through so-called regular contributions, but partly in the form of an irrevocable payment obligation by providing cash collateral. The pbb Group recognises collateral in accordance with the meeting reports of the Banking Committee of the Institute of Public Auditors in Germany. This states that the transfer of cash as cash collateral at the institution subject to the contribution obligation (collateral provider) results in the recognition of a financial receivable from the collateral taker (restructuring fund) and the derecognition of the cash. As at 31 December 2023, the collateral provided for the European bank levy amounted to € 42 million, for the Deposit Protection Fund to € 3 million and for the Compensation Scheme of German Banks to € 4 million.

A French bank, which is independent of the pbb Group, has brought an action against the Single Resolution Board (SRB) for the European bank levy in order to obtain the return of its cash collateral following the surrender of its banking licence. The General Court of the European Union (General Court) dismissed the French bank's action on 25 October 2023. The French bank has appealed against the judgement. According to pbb Group's assessment, the judgement of the General Court, which is not yet final, has no impact on the accounting treatment of the collateral. No provisions need to be recognised as it is unlikely that the collateral will be utilised by the SRB. However, it cannot be ruled out that the legal assessment of the cash collateral may change. This could be the case, for example, if the French bank's claim is also rejected in the last instance. A change in the legal assessment may have an impact on accounting practice. This may also affect pbb Group's accounting, with negative effects on its net assets and financial position and, depending on the accounting treatment, its results of operations in the maximum amount of the capitalised collateral.

Corporate Social Responsibility
Corporate social responsibility refers to a responsible, entrepreneurial spirit that integrates environmental and social aspects as well as responsible corporate governance – on a voluntary basis – into business activities and in interactions with stakeholders and beneficiaries.

pbb makes a voluntary contribution to a more sustainable development that goes beyond the legal requirements. This can create opportunities for pbb Group, for example, in the client business and as an attractive employer. In contrast, weaknesses in corporate social responsibility can weigh on the relationship to internal and external groups of individuals with whom pbb Group interacts, with corresponding negative effects on its development is assets, financial position and earnings.

Pandemics
Due to increased immunity through vaccinations and infections, the COVID-19 pandemic has no longer been considered an international health emergency since May 2023. However, mutations of the SARS coronavirus or pandemics of other viral or bacterial diseases could again lead to considerable burdens on the economy in the future. This could result in expenses, for example in the form of credit loss allowances on financing. (Source: WHO).

SUMMARY

With regard to 2024, the risks of a negative development in assets, financial position and earnings of operations are greater than in previous years. This is due in particular to regulatory restrictions and the uncertainty surrounding the further development of the commercial real estate markets with the uncertain extent and timing of a possible recovery. Macroeconomic developments also remain uncertain and harbour risks.

Overall, taking into account the opportunities and risks, pbb Group expects profit before tax for 2024 to be significantly higher than the previous year's figure (€90 million).

Commentary on pbb's Annual Financial Statements under HGB

BUSINESS DEVELOPMENT

In the year under review, pbb generated a profit before tax of €10 million in the annual financial statements prepared in accordance with the German Commercial Code (HGB), compared with €128 million in the previous year. On the one hand, this decline was due to the absence of floor income and lower compensation from the early repayment of loans by customers. On the other hand, increased risk provisioning for real estate financing in the USA and additions to the fund for general banking risks in accordance with Section 340g HGB were the main drivers. The financing volume increased as a result of the lower volume of early loan repayments in connection with drawdowns from new business concluded. Its development and pbb's new business volume correspond to the information presented in pbb Group's economic report.

DEVELOPMENT IN EARNINGS

in € million	2023	2022
Net interest income	394	508
Net fee and commission income	2	5
Net other operating income	82	-9
Net operating income	**478**	**504**
General and administrative expenses	-284	-290
Personell expenses	-154	-172
Non-personell expenses (including depreciation and write-offs)	-130	-118
Operating results (before loan loss provisions)	**194**	**214**
Risk provisioning	-186	-81
Net income from financial investments	32	-5
Additions to the fund for general banking risks	-30	-
Operating results	**10**	**128**
Extraordinary result	-	-
Profit before tax	**10**	**128**
Taxes	-10	-14
Net income	**-**	**114**

Net Operating Income

Net interest income fell from €508 million in the previous year to €394 million in 2023, with negative effects, particularly due to higher interest rates and temporary effects, only partially offset by higher earnings from commercial real estate financing. The positive development of the interest contribution from commercial real estate financing resulted from the increase in the average volume of disbursed and therefore interest-bearing REF financing to €30.1 billion (average volume in 2022: €28.6 billion) and higher new business margins. By contrast, earnings were reduced by the extensive elimination of income from interest rate floors as a result of the higher market interest rate level. Furthermore, prepayment penalties fell from €18 million to €3 million due to lower early repayments (€0.9 billion; 2022: €2.2 billion). In addition, net interest income no longer benefited from the interest premium of 50 basis points for the TLTRO III refinancing in contrast to the previous year. In addition, the early settlement of derivatives resulted in an expense of €66 million (2022: income of €7 million). Of this amount, €33 million was attributable to regular terminations in connection with the termination of the underlying transactions. The corresponding offsetting income is included in net income from financial investments in the case of the termination of assets and in other operating income in the case of the termination of liabilities. Further expenses totalling €33 million resulted from asset/liability management and interest rate management. Although these effects resulted in an expense in 2023, they are amortised over the term and will lead to lower interest expenses in the coming periods. As in the previous year, net interest income included interest expenses for AT1 capital in the amount of €23 million (2022: €17 million).

Net fee and commission income from fees fell to €2 million (2022: €5 million), in particular due to the lower level of new business. Furthermore, additional commission expenses were incurred from service contracts for deposit business in connection with pbb direkt (Raisin and CHECK24).

Net other operating income totalled €82 million (2022: €-9 million). The largest item was net price rate gains on own debt securities totalling €33 million (2022: net expenses of less than € 1million). This item also benefited in the amount of €24 million from the expiry of potential repayment claims from a past synthetic securitisation transaction of a predecessor institution of pbb. Expenses from the bank levy amounted to €22 million (2022: €31 million), taking into account a 22.5% security deposit recognised directly in equity. The year-on-year decline in expenses for the bank levy was due, among other things, to a significant decrease in the target volume of the fund at EU level. In the case of provisions outside the lending business, reversals exceeded additions by €49 million. In particular, this related to reversals of provisions for legal risks and costs as well as reversals of personnel provisions. The existence of a current obligation is no longer considered (largely) probable for these legal cases and the associated costs. In 2022, net reversals totalled €24 million, in particular due to the final clarification of tax issues. There were no net expenses from currency translation in 2023 (2022: net expenses of €4 million).

General and Administrative Expenses
General and administrative expenses amounted to €284 million (2022: €290 million). Personnel expenses decreased primarily due to effects from the measurement of defined benefit pension obligations. The main reason for the lower expenses was the largely constant valuation parameters, whereas in the previous year the pension dynamics in particular increased significantly as a result of higher inflation (2.50%; 2022: 2.50%; 2021: 1.50%). Wages and salaries were higher than in the previous year, mainly due to provisions in connection with the termination of employment contracts and partly due to a slightly higher headcount and regular salary adjustments. In addition, pbb paid its employees an inflation adjustment bonus in 2023. Non-personnel expenses were higher than in the previous year due to higher costs for strategic profitability initiatives.

Risk Provisioning
Risk provisioning, being the balance of provisions for possible loan losses and the result from securities and promissory note loans of the liquidity reserve, was increased by net additions of €186 million (2022: €81 million). In terms of the lending business, net reversals of €10 million (2022: €5 million) were attributable to general loan loss provisions to account for potential default risks in the lending business. Net write-ups of €24 million (2022: net increase of €39 million in write-downs to the lower of cost or market, mainly due to interest rate effects) were recognised for third-party securities and debt securities as well as promissory note loans in the liquidity reserve. In the 2023 financial year, there were recoveries of €1 million on receivables written off (2022: no recoveries on receivables written off).

The general loan loss provisions include income from measurement changes in the amount of €22 million, which are described in the notes to the annual financial statements. In addition, pbb fully reversed the management overlay of €69 million existing at the beginning of 2023 during the course of 2023 and recognised a new management overlay of €31 million at the end of 2023, which led to a total reduction in allowances for losses on loans and advances of €38 million. The management overlay formed as at 31 December 2022 was formed at that time for financing office properties, irrespective of the country, as pbb did not believe that the measurement parameters as at 31 December 2022 reflected the risks and uncertainties comprehensively enough. In the course of 2023, however, these valuation parameters, and in particular the interest rate level, did not develop as negatively as assumed in the management overlay. A new management overlay was created at the end of 2023 to reflect the emerging dynamics on the US real estate markets. This market is currently characterised by historically low transaction volumes, a sharp decline in market value and a high level of uncertainty. On the one hand, the overlay includes an adjustment of the model-based average estimated probabilities of default (PD) and loss given default (LGD) for the entire US business. For this purpose, the PDs and LGDs were derived on the basis of a longer-term historical average in order to take into account experience from several economic cycles. Secondly, US property loans without indicators of impaired credit quality were collectively provided for in the amount of the expected credit losses over the term if the last default rating was issued more than six months ago.

The net additions to specific loss allowances in the amount of €221 million (2022: €45 million) mainly related to real estate financing in the USA and development financing in Germany. The main reason for the additional risk provisioning was a decline in the expected realisation proceeds derived from the current lower prices for comparable transactions.

Net Income from Financial Investments
The income from financial investments amountes to €32 million (2022: €-5 million). The net income mainly resulted from gains on the sale of securities held as fixed assets, while the result from investments amounted to €0 million. In the previous year, write-downs of €8 million were recognised on shares in affiliated companies, which exceeded the net income of €3 million from the reversal of general valuation allowances on securities held as fixed assets.

Additions to the fund for general banking risks
Due to the market situation, €30 million was added to the fund for general banking risks in accordance with Section 340g HGB in the 2023 financial year. It therefore amounted to €77 million as at 31 December 2023 (31 December 2022: €47 million).

Taxes
The tax expense amounted to €10 million (2022: €14 million) and mainly resulted from expenses for taxes on income.

DEVELOPMENT IN ASSETS

in € million	31.12.2023	31.12.2022
Cash reserve	43	46
Loans and advances to other banks	5,826	7,549
Loans and advances to customers	39,060	38,345
Bonds and other fixed-income securities	5,226	6,631
Equity shares and other variable-yield securities	2	2
Investments in affiliated companies	1	5
Intangible assets	48	29
Tangible assets	1	2
Sundry assets	175	229
Prepaid expenses	227	293
Total assets	**50,609**	**53,131**

General Development in Assets

pbb's total assets amounted to €50.6 billion as at the balance sheet date, €2.5 billion lower than as at 31 December 2022. The decline resulted, among other things, from lower loans and advances to other banks due to a significantly lower portfolio of reverse repurchase agreements in connection with the predominant repayment of the TLTRO III funding. Loans and advances to other banks include overnight credit balances with the Bundesbank totalling €2.7 billion. In addition, debt securities and other fixed-interest securities declined due to maturities and sales. Loans and advances to customers were higher than at the end of the previous year. A higher nominal volume of commercial real estate financing more than compensated for the strategic decline in public sector financing.

DEVELOPMENT IN FINANCIAL POSITION

in € million	31.12.2023	31.12.2022
Liabilities to other banks	6,501	8,021
Liabilities to customers	18,935	18,194
Securitised liabilities	20,762	22,291
Sundry liabilities	64	21
Deferred income	382	477
Provisions	230	267
Subordinated liabilities	606	638
Additional regulatory capital instruments	317	312
Fund for general banking risks	77	47
Total liabilities	**47,874**	**50,268**
Equity	2,735	2,863
Total liabilities and equity	**50,609**	**53,131**

Liabilities

Liabilities amounted to €47.8 billion (31 December 2022: €50.3 billion). The main reason for the decline was primarily the repayment of most of the TLTRO III liabilities in the amount of €1.8 billion. Securitised liabilities fell due to buybacks and maturities of public-sector bearer Pfandbriefe and other debt securities. In contrast, liabilities to customers increased due to the higher volume of deposits from private clients (pbb direct), which are cost-effective for pbb.

Additional regulatory capital instruments include Additional Tier 1 (AT1) capital in the total nominal amount of €300 million and a carrying amount of €317 million, including interest accrued. The bond issued by pbb in April 2018 carries an initial coupon of 5.75% p.a. and has no final maturity. The coupon for the new five-year interest period from 28 April 2023 is 8.474%. The coupon payments are linked to certain conditions and are otherwise discretionary.

Equity

in € million	31.12.2023	31.12.2022
Share capital	380	380
Additional paid-in capital	1,639	1,639
Retained earnings	716	716
Unappropriated retained earnings	-	128
Equity	**2,735**	**2,863**

For the financial years 2023 and 2022, pbb's share capital was unchanged, at € 380,376,059.67, consisting of 134,475,308 registered ordinary bearer shares in the form of no-par value shares with a notional interest in the share capital of €2.83 per share. The additional paid-in capital remained unchanged. Within retained earnings, legal reserves remained unchanged in the financial years 2023 and 2022. The other retained earnings remained unchanged in the 2023 financial year (2022: withdrawals totalling € 14 million).

Pursuant to a resolution adopted by the Annual General Meeting on 25 May 2023, pbb paid a dividend of €0.95 per no-par value share entitled to dividends (in total therefore €128 million) to its shareholders for the financial year 2022.

Key Regulatory Capital Ratios

According to Art. 7 (3) of the Capital Requirements Regulation ("CRR"), pbb was exempted from the requirements laid out in parts 2 to 5 and 8 of the CRR; for instance, this includes own funds and capital requirements, stipulations on large exposures and exposures to transferred credit risk, as well as disclosure requirements. As a result, pbb is also exempt from the requirements of Part 7 of the CRR in accordance with Art. 6 (5) CRR.

Disclosures Pursuant to Section 315a (1) HGB

pbb Group's Supplemental Information according to section 315a (1) of the German Commercial Code (HGB) is equal to pbb's Supplemental Information according to section 289a (1) HGB.

Composition of Subscibed Capital (Section 315a (1) No. 1 HGB)
The composition of pbb's subscribed capital is disclosed in the Note "Equity". Each bearer share with no par value entitles the shareholder to one vote at the Annual General Meeting. pbb currently does not hold any nonvoting treasury shares. No shareholder and no shareholder group is entitled to special rights, that confer power to control vis-á-vis pbb.

RESTRICTIONS AFFECTING THE VOTING RIGHTS OR THE TRANSFER OF SHARES (SECTION 315A (1) NO. 2 HGB)

With respect to the exercise and transfer of voting rights of shares only the statutory provisions apply. The voting rights are not limited by size. All shareholders who register for participation in the Annual General Meeting in time and who have demonstrated their right to participate in the Annual General Meeting and to exercise their voting rights may exercise the voting rights subject to a possible loss of rights in accordance with section 44 of the German Securities Trading Act (Wertpapierhandelsgesetz, WpHG) or section 59 of the German Securities Acquisition and Takeover Act (Wertpapiererwerbs- und Übernahmegesetz; WpÜG) attached to all the shares held and registered by them. Where pbb holds treasury shares, section 71b of the German Stock Corporation Act (Aktiengesetz, AktG) prohibits the exercise of rights vested in such shares.

HRE Holding has committed itself to avoid exercise of control over pbb by entering into a control avoidance agreement with pbb. HRE Holding undertakes to exercise voting rights vested to it at the point in time at which the control avoidance agreement enters into effect, and/or at any subsequent point in time at which HRE Holding holds pbb shares, to a maximum of 49% of the present voting capital at the adoption of resolutions regarding the appointment or removal of Supervisory Board members as well as resolutions taken as part of management decisions according to sections 83, 111 (4) sentences 3 to 5, 119 (2) or 179a of the AktG, not to make any proposals for resolution to pbb's Annual General Meeting, in particular for the appointment of Supervisory Board members, and not to vote for candidates for pbb's Supervisory Board which are not independent from HRE Holding, Finanzmarktstabilisierungsfonds-FMS (FMS), FMSA and the Federal Republic of Germany, with the exception of two Supervisory Board members proposed by FMSA to pbb in line with the new framework agreement.

pbb is not aware of any other restrictions affecting voting rights or the transfer of shares.

Shareholdings Exceeding 10% of Voting Rights (Section 315a (1) No. 3 HGB)
According to the knowledge of pbb no shareholder held at least 10% interest in the pbb as of 31 December 2023.

The notifications of voting rights pursuant to sections 33 et seq. of the German Securities Trading Act (Wertpapierhandelsgesetz, WpHG), published by pbb, are available online, inter alia, under "https://www.pfandbriefbank.com/en/investors/mandatory-publications/notifications-according-to-33-et-seq-wphg.html".

Shares with Special Rights Conferring Powers of Control (Section 315a (1) No. 4 HGB)
Shares carrying special rights, which would permit the holder to exercise control, do not exist.

Type of Control of Voting Rights Regarding Shares Held by Employees with their Rights of Control not Being Directly Exercised (Section 315a (1) No. 5 HGB)
Employees holding pbb shares exercise their rights, like all other shareholders, according to statutory provisions and the Articles of Association.

Statutory Provisions, and Provisions in the Articles of Association Regarding the Appointment and Removal of Members of the Management Board, and Regarding Amendments to the Articles of Association (Section 315a (1) No. 6 HGB)
In accordance with section 84 of the AktG and section 6 of the Articles of Association, the members of the Management Board are appointed by the Supervisory Board. The number of members of the Management Board is determined by the Supervisory Board. Pursuant to the Articles of Association, the Management Board consists of at least two members. Members of the Management Board are appointed for no more than five years per term. The term of office may be renewed or extended for a maximum of five years in each case. In case of urgency, the Local Court of Munich (Amtsgericht) shall appoint a missing member of the Management Board upon application of a party involved (section 85 of the AktG). The Supervisory Board may revoke an appointment to the Management Board, and also an appointment to the position of Chairman of the Management Board, should there be good cause for doing so.

Evidence that the Management Board members are trustworthy, have the required professional qualifications, and are sufficiently available, must be provided to BaFin, ECB and the German Bundesbank. According to section 45c of the German Banking Act (Kreditwesengesetz, KWG), BaFin may appoint a special representative, and entrust him or her with the performance of activities of individual Management Board members. BaFin may prohibit members of the Management Board from carrying out their activities, or limit the performance of these activities.

Any amendment of the Articles of Association requires a resolution of the Annual General Meeting (section 179 (1) sentence 1 of the AktG), for which generally a simple majority of the votes cast is required according to section 17 of the Articles of Association, provided, however, that no higher majority is required by law or other sections of the Articles of Association. In cases where a majority of the share capital represented during the passing of the relevant resolution is required – under no formal restrictions – due to regulatory requirements, the simple majority of the share capital represented during the passing of the relevant resolution shall be sufficient. According to section 9 (3) of the Articles of Association, the Supervisory Board shall be authorised to amend the Articles of Association, provided that such amendments are restricted to the wording.

Authorisation of the Management Board to Issue or Repurchase Shares (Section 315a (1) No. 7 HGB)

Authorised Capital 2020/I
In the period until 27 May 2025 the Management Board is authorised to increase, on one or more occasions, pbb's share capital by up to a maximum total amount of €114,112,817.90 by issuance of new ordinary bearer shares with no par value for contribution in cash, subject to the approval of the Supervisory Board (authorised capital 2020/I). The shareholders' subscription rights may be excluded under certain conditions. The authorised capital 2020/I has not been used yet.

Authorised Capital 2020/II
In the period until 27 May 2025 the Management Board is authorised to increase, on one or more occasions, pbb's share capital by up to a maximum total amount of €38,037,605.96 by issuance of new ordinary bearer shares with no par value for contribution in cash or in kind, subject to the approval of the Supervisory Board (authorised capital 2020/II). The shareholders' subscription rights may be excluded under certain conditions. The authorised capital 2020/II has not been used yet.

Furthermore, the Management Board shall be authorised, with the consent of the Supervisory Board, to determine further details concerning the rights attached to shares as well as the conditions of share issuances in the context of the capital measures specified in section 4 of the Articles of Association (authorised capitals 2020/I and 2020/II).

Conditional Capital
Currently there is no conditional capital.

Profit Participation Rights and Hybrid Bonds
The Management Board is authorised to issue bearer or registered profit participation rights and other hybrid financial instruments with or without a limited term on one or more occasions until 27 May 2025. The total nominal amount of the financial instruments to be issued under this authorisation may not exceed €2,000,000,000.00 in total.

Treasury Shares
pbb is authorised to buy, for purposes other than securities trading, its own shares in a total volume of up to 10% of the share capital as of 28 May 2020 or – if such amount is lower – of the share capital at the time this authorisation is exercised. Together with other own shares which are in the Company's possession or attributable to the Company pursuant to sections 71d and 71e of the AktG, the own shares purchased on the basis of this authorisation may not at any time exceed 10% of the Company's share capital. This authorisation to acquire own shares may be exercised directly by pbb, Group entities (section 18 (1) of the AktG) subordinated to pbb, or third parties acting on behalf of pbb or on behalf of Group entities subordinated to pbb. This authorisation may be exercised fully or partially, and – in case of a partial exercise – more than once. This authorisation applies until 27 May 2025. The own shares may, at the discretion of the Management Board, be bought through a stock exchange or by means of a public purchase offer or by means of a public invitation to all shareholders to submit tenders described in more detail in the resolution of the Annual General Meeting of 28 May 2020.

The Management Board is authorised, with the consent of the Supervisory Board, to use any shares purchased on the basis of the authorisation described above for a disposal on the stock exchange or for an offer to all shareholders or to dispose against cash payment provided that the price may not be substantially lower than the stock price of the shares of the Company of the same kind by applying section 186 (3) sentence 4 of the AktG analogously, or to dispose against contribution in kind or to redeem the shares. The shareholders' subscription rights may be excluded as described in more detail in the resolution of the Annual General Meeting of 28 May 2020.

As at 31 December 2023, pbb held no treasury shares.

Material Company Agreements which are Subject to Change of Control Clauses Triggered in the Event of a Takeover Offer (Section 315a (1) No. 8 HGB)

pbb did not enter into material agreements which are subject to change of control clauses triggered in the event of a takeover offer.

Compensation Agreements Entered into with Members of the Management Board or Employees in the Event of a Takeover Offer (Section 315a (1) No. 9 HGB)

There are no compensation agreements within the meaning of Section 315 (1) No. 9 HGB that have been concluded with members of the Management Board or employees in the event of a takeover offer.

Corporate Governance Statement

The Corporate Governance Statement is published on pbb's website (https://www.pfandbriefbank.com/fileadmin/user_upload/downloads/Corportate_Governance/Corporate_Governance_Statement_2023.pdf).

Consolidated Financial Statements

Income Statement

Income statement

in € million	Note	2023	2022
Net interest income	34	482	489
thereof: interest income from financial instruments not measured at fair value through profit or loss (IAS 1.82a)		1,920	1,296
Net fee and commission income	35	3	8
Net income from financial instruments at fair value through profit or loss (net income from fair value measurement)[1)]	36	-	20
Net income from derecognition of financial instruments not measured at fair value through profit or loss (net income from realisations)[1)]	37	85	15
thereof: from financial assets at amortised cost		36	20
Net income from hedge accounting	38	1	-
Net other operating income	39	32	-1
Net income from allowances for credit losses on financial assets (net income from risk provisioning)[1)]	40	-212	-44
General and administrative expenses	41	-249	-224
Expenses from bank levies and similar dues	42	-25	-32
Net income from write-downs and write-ups of non-financial assets	43	-27	-18
Profit before tax		**90**	**213**
Income tax	44	1	-26
Net income		**91**	**187**
attributable to: Shareholders of pbb		91	188
Non-controlling interests in equity		-	-1

[1)] Solely the condensed and parenthesised line item descriptions are used subsequently.

Earnings per share

in €	Note	2023	2022
Basic earnings per share	46	0.51	1.27
Diluted earnings per share	46	0.51	1.27

Statement of Comprehensive Income

Statement of comprehensive income

in € million	2023	2022
Net income	**91**	**187**
Accumulated other comprehensive income	-6	-11
Items that will not be reclassified to profit or loss, net of tax	-21	62
Gains/losses on pension commitments, before tax	-24	69
Income tax relating to items that will not be reclassified to profit or loss	3	-7
Items that may be reclassified to profit or loss, net of tax	15	-73
Gains/losses on cash flow hedge accounting, before tax	-4	2
unrealised gains/losses	-	-
gains/losses reclassified to profit or loss	-4	2
Gains/losses on financial assets at fair value through other comprehensive income, before tax	22	-85
unrealised gains/losses	22	-85
gains/losses reclassified to profit or loss	-	-
Income tax relating to items that may be reclassified to profit or loss	-3	10
Comprehensive income for the period	**85**	**176**
attributable to: Shareholders	85	177
Non-controlling interests in equity	-	-1

Statement of Financial Position

Assets

in € million	Note	31.12.2023	31.12.2022	1.1.2022
Cash reserve	9, 47	2,728	1,044	6,607
Financial assets at fair value through profit or loss	10, 48	944	1,075	1,180
Positive fair values of stand-alone derivatives		494	562	540
Debt securities		123	117	132
Loans and advances to customers		324	394	505
Shares in investment funds qualified as debt instruments		3	2	3
Financial assets at fair value through other comprehensive income	11, 49	1,475	1,692	1,258
Debt securities		1,354	1,409	943
Loans and advances to customers		121	283	315
Financial assets at amortised cost after credit loss allowances	12, 50	45,228	48,734	48,087
Financial assets at amortised cost before credit loss allowances		45,811	49,121	48,429
Debt securities		4,014	5,377	6,893
Loans and advances to other banks		2,507	5,763	2,646
Loans and advances to customers		39,155	37,839	38,710
Claims from finance lease agreements		135	142	180
Credit loss allowances on financial assets at amortised cost		-583	-387	-342
Positive fair values of hedge accounting derivatives	13, 51	251	262	1,009
Valuation adjustment from porfolio hedge accounting (assets)	14, 52	-56	-84	5
Tangible assets	15, 53	20	27	32
Intangible assets	16, 54	53	49	42
Other assets	17	68	58	50
Current income tax assets	27	43	31	3
Deferred income tax assets	27	129	119	129
Total assets		**50,883**	**53,007**	**58,402**

Liabilities and equity

in € million	Note	31.12.2023	31.12.2022	1.1.2022
Financial liabilities at fair value through profit or loss	18, 56	662	686	559
Negative fair values of stand-alone derivatives		662	686	559
Financial liabilities measured at amortised cost	19, 57	45,913	47,672	52,656
Liabilities to other banks		6,079	7,507	10,633
Liabilities to customers		18,829	17,889	20,100
Bearer bonds		20,402	21,641	21,268
Subordinated liabilities		603	635	655
Negative fair values of hedge accounting derivatives	20, 58	789	1,125	1,372
Valuation adjustment from porfolio hedge accounting (liabilities)	21, 59	-49	-112	70
Provisions	22, 60	117	135	231
Other liabilities	23	68	57	55
Current income tax liabilities	27	18	19	34
Liabilities		**47,518**	**49,582**	**54,977**
Equity attributable to the shareholders of pbb	24, 63	3,067	3,125	3,124
Subscribed capital		380	380	380
Additional paid-in capital		1,637	1,637	1,637
Retained earnings		1,162	1,214	1,202
Accumulated other comprehensive income		-112	-106	-95
Additional equity instruments (AT1 capital)		298	298	298
Non-controlling interest in equity		-	2	3
Equity		**3,365**	**3,425**	**3,425**
Total equity and liabilities		**50,883**	**53,007**	**58,402**

Statement of Changes in Equity

Statement of changes in equity

in € million	Subscribed capital	Additional paid-in capital	Retained earnings	Pension commit-ments	Cash flow hedge accounting	Financial assets at fair value through OCI	Additional equity instruments (AT1 capital)	Non-controlling interest	**Equity**
	Equity attributable to the shareholders								
				Accumulated other comprehensive income (OCI) from:					
Balance at 1.1.2022	**380**	**1,637**	**1,202**	**-111**	**-28**	**44**	**298**	**3**	**3,425**
Distribution (dividend)	-	-	-159	-	-	-	-	-	-159
Payment on AT1 capital	-	-	-17	-	-	-	-	-	-17
Comprehensive income for the period	-	-	188	62	2	-75	-	-1	176
Net income	-	-	188	-	-	-	-	-1	187
OCI for the period, after taxes	-	-	-	62	2	-75	-	-	-11
Balance at 31.12.2022	**380**	**1,637**	**1,214**	**-49**	**-26**	**-31**	**298**	**2**	**3,425**
Balance at 1.1.2023	**380**	**1,637**	**1,214**	**-49**	**-26**	**-31**	**298**	**2**	**3,425**
Share purchase	-	-	2	-	-	-	-	-2	-
Distribution (dividend)	-	-	-128	-	-	-	-	-	-128
Payment on AT1 capital	-	-	-17	-	-	-	-	-	-17
Comprehensive income for the period	-	-	91	-21	-4	19	-	-	85
Net income	-	-	91	-	-	-	-	-	91
OCI for the period, after taxes	-	-	-	-21	-4	19	-	-	-6
Balance at 31.12.2023	**380**	**1,637**	**1,162**	**-70**	**-30**	**-12**	**298**	**-**	**3,365**

Statement of Cash Flows

Statement of cash flows[1)]

in € million	2023	2022
Net income/loss	**91**	**187**
Write-downs and depreciation on tangible and intangible assets	27	18
Write-downs, provisions for losses on, and write-ups of, financial assets at amortised cost	231	45
Impairment / Revaluation on Financial Instruments measured at Fair Value OCI	-	-
Result from the disposal of financial securities at amortised cost	-66	4
Result from the disposal of securities at fair value through other comprehensive income	-	-
Change in other non-cash positions	289	-163
Other adjustments	-483	-463
Subtotal	**89**	**-372**
Change in assets and liabilities from operating activities after correction of non-cash components		
Increase in assets/decrease in liabilities (-)		
Decrease in assets/increase in liabilities (+)		
Financial instruments at fair value through profit or loss and positive/negative fair values of hedge accounting derivatives	37	279
Financial assets at fair value through other comprehensive income	156	21
Financial instruments at amortised cost (without payments in/of subordinated capital)	-319	-5,962
Other assets from operating activities	-14	-6
Other liabilities from operating activities	-85	-86
Interest income received	2,821	1,710
Interest expense paid	-2,242	-1,202
Taxes on income paid/refund	-22	-57
Cash flow from operating activities	**421**	**-5,675**
Proceeds from the sale of securities	1,763	930
Payments for the acquisition of securities	-296	-598
Payments for the acquisition of tangible and intangible assets	-23	-19
Cash flow from investing activities	**1,444**	**313**
Proceeds from additional equity instruments (AT1)	2	-
Disbursement of dividends	-128	-159
Payments in/of subordinated liabilities	-30	-20
Payments from Leasing Liabilities	-6	-5
Payment on AT1 capital	-17	-17
Change non-controlling interest	-2	-
Sale of shares of consolidated subsidiaries	-	-
Cash flow from financing activities	**-181**	**-201**
Cash and cash equivalents at the end of the previous period	1,044	6,607
+/- Cash flow from operating activities	421	-5,675
+/- Cash flow from investing activities	1,444	313
+/- Cash flow from financing activities	-181	-201
Cash and cash equivalents at the end of the period	**2,728**	**1,044**

[1)] Explanations in Note “Notes to the Items in the Consolidated Statement of Cash Flows”.

Notes

1. General Information

Deutsche Pfandbriefbank AG (pbb), with its registered office in Munich, Germany, is a public limited company and a leading provider of commercial real estate finance and public investment finance. The Company is registered in the commercial register of the Munich local court (Amtsgericht München) under registration number HRB 41054; it is the parent company of Deutsche Pfandbriefbank Group (pbb Group). The address of the principal place of business is Parkring 28, 85748 Garching, Germany.

The financial statements are stated in euros, the presentation currency of pbb Group, and principally rounded to millions of Euro (€ million). Information is presented in accordance with the principle of materiality. Minor differences may occur regarding the figures and totals stated due to rounding. Items under € 500,000.00 are presented as zero respectively zero balances are denoted by a dash.

The Management Board of pbb prepared and authorised for these consolidated financial statements for issue on 5 March 2024.

ACCOUNTING POLICIES

2. Principles

pbb has prepared the present Consolidated Financial Statements for the period ending 31 December 2023 in line with EC ordinance No. 1606/2002 of the European Parliament and Council of 19 July 2002 in accordance with International Financial Reporting Standards (IFRS). The IFRS are standards and interpretations adopted by the International Accounting Standards Board (IASB). These are the International Financial Reporting Standards (IFRS), the International Accounting Standards (IAS) and the interpretations of the IFRS Interpretations Committee (formerly IFRIC) respectively the former Standing Interpretations Committee (SIC); they are also based on the regulations of commercial law which are applicable in accordance with Section 315e (1) HGB (German Commercial Code).

The Consolidated Financial Statements are based on IFRS as adopted in European law by the European Commission as part of its endorsement process. With the exception of certain regulations on fair value hedge accounting for a portfolio hedge of interest rate risks in IAS 39 Financial Instruments: Recognition and Measurement, all the IFRS published by the IASB and required to be applied were fully endorsed by the European Union (EU). According to the option pursuant to IFRS 9.7.2.21 ppb Group still applies the requirements of IAS 39 for hedge accounting instead of the requirements in chapter 6 of IFRS 9. Within the framework of fair value hedge accounting for a portfolio hedge of interest rate risks, pbb Group applies a part of the exemptions permitted under European law. Therefore, the present consolidated financial statements comply with IFRS applicable in the EU, but not with IFRS as a whole as promulgated by the IASB.

Initially Adopted IFRS, Interpretations and Amendments in 2023
In financial year 2023, pbb Group has applied all mandatory standards, interpretations and amendments to the extent that they have been endorsed by the European Union. However, in order to ensure the comprehensibility and information content of these consolidated financial statements, pbb Group has, where necessary, omitted disclosures on non-relevant or non-material matters.

- IFRS 17 (Insurance Contracts including Amendments to IFRS 17) governs the principles relating to the recognition, measurement, presentation and disclosure of insurance contracts. There were no material effects as pbb Group does not act as an insurer. On adoption into European law, European companies were given the option of exempting certain groups of contracts from the requirement to recognise annual cohorts in IFRS 17.22. This option also had no relevance for the financial statements of pbb Group.
- Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction: If assets and liabilities are recognised for the first time, deferred taxes do not have to be recognised under certain conditions. In accordance with the amendments to IAS 12, this exemption no longer applies to transactions in which both deductible and taxable temporary differences of the same amount arise on initial recognition, even if the other previously applicable conditions are met. The amendments did not have any material impact on pbb Group.

- Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2: Disclosure of Accounting Policies: The amendments to IAS 1 and IFRS Practice Statement 2 specify the extent to which accounting policies are to be explained in the notes. It is no longer necessary to disclose significant accounting policies, but only material accounting policies. There were no effects on the consolidated financial statements for 2023.
- Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates: The amendments to IAS 8 introduce a definition of an accounting estimate for the first time. Accounting estimates are monetary amounts in the financial statements that are subject to measurement uncertainties. A distinction from accounting policies is crucial, as IAS 8 provides for different consequences for changes to estimates and accounting policies. Changes in accounting policies must be recognised retrospectively, changes in estimates prospectively. The initial application had no material impact on the consolidated financial statements for 2023.
- Amendments to IAS 12 Income Taxes: International Tax Reform - Pillar Two Model Rules: The amendment addresses the potential impact of the Pillar Two model rules published by the Organisation for Economic Co-operation and Development (OECD) on the accounting treatment of deferred taxes. It regulates a temporary exemption from recognising deferred taxes resulting from the implementation of the global tax rules on minimum taxation by the respective countries. An entity must disclose that it has applied the exception. In addition, the amendment contains disclosure requirements to help users of financial statements better understand the impact of an entity's income taxes in connection with the implementation of the Pillar 2 rules, especially in periods when the legislation implementing these rules is not yet in force.

  pbb Group applies the exemption from recognising deferred taxes resulting from the implementation of the global minimum tax rules by the respective countries. The pbb Group does not operate in countries that have a nominal tax rate below the 15% threshold. pbb Group has disclosed the disclosure requirements in relation to the IAS 12 amendments in the notes.

Standards, interpretations and amendments adopted into European law that are not yet mandatory

pbb Group does not plan to early apply standards and amendments that have been adopted into European law as at the balance sheet date, but whose adoption is not mandatory until later financial years. The following standards and amendments had been adopted into European law as at the balance sheet date, but their application was not yet mandatory:

Designation	Publication	Initial application	Expected effects
Amendments to IAS 1 Presentation of Financial Statements: * Classification of Liabilities as Current or Non-current * Classification of Liabilities as Current or Non-current - Deferral of Effective Date * Non-current Liabilities with Covenants	23.1.2020/ 15.7.2020/ 31.10.2022	1.1.2024	The purpose of the amendments to IAS 1 is to clarify that the classification of liabilities as current or non-current should be based on the entity's existing rights at the reporting date. Management's expectations as to whether such a right will actually be exercised should not be taken into account. If a right to extend is subject to one or more conditions (e.g. covenants) that are only tested/reviewed at a later date (after the reporting date), the decisive factor for classification is whether the conditions were met on the reporting date. In addition, the IASB clarifies that credit terms which - at the option of the creditor - can lead to the debt being settled in equity shares of the company are to be taken into account in the classification, unless there is an equity instrument to be recognised separately within the meaning of IAS 32. The pbb Group does not expect any material changes to the classification and presentation of liabilities in the statement of financial position, as these are already classified according to their maturity.
Amendments to IFRS 16 Leases: Lease Liability in a Sale and Leaseback	22.9.2022	1.1.2024	The amendments to IFRS 16 specify how a seller-lessee should apply the subsequent measurement requirements in IFRS 16 to the lease liability arising on the sale and leaseback transaction. As pbb Group does not currently engage in any sale and leaseback transactions, the amendment is not expected to have any impact.

IFRS, Interpretations and Amendments issued but not yet endorsed by the EU
The following amendments have not yet been endorsed by the European Union at the balance sheet date:

Designation	Publication	Initial application	Expected effects
Amendments to IAS 7 Statement of Cash Flows and IFRS 7 Financial Instruments: Disclosures: Supplier Finance Arrangements	25.5.2023	1.1.2024	These amendments have created additional disclosure requirements in accordance with IAS 7 and IFRS 7. The subject of these amendments are so-called supplier finance arrangements, in particular reverse factoring agreements as the most common form. As pbb Group does not engage in such transactions, no effects on the development in assets, financial position and earnings are expected.
Amendments to IAS 21 The Effects of Changes in Foreign Exchange Rates: Lack of Exchangeability	15.8.2023	1.1.2025	The amendments to IAS 21 are intended to help entities determine whether a currency can be exchanged for another currency and what accounting treatment to apply if it cannot be exchanged. As the pbb Group only has assets and liabilities in currently exchangeable currencies, the amendments are not expected to have any impact on the financial position and performance.

Statement of compliance for the German Corporate Governance Code
Company's Management Board and the Supervisory Board published a statement of compliance for the German Corporate Governance Code according to section 161 AktG in this annual report as well as on pbb's website (https://www.pfandbriefbank.com/en/the-company/corporate-governance.html).

Combined Management Report
The combined management report meets the requirements of section 315 (1) and (2) HGB and the from Deutschen Rechnungslegungs Standards Committee (DRSC) published DRS 20.It comprises fundamental information about the Group, a report on the economic position, a risk and opportunity report, a report on expected developments, commentary on pbb's unconsolidated Annual Financial Statements under HGB and supplemental information. The risk and opportunity report contains information which, under IFRS 7, is required to be disclosed.

3. Consistency

pbb Group applies its accounting policies on a consistent basis in accordance with the Conceptual Framework for Financial Reporting, as well as IAS 1 and IAS 8. Except for the matter outlined below, the same accounting policies were applied as in the consolidated financial statements as at 31 December 2022:

pbb Group unveiled an update to its strategic initiatives, as well as specific targets for them, in March 2023. The main objective of the growth initiatives is to boost the return on equity. To pursue implementation of its strategic agenda and a stronger focus on its core business in commercial real estate finance (Real Estate Finance, REF), pbb has decided to merge the Public Investment Finance (PIF) segment and the Value Portfolio (VP) and transfer these two businesses into a "Non-Core" segment. Given this decision, the PIF segment – and hence, the Bank's public investment finance activities – are no longer considered as a strategic activity for pbb Group. This also means that no further new business will be concluded in the Non-Core segment. At the same time, pbb endeavours to accelerate the reduction of the segment portfolio compared to the regular run-off, in a value-preserving manner, to the extent that relevant market opportunities can be exploited. Accordingly, pbb will no longer issue public-sector Pfandbriefe on the capital markets, and will conduct early repurchases of these issues if appropriate. The purpose of this strategy change is to release resources, or to put them to more productive use. The previous year's figures were restated in accordance with IFRS 8.29. Since there were no internal relationships between the former PIF and VP segments, the new Non-Core segment has been formed through a simple conjoining of the two.

4. Consolidation

Number of subsidiaries/ entities[1)]	Fully consolidated subsidiaries		Associated entities and other investments		
	Total	Thereof: special purpose entities	Associated entities	Other investments	**Total**
1.1.2022	**4**	**-**	**1**	**1**	**6**
Additions	-	-	-	-	**-**
Disposals	-1	-	-	-	**-1**
31.12.2022	**3**	**-**	**1**	**1**	**5**
1.1.2023	**3**	**-**	**1**	**1**	**5**
Additions	-	-	1	-	**1**
Disposals	-	-	-	-	**-**
Mergers/ accruals	-1	-	-	-	**-1**
31.12.2023	**2**	**-**	**2**	**1**	**5**

[1)] pbb, subsidiaries, associated companies and other investments.

A subsidiary is an entity that is controlled by another entity. Control is deemed to exist if pbb has decision-making powers to manage relevant activities, has a right to significant returns from the subsidiary, and can use its decision-making powers to influence the amount of significant variable returns.

Structured entities are entities in which voting rights or similar rights are not the dominant factors in determining control, such as if the voting rights relate merely to administrative duties and the relevant activities are governed by contractual agreements.

In June 2023, the shares held by Caisse des Dépôts et Consignations (CDC) in CAPVERIANT GmbH (28.57%) were repurchased by pbb. The purchase of the non-controlling interest in equity was treated as a change in the ownership interest of a parent company in a subsidiary in accordance with IFRS 10.23 as an equity transaction. In March 2023, pbb Group decided to focus on its core business of commercial real estate finance as part of its Strategy 2026 and subsequently withdrew from the public investment finance business. CAPVERIANT GmbH discontinued its operating activities in June 2023. On 27 June 2023, pbb's Management Board resolved to merge CAPVERIANT GmbH into pbb with economic effect from 1 January 2023. The merger was entered in the commercial register and thus became legally effective in September 2023. The merger had no impact on pbb Group's development in assets, financial position and earnings.

Uniform Consolidated Accounting
The unconsolidated financial statements of the consolidated companies are incorporated in the consolidated financial statements of pbb using uniform accounting and measurement principles. Assets, liabilities, income, expenses and cash flows of the parent company and all of its subsidiaries are shown as if it is one single entity. Business relations within the group of consolidated companies are offset against each other for consolidation purposes.

Business relationships within the scope of consolidation are offset and interim results from intra-group transactions are eliminated.

5. Disclosures of Interests in Subsidiaries

These Consolidated Financial Statements include a list of shareholdings in the Note "Holdings of pbb" containing subsidiaries and other shareholdings. The financial year for all fully-consolidated companies is the calendar year. pbb Group does not have any subsidiaries which are not consolidated as of 31 December 2023 and 31 December 2022.

Significant Restrictions with respect to the Usability of Assets within the Group
Statutory, contractual or regulatory restrictions and protective rights of non-controlling interests may limit the Group in its ability to obtain access to the assets and to easily transfer them to respectively from another company or other companies and settle the Group's liabilities. As of the balance sheet date pbb Group had no significant interests over which it could not exert control.

6. Disclosures of Interests in Associates

In May 2023, pbb co-founded Eco Estate GmbH and has held 35% of the shares in this company since then. The company offers consulting services to companies in the area of environmental social governance (ESG) with a property focus. The shares in the two associates, which are immaterial from a Group perspective, are not accounted for in the consolidated financial statements using the equity method, but are recognised at fair value through profit or loss in accordance with IFRS 9. As a result, there were no material investments in associates or joint arrangements or joint ventures accounted for using the equity method as at 31 December 2023 and 31 December 2022.

7. Financial Instruments

According to IAS 32, a financial instrument is a contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Recognition and Derecognition
pbb Group recognises a financial asset or a financial liability in its statement of financial position if a Group company becomes party to the contractual provisions of the financial instrument.

The purchases or sales of financial instruments are recognised on the trading date. Premiums and discounts are recognised in accordance with the accrual concept in the position net interest income. In accordance with the primary derecognition concept of IFRS 9, a financial asset has to be derecognised if all risks and rewards have substantially been transferred. If the main risks and rewards of ownership of the transferred financial asset are neither transferred nor retained, and if control over the transferred asset is retained, the Company has to recognise the asset to the extent of its continuing involvement. There are no transactions within pbb Group which result in partial derecognition due to a continuing involvement. Compensation for voluntary early repayment of receivables by customers is reported as net income from realisations for reasons of transparency.

In case of genuine repurchase agreements and synthetic securitisations the assets transferred do not qualify for derecognition because derecognition criteria of IFRS 9 are not met.

Collateral with the same counterparty and same conditions (e.g. ISDA master agreement) must be netted. Accordingly, only the net amount is disclosed.

Classification and Measurement of Financial Instruments
A financial asset or a financial liability shall be measured at its fair value at initial recognition plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability.

The amortised costs are the amount at which the financial asset or financial liability is measured at initial recognition minus the principal payments, plus or minus the cumulative amortisation using the modified effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any loss allowance.

Financial instruments at fair value are measured on the basis of stock market prices or other market prices, if existent (Level 1). If a price is not available from an active market, observable market prices from comparable financial instruments are used (Level 2). If prices from comparable financial instruments are not available, valuation models are used that are based on observable market parameters. If these parameters are not observable at the markets, the measurement of the financial assets is based on models with non-market-observable parameters (Level 3). The measurement models used are market standard models. A description of these models and the products is given in the Note “Fair Values of Financial Instruments”.

The best evidence of the fair value of a financial instrument at initial recognition is normally the transaction price, i.e. the fair value of the consideration given or received. If pbb Group determines that the fair value at initial recognition differs from the transaction price the financial instrument will be measured at fair value at initial recognition if that fair value is evidenced by a quoted price in an active market for an identical asset or liability (Level 1) or based on a valuation technique that uses only data from observable markets (Level 2). pbb Group records the difference as a gain or loss in these cases. In all other cases the difference between the fair value and the transaction price (so called day one profit) is deferred. In the financial years 2023 and 2022 there were no day one profits.

For the purposes of subsequent measurement, financial assets must be divided into the following three categories:
- at fair value through profit or loss (FVPL)
- at fair value through other comprehensive income (FVOCI)
- at amortised cost (AC)

The categorisation of financial assets depends on the entity’s business model for managing financial assets (business model criterion) and the contractual cash flow characteristics of the financial asset (contractual cash flow criterion) at initial recognition.

A financial asset shall be measured at amortised cost (AC) if both of the following conditions are met:
- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and.
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding.

A financial asset shall be measured at fair value through other comprehensive income (FVOCI) if both of the following conditions are met:
- the financial asset is held within a business model whose objective is achieved by both collecting cash flows and selling financial assets; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding.

A financial asset shall be measured at fair value through profit or loss (FVPL) unless it is measured at amortised cost or at fair value through other comprehensive income. However, an entity can make an irrevocable election at initial recognition for particular investments in equity instruments that would otherwise be measured at fair value through profit or loss to present subsequent changes in fair value in other comprehensive income. pbb Group holds equity instruments of an insignificant amount. These are measured at fair value through profit or loss.

In the first step the financial assets are categorised based on business model criterion. An entity's business model is determined at a level that reflects how groups of financial assets are managed together to achieve a particular business objective. Accordingly, this condition is not an instrument-by-instrument approach to classification and should be determined on a higher level of aggregation. For this purpose, the entity must consider all relevant evidence that is available at the date of assessment. Such relevant evidence includes, but is not limited to:

- how the performance of the business model and the financial assets held within that business model are evaluated and reported to the entity's key management personnel;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and, in particular, the way in which those risks are managed;
- how managers of the business are compensated (for example, whether the compensation is based on the fair value of the assets managed or the contractual cash flows collected);
- the expected frequency, value and timing of sales in prior periods, the reasons for those sales and expectations about future sales activities.

Principally, pbb Group aggregates its financial assets for the determination of the business model criterion on the level of segments. However, in the Real Estate Finance (REF) segment, the transactions to be syndicated form a special portfolio. In addition, the Non-Core (NC) segment is divided into a portfolio with the intention to hold and a portfolio with the intention to hold and sell. In addition, Consolidation & Adjustments (C&A) includes portfolios with an intention to hold as well as the liquidity portfolio, for which there is an intention to hold and sell.

In line with IFRS 9B4.1.3A the business model may be hold to collect contractual cash flows even if the entity sells financial assets in specific situations. Such exceptions can be driven by an increased credit risk of the financial asset which amongst others pbb Group measures by the loan to value of the financing or a change to non-investment grade. Further exceptions are sales of financial assets with a short remaining maturity if the realized proceeds approximate the remaining cash flows. In addition, sales may be consistent with the business model hold to collect contractual cash flows if those sales are more than infrequent (even if significant in value) or insignificant in value either individually or aggregated (even if frequent). Amongst others, pbb Group sets the volume of sold assets in relation to the total volume of the portfolio to which the assets belong for the determination of significance.

If cash flows are realised in a way that differs from pbb Group's expectations at the time the business model was assessed, this does not result in a prior period error in the entity's financial statements, nor does it change the classification of the remaining financial assets held under this business model. The prerequisite is that pbb has considered all relevant information that was available at the time the business model was assessed. There may be a deviation from the business model if, for example, more or fewer assets are sold than assumed when the assets were classified. Such a deviation exists in the pbb Group for the financial assets measured at amortised cost in the NC segment. As all relevant information available at the time of the assessment was taken into account for these assets, they continue to be measured at amortised cost.

pbb Group has to reclassify financial assets if it changes the business model for managing those financial assets. Such changes according to IFRS 9B4.41 which are expected to be very infrequent are determined by the senior management as a result of externally or internally significant changes and externally demonstrable changes. Examples may be in the context of business combinations or shut downs of operations. There have not been reclassifications of financial assets in the years 2023 and 2022.

In the second step of the categorisation an entity has to classify a financial asset on the basis of the contractual cash flow characteristics (contractual cash flow criterion). For this, an entity shall assess whether contractual cash flows are solely payments of principal and interest on the principal amount outstanding. The principal is the fair value of the financial asset at initial recognition. Interest consists of consideration for the time value of money, for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks (for example, liquidity risk) and costs, as well as a profit margin. When assessing the contractual cash flows pbb Group also considers derivatives embedded in a host contract. For example, if leverage increases the volatility of the contractual cash flows the contractual cash flow criterion will not be fulfilled. Furthermore, for financings of structured entities without the right ofrecourse on specific assets of the borrower or payments from these assets has to be assessed whether primarily a loan risk or an investment risk exists. If there is primarily an investment risk but not primarily a loan risk the contractual cash flow criterion will not be fulfilled. pbb Group assesses this distinction on the basis of the loan to value at the date of the initial recognition of the financial asset.

An entity may, at initial recognition, irrevocably designate a financial asset as measured at fair value through profit or loss if doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognising the resulting gains and losses on different bases (so called fair value option). pbb Group does not use the fair value option for financial assets.

Non derivative financial liabilities have to be measured at amortised cost, unless they are hold for trading purposes or are designated at fair value through profit or loss. As of 31 December 2023 and 31 December 2022 pbb Group has not issued compound financial instruments with multiple embedded derivatives.

The amount of change in the fair value of financial liabilities designated at fair value through profit or loss (fair value option) that is attributable to changes in credit risk of that liability shall be presented in other comprehensive income and the remaining amount of change in profit or loss. pbb Group does not have non-derivative financial liabilities measured at fair value through profit or loss and does not use the fair value option for financial liabilities. Derivatives have to be measured at fair value through profit or loss unless they are used as hedging instruments in the scope of cash flow hedge accounting.

According to IFRS 9 the non-derivative financial instruments of pbb Group are aggregated, classified and measured as follows:

- Segment Real Estate Finance (REF): Non-derivative financial instruments are principally measured at amortised cost (business model: financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows). The exceptions are financial assets or parts of financial assets, for which there is an intention to syndicate (business model: financial asset is neither held within a business model whose objective is to hold financial assets in order to collect contractual cash flows nor within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets). These have to be accounted for at fair value through profit or loss.

- Non-Core (NC) segment: Non-derivative financial instruments are principally measured at amortised cost (business model: financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows). Exceptions are:
  - Financial assets or parts of financial assets held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. These are measured at fair value through other comprehensive income.
  - Financial assets which do not fulfill the contractual cash flow criterion and therefore have to be measured at fair value through profit or loss.
- Portfolios in Consolidation and Adjustments (C&A): Non-derivative financial instruments are principally measured at amortised cost (business model: financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows). Exceptions are:
  - Financial assets held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. These financial assets of the liquidity portfolio are measured at fair value through other comprehensive income.

The European Market Infrastructure Regulation (EMIR) imposes a clearing obligation for standardised Over-The-Counter (OTC) derivatives. pbb uses Eurex Clearing as central clearing agent for derivatives. For Eurex cleared transactions, pbb applies on-balance sheet netting. On-balance sheet netting is applied for each currency, and comprises the carrying amounts of the derivatives as well as the margins calculated (and collected or credited) by Eurex Clearing. The net book values are disclosed under "positive fair values of hedge accounting derivatives" or "negative fair values of hedge accounting derivatives".

In alignment with the customer the contractual cash flows of a financial instrument in the existing business may be renegotiated or otherwise modified. Such changes made to existing terms of a contractual relationship during the contract term are called modifications. Modifications may be market-driven commercial renegotiations or can be performed to avoid larger credit defaults. It is necessary to check whether the modification is significant or insignificant.

Significant modifications are substantial to the extent that they, in essence, constitute a new financial instrument. The modification can be significant due to qualitative (for example change of counterparty or of currency) or due to quantitative reasons. In case of significant modifications the old financial instrument has to be derecognized and a modified new financial asset has to be recognized as a new asset.

In case of insignificant modifications the agreed amendments to the contractual cash flows have to be discounted and the difference between the present value of the modified contractual payments determined in this way and the carrying amount (present value of the contractual payments before modification) are recognized through profit or loss. In the years 2023 and 2022 the effects in the profit and loss statement from insignificant modifications of financial assets were not material.

Loans at risk of default are restructured by pbb Group if the borrower's financial position has deteriorated but a positive going-concern forecast for the loan exposure can still be expected. This is carried out by changing the underlying terms and conditions or side agreements by means of a unilateral or mutual declaration of intent. Restructuring agreements should maximise opportunities to realise its outstanding loans or at least minimise the risk of default of the loan exposure. These generally include inter alia standstill agreements, maturity extensions, changed interest payment/repayment terms, interest/repayment reductions or the suspension of contractual agreements (e.g. financial covenants) so that the borrower is again able to meet their payment obligations. The credit risk associated with restructured loans is managed by the Group's Credit Risk Management units.

Accounting of Impairment

The regulations regarding impairments in accordance with IFRS 9 are relevant for assets measured either at "amortised cost" or at "fair value through other comprehensive income" as well as for off-balance sheet obligations, such as loan commitments and financial guarantees. The rules do not have to be applied for equity instruments. An impairment is implied for financial assets measured at fair value through profit or loss at subsequent measurement. IFRS 9 contains a model according to which provisions for credit losses may be created upon initial recognition of the financial asset (or on the date when the Group becomes a contracting party of the loan commitment or financial guarantee) on the basis of credit losses expected at that time. According to IFRS 9.5.5.17 this is an unbiased and probability-weighted amount that is determined by evaluation of a range of possible outcomes and scenarios. It will be clarified that this is a probability weighted average and not the most probable amount.

Upon initial recognition, the impairments in lending business are based on expected credit losses within the following twelve months (so-called stage 1). The 12-months expected credit loss is part of the lifetime expected credit losses and corresponds to the expected credit losses from defaults that may occur for the financial instrument within twelve months after balance sheet date. In case of a significant increase in the financial asset's credit risk within the context of subsequent measurement (stage 2) or in case of a credit impairment (stage 3), the impairment has to reflect the lifetime expected credit losses. pbb Group does not apply the simplified approach for loans from lease agreements but also differentiates these into the impairment stage 1 and 2.

The same definition of default is used for IFRS 9 as for regulatory purposes. For this a default is defined if
- it is unlikely that the borrower can fully fulfil its payment obligations, or
- the borrower has material past dues of more than 90 days.

Group determines the expected credit losses on an individual basis.

pbb Group developed check criteria for the allocation to the three impairment stages of IFRS 9 which is very closely linked to the methods and instruments for credit and risk monitoring. In addition, the practice of credit risk management leads to an intensification of supervision with increasing impairment stage. Each financial asset which does not have to be measured at fair value through profit or loss has to be allocated to stage 1 at initial recognition if it is not credit-impaired. A financial asset moves to stage 2 if the credit risk has increased significantly but is not credit-impaired. This is the case if
- as rebuttable presumption there is a past due of more than 30 days; or
- the financial asset is non-investment grade and the multi-year probability of default at balance sheet date exceeds the multi-year probability of default at initial recognition of the financial asset by a factor of at least 2.5.
- any forbearance measures were implemented for a performing financial instrument.

The criterion of 30 days past due can be rebutted for example in the case of so called technical past dues. This can be the case if the borrower transfers the amount owed to a wrong account and corrects this at short notice.

Counterparties of loans and securities which credit has deteriorated compared with the date of initial recognition but which still have an investment grade rating and which do not have a payment past due of more than 30 days are assessed as very low-risk in the allocation to the impairment stages.

A financial asset will have to be moved to stage 3 if it is credit-impaired. A deal will be credit-impaired if one or more events that have detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired include observable data about the following events:
- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past due event;
- pbb Group, for economic reasons or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower concessions that pbb Group would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- the disappearance of an active market for that financial asset because of financial difficulties;
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

For purchased or originated credit-impaired financial assets (POCI) only the cumulative changes in lifetime expected credit losses since initial recognition have to be recognised as a loss allowance at balance sheet date. For such financial assets expected credit losses shall be discounted using the credit-adjusted effective interest rate determined at initial recognition. The credit-adjusted effective interest rate has to be applied to the amortised cost from initial recognition. The recognition of interest income will have to be determined this way for the entire maturity also if the borrower recovers. The interest income is attributed to the POCI-asset, received repayments have to be recognised as repayments. pbb Group did not purchase or originate credit-impaired financial assets as of 31 December 2023 and as of 31 December 2022.

pbb Group principally uses a model-based approach for determining the amount of expected credit losses. Regulatory risk parameters (probability of default/PD, loss given default/LGD) and contract information, for example the contractually agreed cash flows, are used as a basis for determining the amount of credit losses of the stage 1 and stage 2 financial instruments. The exposure size results from the comparison of the contractually agreed cash flows and the expected cash flows. The risk parameters listed above are linked to the exposure size to determine the expected losses. In addition expectations about prepayments (so called prepayment rates), expected prolongations of loans (so called prolongation rates) and expected drawings of undrawn parts of a commitment (so called credit conversion factor/CCF) are considered in the expected cash flows. The risk parameter PD is determined for each borrower with the aid of customer specific rating methods. Several customer specific risk factor for example the debt ratio, return indicators and similar quantitative indicators are input factors of the rating methods. The risk parameter LGD is determined with the aid of specific LGD models in which especially expected recovery ratios from the disposal of collaterals or other parts of the asset, the transaction specific ratio of current collaterals and the book value of the loan as well as the expected time till receipt of payments are material input factors. These PD rating methods and LGD models are also methods used as an approach for risk assessment and risk controlling.

The regulatory risk parameters are transformed adequately so that the requirements of IFRS 9 are fulfilled. These include the deduction of conservative adjustments which are used for regulatory purposes, the consideration of macroeconomic factors for the purpose of the so called point in time transformation and the transition from the regulatory discount rate to the effective interest rate required by IFRS 9. Particularly the transformations ensure that the risk parameters are unbiased. Historic data about rating migration together with forecasts of macro-economic developments (for example the unemployment rate, the economic growth per country, 5-year swap rate per currency and – for real estate financings – the development of collateral market values differentiated by object types and regions) are used for the determination of multi-year probabilities of default. For this information according to the type of customer are used. pbb Group forecasts relevant indicators on the basis of internal analyses and externally available data. The interest income is calculated by applying the effective interest rate on the financial asset, therefore on the gross book value (book value before risk provision).

In determining point-in-time default probabilities, macroeconomic projections issued, for example, by the ECB, other central banks and economic research institutions in relation to the unemployment rate and the gross domestic product are used. Only the forecast for the year 2024 is used for transactions included in Stage 1 allowances. The forecasts until the year 2027 are used for transactions of Stage 2 allowances. As from 2028, a model for convergence to the long-term average will be applied.

pbb Group has established a limited adjustment of expected credit losses in form of a management overlay as at 31 December 2023 in order to properly reflect the prevailing risk situation of financing office real estate. The management overlay is described in detail in the Note “Financial assets at amortised cost after credit loss allowances (including claims from finance lease agreements)”.

The expected credit losses of impairment stage 3 are determined on the basis of individual cash flows with several probability-weighted scenarios. The amount of risk provision equals the difference between the carrying amount of the asset and the present value of the expected future cash flows. The latter is calculated on the basis of the initial effective interest rate. The expected future cash flows take into account the marketability of collaterals for example charges on the land/mortgages. The interest income is calculated by applying the effective interest rate to the amortised cost of the financial asset.

A financial asset has to be written-off by using the existing booked impairment if a recovery is not feasible based on adequate judgement. This is generally the case if in the process of a realization of the collateral a residual claim remains and if it is foreseeable that no further amounts are expected from the borrower (for example due to insolvency/lack of funds). pbb groups attempts to collect the remaining claim completely or at least partly by enforcement activities for written-off loans in justified exceptions.

Accounting of Hedge Accounting
As long as regulations on accounting for macro hedges have not yet been adopted, the IASB provides the possibility by an option to apply the former rules pursuant to IAS 39. For hedge accounting pbb Group exercised the accounting option and retains the current regulation of IAS 39. The accounting of hedge relationships is shown in the section “Notes to Derivative Transactions and Hedged Items”.

Disclosure/Notes
IFRS 7 (Financial Instruments: Disclosures and IFRS 13 (Fair Value Measurement) required disclosures according to classes of financial instruments. pbb Group mainly defined the measurement categories according to IFRS 9– sub divided in the products loans and advances and debt securities as well as liabilities to other banks, liabilities to customers, bearer bonds and subordinated liabilities – irrevocable loan commitments, financial guarantees, hedging derivatives and cash reserve as well as claims from finance lease agreements.

Specific disclosures required by IFRS 7 are shown in the risk and opportunity report for example about credit risk, market risk and liquidity risk.

8. Leases

According to IFRS 16, a lease is a contract that conveys the right to use an asset for a period of time in exchange for consideration.

pbb Group as a Lessor
Upon initial recognition of a lease, lessees recognise a lease liability as well as a right-of-use asset. The lease liability is discounted using the present value of future lease payments; simultaneously, lessees recognise a right-of-use asset in the amount of the discounted lease liability. Discounting is based on the interest rate underlying the lease or, if this rate is not readily available, on the incremental borrowing rate of pbb Group for the respective lease. Usually, right-of-use assets are depreciated on a straight-line basis over the projected term of the lease. All payment obligations of the lessee resulting from leases are subsequently measured at amortised cost using the effective interest method. The lease liability is remeasured when the future lease payments are modified due to a change in the index rate, or when pbb Group changes its assessment as regards the exercise of extension or termination options. In case of such a remeasurement of the lease liability, the carrying amount of the right-of-use asset is also adjusted accordingly.

pbb Group discloses right-of-use assets in ‘tangible assets’, while lease liabilities are disclosed under ‘other liabilities’. Depreciation of right-of-use assets is recognised in the note on ‘net gains and losses from write-downs and write-ups of non-financial assets’. Interest expenses resulting from lease liabilities are disclosed in ‘net interest income’.

pbb Group as a Lessee
As a lessor, pbb Group has entered into finance leases only. Regarding finance leases, substantially all risks and rewards incidental to ownership of the leased asset are transferred to the lessee. The lessor recognises receivables in the amount of the net investment value. Lease payments received are divided into an interest portion, which is recognised through profit or loss, and a principal portion.

pbb Group discloses loans and advances from finance leases under financial assets at amortised cost. Interest income from finance leases is disclosed in ‘net interest income’.

9. Cash Reserve

Cash reserve contains balances with central banks which are measured at cost.

10. Financial Assets at Fair Value through Profit or Loss

The financial assets at fair value through profit or loss consist of positive fair values of stand-alone derivatives and the following non-derivative financial assets:

- Loans and advances, debt securities, shares in investment funds and in entities which are not measured at-equity due to their immateriality which do not fulfil the contractual cash flow criterion.
- Parts of financial assets, for which there is an intention to syndicate.

Financial assets of this balance sheet position are measured at fair value. Changes of the fair value within a period affect profit or loss in the line item net income from fair value measurement of the income statement. The payments and amortisation of interests from this position are shown in net interest income.

11. Financial Assets at Fair Value through Other Comprehensive Income

The position financial assets at fair value through other comprehensive income consists of loans and advances as well as securities of the measurement category at fair value through other comprehensive income. These are non-derivative financial assets which fulfil the contractual cash flow criterion of IFRS 9 and which are held within a business model whose objective is achieved by both collecting cash flows and selling financial assets. Parts of the debt securities and loans and advances of the Value Portfolio and Consolidation & Adjustment fulfil these criteria.

Financial assets of this balance sheet position are measured at fair value. Changes of the fair value within a period are shown in accumulated other comprehensive income of equity without affecting profit or loss. The payments and amortisation of interests from these positions are shown in net interest income. Impairments of all three stages according to IFRS 9 are shown in net income from risk provisioning of the income statement and in accumulated other comprehensive income in the statement of financial position. Gains or losses from derecognition of financial assets measured at fair value through other comprehensive income are shown in net income from realisations.

12. Financial Assets at Amortised Cost after Credit Loss Allowances

The position financial assets at amortised cost after credit loss allowances contains loans and advances as well as securities of the measurement category at amortised cost. These are non-derivative financial assets which fulfil the contractual cash flow criterion of IFRS 9 and which are held within a business model whose objective is to hold financial assets in order to collect contractual cash flows. Debt securities and loans and advances of the segments Real Estate Finance and Public Investment Finance fulfil these criteria unless they are intended for syndicated financing. Moreover, parts of the Value Portfolio and of Consolidation & Adjustments have to be recognised at amortised cost when the cash flow criterion is fulfilled and they are held as part of a business model whose objective is to collect contractual cash flows.

Financial assets of this balance sheet position are measured at amortised cost. Interest income and expenses from this position is shown in net interest income. Impairments of all three stages according to IFRS 9 are shown in net income from risk provisioning of income statement. The assets are shown before and after impairments in the income of financial position. Gains or losses from derecognition of financial assets measured at fair value through other comprehensive income are shown in net income from realisations.

13. Positive Fair Values of Hedge Accounting Derivatives

The position positive fair values of hedge accounting derivatives contains the fair value of derivatives which are subject to hedge accounting and which are positive. As pbb Group does not designate derivatives in cash flow hedge accounting anymore the position only includes derivatives of the micro fair value hedge accounting and of the portfolio hedge of interest rate risks to a lesser extent, currency risks. These derivatives are measured at fair value. Changes of the fair value within a period affect profit or loss and are disclosed in the position net income from hedge accounting in the income statement. The interest payments and amortisations of these positions are shown in net interest income.

14. Valuation Adjustment from Portfolio Hedge Accounting (Assets)

The position valuation adjustment form portfolio hedge accounting (assets) contains the fair values subject to the hedged risks in the hedged cash flows of the portfolios of hedged items on the asset side. In the context of portfolio hedge accounting interest rate risks from loans and advances as well as from liabilities are hedged on a portfolio basis.

15. Tangible Assets

Tangible assets are generally measured at cost of purchase or cost of production. The carrying amounts are depreciated on a straight-line basis in accordance with the expected useful lives of the assets. In addition, tangible assets are tested at least annually for impairment. If the value of tangible assets has impaired, an impairment loss is recognised in profit or loss. If the reasons for the impairment no longer exist, an amount not exceeding amortised cost or cost of production is reversed through profit or loss. For fixtures in rental buildings calculations are based on the term of the contract, taking into account any extensions options if this term is shorter than the normal useful economic life.

The normal useful economic life amounts to:
- Fixture in rental buildings: 5-15 years
- IT equipment (broad sense): 3-5 years
- Other operating equipment: 3-25 years

Subsequent cost of purchase or costs of conversion are capitalised if an additional economic benefit is generated for the Company. Maintenance expenses of tangible assets are recognised in profit or loss of the financial year in which they arose.

Right-of-use assets from leasing are disclosed in “tangible assets”. The accounting of the right-of-assets is described in the note “leases”.

16. Intangible Assets

Purchased and internally generated software are the main items recognised as intangible assets. Goodwill, brand names and customer relations are not capitalised.

Software is an intangible asset with a finite useful life. Purchased software is measured at the amortised purchase cost. Internally generated software will be capitalises if it is probable that future economic benefits is generated for the Group and the expenses can be measured reliably. Expenses eligible for the capitalisation of internally generated software include external, directly attributable costs of materials and services as well as personnel expenses for employees directly associated with the creation of software used by the Company. Software is amortised on a straight-line basis over expected useful lives of three to eight years. In addition, intangible assets with a finite useful life are tested for impairment annually or whenever there is an indication that the intangible asset may be impaired or its useful life has reduced.

17. Other Assets

Other assets mainly comprise the collaterals pledged for the banking levy. The collaterals are accounted for at amortised cost. The balance sheet value of the collateral is shown in the note "Assets pledged as collateral". The recognition of collateral is shown in the note "Contingent liabilities, other obligations and contingent assets".

18. Financial Liabilities at Fair Value through Profit or Loss

The financial liabilities at fair value through profit or loss contain the negative fair values of stand-alone derivatives. Financial liabilities of this balance sheet position are measured at fair value. Changes of the fair value within a period affect profit or loss in the line item net income from fair value measurement of the income statement. The payments and amortisation of interests from this position are shown in net interest income.

19. Financial Liabilities at Amortised Cost

The position financial liabilities at amortised cost consists of all non-derivative financial liabilities. Financial liabilities of this balance sheet position are measured at amortised cost. Interest income and expenses from this position is shown in net interest income. Gains or losses from derecognition of financial liabilities measured at amortised cost are shown in net income from realisations. Such derecognitions may result from prepayments of borrowers.

Amongst others the position financial liabilities at amortised cost contains subordinated liabilities. In the event of insolvency or liquidation subordinated liabilities may only be repaid after all non-subordinated creditors have been satisfied. For some instruments of subordinated liabilities the holders participate in any net loss or unappropriate retained earnings. In addition, the interest entitlement can be ceased or reduced under specific conditions. For other instruments the interest payment ceases only in case of a net loss respectively unappropriate retained earnings which can be recovered depending on the structuring.

Pursuant to IAS 32 the subordinated capital instruments issued by companies of pbb Group were classified as financial liabilities or equity instruments in accordance with the substance of the contractual arrangement and the definitions of a financial liability and an equity instrument.

20. Negative Fair Values of Hedge Accounting Derivatives

The position negative fair values of hedge accounting derivatives contains the fair value of derivatives which are subject to hedge accounting and which are negative. As pbb Group does not designate derivatives in cash flow hedge accounting anymore the position only includes derivatives of the micro fair value hedge accounting and of the portfolio hedge of interest rate risks and, to a lesser extent, currency risks. These derivatives are measured at fair value. Changes of the fair value within a period affect profit or loss and are disclosed in the position net income from hedge accounting in the income statement. The interest payments and amortisations of these positions are shown in net interest income.

21. Valuation Adjustment from Portfolio Hedge Accounting (Liabilities)

The position valuation adjustment form portfolio hedge accounting (liabilities) contains the fair values subject to the hedged risks in the hedged cash flows of the portfolios of hedged items of the liability side. In the context of portfolio hedge accounting interest rate risks from loans and advances as well as from liabilities are hedged on a portfolio basis.

22. Provisions

A provision is a liability of uncertain timing or amount. A provision shall be recognised when an entity has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. According to IAS 37.15 in rare cases it is not clear whether there is a present obligation. In these cases a past event is deemed to give rise to a present obligation if, taking into account of all available evidence, it is more likely than not that a present obligation exists at the end of the reporting period. In rare cases, for example in a law suit, it may be disputed whether certain events have occurred or whether those events result in a present obligation. In such a case, pbb determines whether a present obligation exists at the end of the reporting period by taking into account all available evidence, including, for example, the opinion of experts.

Under IAS 37.36 et seq., the best estimate is used for measuring provisions for contingent liabilities and contingent losses attributable to pending transactions. Long-term provisions are generally discounted with an interest rate that reflects the current assessments of the time value of money and the risks specific to the liability and if the interest rate is positive.

Provisions for commitments and guarantees given are booked on the basis of impairment rules of IFRS 9 and disclosed under provisions.

Provisions for defined benefit plans are calculated on the basis of actuarial reports in accordance with IAS 19. They are measured using the projected unit credit method. The amount of the provision equals the so-called net defined benefit liability which is the difference between the present value of the defined benefit obligation and the fair value of plan assets. pbb has concluded plan assets in the form of a qualifying insurance policy to hedge parts of the risk from the defined benefit obligations. The reinsurance is pledged to the plan beneficiaries.

The determination of the net defined benefit liability is based on demographic and financial actuarial assumptions. A demographic assumption for example is the mortality for which pbb uses guidance tables. For financial actuarial assumptions the discount rate has the greatest effect on the amount of defined benefit liability. The interest rate used for the measurement is determined by reference to market yields at the end of the reporting period on high-quality, fixed-interest corporate bonds.

Net interest on the defined benefit liability is determined by multiplying the defined benefit liability with the discount rate. The determination is done at the beginning of the financial year taking into account any changes in the net defined benefit liability as a result of contribution and benefit payments during the period. Net interest on defined benefit liability are shown together with all other effects on income statement from the defined benefit obligations and the plan assets in the position pension expenses and related employee benefit costs in general and administrative expenses.

Remeasurements of the net defined benefit liability result from actuarial gains and losses and the return on plan assets excluding amounts included in net interest on the net defined benefit liability. Remeasurements of the net defined benefit liability are shown in equity in the position profit/losses from pension obligations. Changes of remeasurements of the net defined benefit liability within a period are shown as a component of the statement of comprehensive income. Actuarial gains and losses result from increases or decreases in the present value of the defined benefit obligation due to changes of actuarial assumptions and experience adjustments. Changes of the discount rate usually have the biggest effect on the actuarial gains and losses.

Along with other German financial institutions, pbb Group is a member of the pension fund BVV Versorgungskasse des Bankgewerbes e. V. (“BVV”). Both pbb Group as an employer and the eligible employees make regular contributions to the BVV pension schemes. BVV insurance tariffs are calculated and designed to provide fixed pension payments, plus profit participations. Every BVV member entity has a subsidiary responsibility for the pension claims of its eligible employees. pbb Group classifies the BVV pension scheme as a defined benefit plan, but discloses it as a defined contribution plan for accounting purposes because the information available is not sufficient to recognise it as a defined benefit plan. pbb Group considers the risk of becoming liable to pension obligations due to its subsidiary responsibility as very remote, and does not recognise any provisions in this respect.

23. Other Liabilities

Accruals are one position in other liabilities. This also includes short-term liabilities to employees, for instance flexitime credits and vacation entitlements. The accrued liabilities are recognised at the amount likely to be utilised. If the obligations listed at this note cannot be quantified precisely on the balance sheet date and if the criteria specified in IAS 37 for recognising provisions are satisfied, these items have to be disclosed as provisions. Leasing liabilities are a further position in Other Liabilities whose accounting is described in the note “leases”.

24. Equity

The equity includes the equity attributable to the shareholders, the additional equity instruments (AT1 capital) and non controlling interests. The equity attributable to the shareholders consists of the subscribed capital, additional paid-in capital, retained earnings, consolidated profit and accumulated other comprehensive income. The accumulated other comprehensive income contains the reserves for remeasurements of defined benefit commitments (gains/losses from pension obligations), for cash flow hedge accounting and for financial assets at fair value through other comprehensive income (FVOCI).

The AT1 capital is classified as equity since there is neither an obligation to repay the capital nor is there an obligation for ongoing debt service. The transaction costs directly attributable to the issue of the AT 1 capital and paid coupons are deducted directly from equity.

25. Share-based Payment

Since the financial year 2016 in line with the German Regulation of Remuneration in Financial Institutions (Institutsvergütungsverordnung – InstVergV), the payout structure of pbb Group's performance-related remuneration for members of the Management Boad and certain employees whose services hase a significant influence on the overall risk profile of pbb Group is divided into a disbursement portion and a so-called deferral portion. 50% of the payout portion is paid out in cash in the following financial year. The remaining 50% of the payout portion is economically influenced by the performance of pbb's share price and is paid out after a holding period. The deferral period for the deferral portion is three years, four years or five years. If the deferred remuneration components become an entitlement, half of the respective deferral portion is paid out in cash. The other half is in turn economically influenced by the performance of pbb's share price and is also paid out after the expiry of a holding period.

The aforementioned deferral portion of the variable remuneration which are influenced in financial terms by the development of the pbb share price, represents share-based remuneration. This share-based payment does not represent an option programme for physical shares, but rather for virtual shares where the amount set accordingly is converted into an equivalent number of virtual shares. This equivalent number corresponds to the number of virtual shares granted in the reporting period. The calculation of the number of virtual shares is based on the average Xetra closing price of the pbb share in February of the year subsequent to the financial year for which the variable remuneration is granted (subscription price). The resulting number of virtual shares is automatically converted into a cash amount after a holding period of one year, and paid out. In the year of payment, these virtual shares are presented as "exercised in the reporting period". The conversion is based on the average Xetra closing price of the pbb share in February of the disbursement year (disbursement price). Therefore, half of the variable remuneration of the employees concerned is linked to the performance of the pbb share price as part of the sustainability component.

The share-based remuneration may be forfeited after granting if the beneficiary was significantly involved in or responsible for conduct that led to significant losses or a significant regulatory sanction for the institution, or if he or she seriously violated relevant external or internal regulations regarding suitability and conduct (§§ 18 (5), 20 IVV).

When, in the context of share-based payment, the service is provided by the beneficiary, the resulting liability of pbb Group is recognised at fair value through profit or loss. The fair value of the liability is remeasured as at each reporting date, taking into account pbb’s share price, until the liability is settled, with all changes in fair value being recognised in profit or loss. The volume of share-based payment is disclosed in Note “Related parties disclosures”.

26. Currency Translation

Currency translation is carried out in accordance with the regulations of IAS 21. On the balance sheet date, monetary items in a foreign currency are translated into the functional currency. The reporting currency is Euro. Non-monetary items which were stated in a foreign currency using historical cost of purchase are measured using the exchange rate applicable at date of purchase.

Income and expenses attributable to currency translation are generally recognised in profit or loss in net other operating income/expenses.

All entities of the Group have Euro as the functional currency. Therefore, the group of consolidated companies does not include any companies from hyperinflationary countries.

27. Income Taxes

Income taxes are accounted for and measured pursuant to IAS 12 and according to IFRIC 23. Apart from the exceptions defined in the standard, deferred taxes are calculated for all temporary differences between the IFRS values and the tax values (balance sheet method). Deferred tax assets arising from non-utilised losses carried forward, interest assets carried forward and tax credits are recognised if required in accordance with IAS 12.34 et seq.

Deferred taxes are calculated using the national tax rates which are expected at the time the differences are settled, as the concept of deferred taxes is based on the presentation of future tax assets or tax liabilities (liability method). Changes in tax rates have been taken into account.

If it is unlikely that the amounts disclosed in pbb's tax declarations will be realised (uncertain tax positions), tax liabilities are recognised. The liability amount is derived as being the best possible estimate of the expected tax payment (expected amount or most likely amount of tax uncertainty). Tax claims from uncertain tax positions are recognised if they will likely be realised.

pbb Group applies the exemption from recognising deferred taxes resulting from the implementation of the global minimum tax rules by the respective countries. The pbb Group does not operate in countries that have a nominal tax rate below the 15% threshold. pbb Group has disclosed the disclosure requirements in relation to the IAS 12 amendments in the note 'Income Taxes'.

28. Non-current Assets Held for Sale

In accordance with IFRS 5, a non-current asset or disposal group must be classified as held for sale if the related carrying amount is primarily realised by a disposal transaction and not by continued use. To reclassify an asset as held for sale, certain conditions must be met on a cumulative basis. Above all, there must be a specific intention to sell, the asset must be immediately available and the disposal must be highly probable. As at 31 December 2023 and at 31 December 2022 pbb Group did not own any assets held for sale.

29. Judgements and estimations

When preparing the financial statements, pbb Group makes future-related judgements as well as estimations, which may carry a considerable risk of a major change to the disclosed assets and liabilities becoming necessary during the next financial year. The assumptions and parameters underlying the estimates to be made are based on the exercise of appropriate judgement.

Going-Concern
The Consolidated Financial Statements of pbb are based on the judgement of going-concern. The conditions of going-concern are described in the report on expected developments.

Classification of Financial Instruments (Business model criteria)
For measurement purposes the financial assets have to be classified into the three measurement categories at fair value through profit or loss, at fair value through other comprehensive income and at amortised cost. The classification depends amongst others on the contractual cash flow criterion. The assessment of this criterion is based on judgements which are described in the note "Financial Instruments". For example, this relates to the assessment of the intention to hold financial assets in the future.

Allowances
pbb shall recognise a loss allowance for expected credit losses on a financial asset that is measured at amortised cost or at fair value through other comprehensive income, a lease receivable or specific loan commitments and financial guarantee contracts. For this reasonable and supportable information, including forward-looking information, have to be taken into account.

Expected credit losses are a probability-weighted estimate of credit losses, i.e. the present value of expected cash shortfalls, over the life of the financial instrument. A cash shortfall is the difference between the cash flows that are due to an entity in accordance with the contract and the cash flows that entity is expected to receive. Upon initial recognition, the impairments in lending business are based on expected credit losses for twelve months (so-called stage 1). The 12-month expected credit loss is that part of the lifetime expected credit losses, which is equal to the expected credit losses from defaults that may occur for the financial instrument within twelve months after balance sheet date. In case of a significant increase in the financial asset's credit risk within the context of subsequent measurement (stage 2) or in case of a credit impairment (stage 3), the impairment has to reflect the expected default events over the life of the transaction (lifetime expected credit loss).

The methods and judgements, including forward-looking information, for the determination of a change of an impairment stage and estimation of the amount of impairment are reviewed at least annually.

In accordance with IAS 8.34, an accounting estimate may need revision if changes occur in the circumstances on which the estimate was based, or as a result of new information or more experience. The determination of loss allowances on financial instruments is based on accounting estimates. In 2023, pbb Group made one change in accounting estimates as regards the measurement of loss allowances for non-credit-impaired financial instruments (Stages 1 and 2).

The regulatory risk parameters probability of default (PD) and loss given default (LGD), which are transformed to a point-in-time estimate of the current situation, are used as a basis for determining the amount of stage 1 and 2 credit loss allowances. Parameters based on historical loss experience are used for the point-in-time transformation. The change in accounting estimates reflects experience gained from analysing factors influencing losses.

In 2023, pbb Group adjusted the data used to determine PDs and LGDs for the derivation of historical losses. On the one hand, a longer period was taken into account. On the other hand, financing types were no longer used if they are no longer relevant in pbb Group's portfolio. This adjustment has increased the representativeness of the data. The change in accounting estimates resulted in a reversal of allowances for losses on loans and advances and thus net income from risk provisioning in the amount of €23 million. Of this amount, €21 million was attributable to credit loss allowances on financial assets and €2 million to business that has not yet been disbursed and is therefore off-balance sheet.

Fair Values of Original and Derivative Financial Instruments
The fair value of financial instruments that are not listed on active markets is measured using valuation models. In such cases, a check is performed regularly to assess whether the valuation models provide a comparable benchmark for current market prices. The valuation models can only take into account quantifiable factors (e.g. cash flows and discount rates) that also require estimates. Changes in estimations of these factors might have an impact on the fair values of the financial instruments.

Criteria in the area of environment, social and governance (ESG) should have a growing influence on the fair values of financial instruments in the future. This could lead to adjustments in estimates and measurement models.

Hedge Accounting
Relations between hedged items and hedging instruments can be presented in hedge accounting. A relationship only qualifies for hedge accounting when certain conditions specified under IAS 39.88 are satisfied. Amongst others the hedge has to be very efficient with regard to achieving compensation for the risks resulting from changes in the fair value or the cash flow in relation to the hedged risk.

The determination of the effectiveness of the risk hedge depends on risk measuring methods, the parameters which are used and estimations relating to the probability of occurrence. These methods and parameters are continuously developed in line with the risk management objectives and strategies.

Intangible Assets, Tangible Assets including Right-of-Use assets from Leases

Intangible assets and tangible assets include right-of-use assets from leases are subject to estimation uncertainties, particularly in the determination of the useful life of assets respecitively the expected contractual period of the lease and the associated amount of depreciation/amortisation recognised per period.

Provisions

Estimates are used in the measurement of provisions at pbb Group. Estimation uncertainties arise in particular during assessment of the amount of the future cash outflows, the time horizon and the discount rate.

Bank Levy

pbb Group has utilised the option of paying contributions to the European bank levy, the deposit protection fund and the compensation scheme of German banks not exclusively by means of so-called regular contributions, but partly in the form of an irrevocable payment obligation by providing cash collateral. The pbb Group recognises collateral in accordance with the meeting reports of the Banking Committee of the Institute of Public Auditors in Germany. It is stated therein that the transfer of cash as cash collateral leads to the recognition of a financial receivable from the collateral taker (restructuring fund) and to the derecognition of the cash. In pbb Group's opinion, no provisions need to be recognised as it is unlikely that the collateral will be utilised by the SRB.

The accounting policy is based on judgements. It cannot be ruled out that the legal assessment of the cash collateral will change. One reason for this may be the outcome of ongoing legal proceedings of a French bank, which is independent of the pbb Group, against the Single Resolution Board (SRB) for the European bank levy.

Income Taxes

pbb Group is subject to a wide range of national tax regulations with regard to the calculation of income taxes. In order to measure the tax expenses, it is necessary to make estimates that are calculated with the existing knowledge as of the balance sheet date and closely related to the tax return prepared in the following financial year. In some countries, the current tax charges attributable to the current financial year can only be definitely finalised after the corresponding tax audit has been completed. The variances with regard to the estimated tax burden may have a positive or negative influence on the tax burden in future years.

With regard to the capitalisation of deferred taxes on loss carryforwards and other tax credits, the extent as well as the actual availability of such tax benefits are subject to estimation. These estimates are subject to change based on new information and findings. Major losses carried forward are subject to national German tax law, and their availability depends inter alia on the restrictions set out in Sections 10 d EStG, 8 c KStG as well as Section 10 a GewStG restrictions. Deferred tax assets arising from losses carried forward are therefore recognised to the extent as it is likely that future taxable income will be available to offset the non-utilised tax losses carried forward. The actual tax result situation in future periods - and thus the actual usability of loss and interest carryforwards - may differ from the estimate at the time the deferred taxes are recognized.

Consolidation

Companies and structured entities must be consolidated if pbb has direct or indirect control over them. Control is deemed to exist if pbb has decision-making powers to manage relevant activities, has a right to significant returns from the subsidiary and can use its decision-making powers to influence the amount of the significant variable returns. The level of control is assessed on the basis of contractual and economic relationships to the company or the structured entity. The assessment whether pbb exerts control or substantial influence over the company may result in judgement leeway.

30. Notes to segment reporting by operating segment

Segment reporting for the 2023 financial year was prepared in accordance with IFRS 8 Operating Segments. In line with the Management Approach under IFRS 8, segment reporting discloses segment-specific, management-relevant financial information that is also regularly used by Management Board (Chief Operating Decision Maker) when deciding on the allocation of resources, and for assessing the earnings power of segments. Based on the organisational structure, which is aligned to the various products and services offered, two business segments have been determined in line with internal management reporting.

Within segment reporting, income is determined by deducting matched-maturity funding rates prevailing at the time of concluding a transaction from the interest rate charged to the client. The input parameters required for this purpose are set at the time of originating a new business transaction, within the scope of accounting for individual transactions. In addition, income from investing the Bank’s own funds is included at segment level. The allocation of liquidity costs to the operating segments is based on the transfer price mechanism for the individual transaction. The income of pbb Group's operating segments is based exclusively on transactions with external customers. For this reason, pbb does not present income per business segment separately according to internal and external income.

Income or expenses that cannot be allocated directly to a specific lending transaction (in particular, the results from disposal of assets held for liquidity management, from market-induced effects on net income from fair value measurement, hedging relationships, the reversal or addition of provisions in the non-lending business as well as the bank levy) are allocated to the business segments, usually on a pro-rata basis, in line with financing volumes.

The allocation of general and administrative expenses to the operating segments differentiates between expenses which can be directly attributed and those which are not directly attributable. Expenses (of the sales units, for example) which are directly attributable can be clearly assigned to the segments via the cost centre. Expenses that cannot be directly allocated (for example central divisions) are distributed to the segments using allocation keys for each cost centre.

Segment risk-weighted assets (RWA) are determined in accordance with the allocation of individual transactions (credit risk, for example) and with the allocated risk types (operational risks, for example). Risk types that are not directly attributable are allocated to the segments according to defined keys.

pbb allocates reported equity to segments in proportion to economic required capital (in line with the ‘bottleneck principle’), incorporating adjusted input parameters from Pillar 1 for the ICAAP economic perspective. Beginning in the year under review, credit spread risks are no longer taken into account when deriving the equity capital allocation key on the basis of an expected loss shortfall approach (see note “Consistency”).

Real Estate Finance (REF)
The REF operating segment comprises financing for professional real estate investors. These include professional national and international real estate companies, institutional investors, property funds as well as, above all in Germany, customers with a regional focus. Financed properties mainly involve office buildings, properties for residential use, retail and logistics properties as well as (business) hotels. Due to their still small size, the earnings components of the pbb Invest division are also reported in the REF segment until further notice.

Non-Core (NC)
The non-strategic operating segment NC includes financing eligible for Pfandbrief cover primarily for the provision and improvement of public infrastructure and financing to the public sector that is not specifically earmarked for a particular purpose (budget financing). The NC segment was created in the first quarter of 2023 by combining the previous Public Investment Finance (PIF) and Value Portfolio (VP) segments. It is not strategic.

Consolidation & Adjustments (C&A) reconciles the aggregated segment results with the consolidated result. The column also includes income from the investment of allocated equity.

31. Income statement by operating segment

Income/expenses

in € million		REF	Non-Core	C&A	**pbb Group**
Operating income	2023	511	90	2	**603**
	2022	460	69	2	**531**
Net interest income	2023	434	46	2	**482**
	2022	420	67	2	**489**
Net fee and commission income	2023	4	-1	-	**3**
	2022	8	-	-	**8**
Net income from fair value measurement	2023	-	-	-	**-**
	2022	14	6	-	**20**
Net income from realisations	2023	44	41	-	**85**
	2022	16	-1	-	**15**
Net income from hedge accounting	2023	1	-	-	**1**
	2022	-	-	-	**-**
Net other operating income	2023	28	4	-	**32**
	2022	2	-3	-	**-1**
Net income from risk provisioning	2023	-213	1	-	**-212**
	2022	-69	25	-	**-44**
General and administrative expenses	2023	-219	-30	-	**-249**
	2022	-196	-28	-	**-224**
Expenses from bank levies and similar dues	2023	-17	-8	-	**-25**
	2022	-21	-11	-	**-32**
Net income from write-downs and write-ups of non-financial assets	2023	-24	-3	-	**-27**
	2022	-16	-2	-	**-18**
Profit before tax	**2023**	**38**	**50**	**2**	**90**
	2022	**158**	**53**	**2**	**213**

Cost-income ratio[1)]

in %		REF	Non-Core	**pbb Konzern**
Cost-income ratio	2023	47.6	36.7	**45.8**
	2022	46.1	43.5	**45.6**

[1)] Cost-income ratio is the ratio of general and administrative expenses and net income from write-downs and write-ups on non-financial assets to operating income.

32. Balance-sheet-related measures by operating segment

The Management Board controls balance-sheet-related measures by operating segments based on financing volumes, on risk-weighted assets and on equity.

Balance-sheet-related measures

in € billion		REF	Non-Core	C&A	**pbb Group**
Financing volumes[1]	31.12.2023	31.1	12.4	-	**43.5**
	31.12.2022	29.3	14.4	-	**43.7**
Risik-weighted assets[2]	31.12.2023	17.5	0.6	0.5	**18.6**
	31.12.2022	15.5	0.8	0.7	**17.0**
Equity[3]	31.12.2023	2.3	0.4	0.4	**3.1**
	31.12.2022	2.4	0.4	0.4	**3.2**

[1] Notional amounts of the drawn parts of granted loans and parts of the securities portfolio.
[2] Including risk-weighted credit risk positions as well as the capital requirements for market risk positions and operational risks scaled with the factor 12.5.
[3] Excluding accumulated other comprehensive income (OCI) from cash flow hedge accounting, financial assets at fair value through OCI, AT1 capital and non controlling interest.

33. Breakdown of operating income

Operating income by products

Operating income by products

in € million		Real estate financing	Other Products	**pbb Group**
Operating income	2023	511	92	**603**
	2022	460	71	**531**

Operating income by regions

pbb Group differentiates between the regions Germany, Rest of Europe and USA. Allocation of values to regions is based on the location of the registered offices of the Group companies or their branches respectively their representative offices.

Operating income by regions

in € million		Germany	Rest of Europe	USA	**pbb Group**
Operating income	2023	567	30	6	**603**
	2022	494	31	6	**531**

Operating income by customers

There were no significant customers within the meaning of IFRS 8.34 in the financial years 2023 and 2022.

NOTES TO THE CONSOLIDATED INCOME STATEMENT

34. Net interest income

Net interest income

in € million	2023	2022
Interest income	2,760	1,613
from financial assets at fair value through profit or loss	837	301
from financial assets at fair value through other comprehensive income	40	31
from financial assets at amortised cost	1,880	1,211
from hedge accounting derivatives (net)	-	12
from other assets	3	4
negative interest from non-derivative financial liabilities	-	54
Interest expenses	-2,278	-1,124
from financial liabilities at fair value through profit or loss	-911	-382
from financial liabilities measured at amortised cost	-1,091	-716
Hedge accounting derivatives (net)	-275	-
from other liabilities	-1	-1
negative interest from non-derivative financial assets	-	-25
Total	**482**	**489**

The net interest income contains negative interest (net) from derivatives in the amount of €2 million (2022: positive interest of €5 million).

35. Net fee and commission income

Net fee and commission income

in € million	2023	2022
Fee and commission income	8	11
from financial assets at amortised cost and financial liabilties not at fair value through profit or loss	8	11
Other lending business	8	11
Fee and commission expenses	-5	-3
from financial assets at amortised cost and financial liabilties not at fair value through profit or loss	-5	-3
Securities and custodial services	-3	-2
Other lending business	-1	-1
Trust, fiduciary and other services	-1	-
Total	**3**	**8**

Fee and commission income is recognised at a point in time when the performance obligation is satisfied, i.e. the service is provided, by pbb Group. Fee and commission income is generated mainly in the REF segment.

36. Net income from fair value measurement

Net income from fair value measurement

in € million	2023	2022
Net income from stand-alone derivatives	-11	82
Interest derivatives	-11	82
Net income from other financial assets at fair value through profit or loss	11	-62
From debt instruments	11	-62
Interests in companies and funds qualified as debt instruments	-	-1
Debt securities	5	-16
Loans and advances	6	-45
Total	**-**	**20**

37. Net income from realisations

Net income from realisations

in € million	2023	2022
Income from derecognition of financial instruments	94	21
from assets measured at fair value through other comprehensive income	4	-
from disposal	4	-
from financial assets at amortised cost	37	20
from disposal	30	1
from early repayment	7	19
from financial liabilities measured at amortised cost	53	1
from early repayment	53	1
Expenses from derecognition of financial instruments	-9	-6
from financial assets at amortised cost	-2	-1
from disposal	-2	-
from early repayment	-	-1
from financial liabilities measured at amortised cost	-7	-5
from early repayment	-7	-5
Total	**85**	**15**

38. Net income from hedge accounting

Net income from hedge accounting

in € million	2023	2022
Net income from micro fair value hedge accounting	-4	2
from hedged items	-347	616
from hedging instruments	343	-614
Net income from portfolio hedge accounting	5	-2
from hedged items	-24	92
from hedging instruments	29	-94
Total	**1**	**-**

39. Net other operating income

Net other operating income

in € million	2023	2022
Net income from foreign currency translation	3	-4
Net income from provisions in non-lending business	29	22
Miscellaneous other operating income	-	-19
Total	**32**	**-1**

40. Net income from risk provisioning

Net income from risk provisioning

in € million	2023	2022
From financial assets	-219	-47
Stage 1	19	-7
Stage 2	-27	-1
Stage 3	-211	-39
Income from recoveries from written-off financial assets	1	-
Net income from provisions in off balance sheet lending business	6	3
Total	**-212**	**-44**

[1] Adjustment of the previous year's amounts: The originally reported net income from risk provisioning from stage 1 amounted to €21 million and from level 2 to €-57 million.

Net income from risk provisioning from financial assets resulted almost completely from financial assets “at amortised cost” apart.

41. General and administrative expenses

General and administrative expenses

in € million	2023	2022
Personnel expenses	-134	-126
Wages and salaries	-105	-102
Social security expenses	-15	-14
Pension expenses and related employee benefit expenses	-9	-10
Other personnell expenses/income	-5	-
Non-personnel expenses	-115	-98
Office and operating expenses	-6	-5
Consulting expenses	-28	-17
IT expenses	-64	-55
Other non-personnel expenses	-17	-21
Total	**-249**	**-224**

42. Expenses from Bank Levies and Similar Dues

Expenses from bank levies and similar dues[1)]

in € million	2023	2022
Bank levies	-22	-31
Compensation scheme of German banks	-3	-1
Total	**-25**	**-32**

[1)] Includes administrative expenses invoiced for the dues/levies.

43. Net Income from Write-downs and Write-Ups of Non-financial Assets

Net income from write-downs and write-ups of non-financial assets

in € million	2023	2022
Depreciation or amortisation	-19	-18
Tangible assets	-7	-7
Thereof: Right-Of-Use of lease assets	-6	-6
Intangible assets	-12	-11
Impairments	-8	-
Intangible assets	-8	-
Total	**-27**	**-18**

44. Icome Tax

Breakdown

in € million	2023	2022
Current taxes	-9	-13
Deferred taxes	10	-13
Thereof: Deferred taxes on losses carried forward	12	-8
Total	**1**	**-26**

Current taxes include tax income for previous years in the amount of €7 million (2022: €10 million). The tax income for previous years mainly results from tax refund claims in Germany and the USA for previous years. In the previous year, it resulted, among other things, from the reversal of provisions for tax audit risks following the completion of a tax audit in Germany.

For domestic companies, the deferred taxes are calculated using the future uniform rate of corporation tax of 15.0% plus the corresponding 5.5% solidarity surcharge and the trade tax depending on the locally applicable assessment rate (the current basic rate is 3.5%). This resulted in a tax rate for the calculation of deferred taxes of 27.67% (2022: 27.67%).

The following overview shows the development of the deferred taxes recognised in the financial statements:

Development of deferred taxes

in € million	2023	2022
Deferred taxes recognised in the statement of financial position	129	119
Difference to prior year	10	-10
Thereof: Recognised in profit or loss	10	-13
OCI from pension commitments	3	-7
OCI from financial assets at fair value through OCI	-3	10
OCI from Cash flow hedge accounting	-	-

The deferred taxes recognised outside profit or loss regarding accumulated other comprehensive income increased by €0 million (2022: €3 million).

Reconciliation

in € million (unless otherwise indicated)	2023	2022
Profit or loss before tax	90	213
Applicable (legal) tax rate in %	27.67	27.67
Expected (computed) tax expense	-25	-59
Tax effects		
arising from deductible and non-deductible items	-2	-7
arising from valuation adjustments and non-application of deferred taxes	22	30
arising from prior years	6	10
Reported income taxes	**1**	**-26**
Group tax ratio in %	**-1.11**	**12.21**

Following the precise determination on euro basis, the corporate tax rate was at -1.45% (2022: 12.22%)

The tax rate applicable for the reporting year, including solidarity surcharge, is 27.67% (2022: 27.67%) and is comprised of the 15.0% German corporate tax rate currently valid, the payable solidarity surcharge of 5.5% as well as the average trade tax rate of 11.84% (2022: 11.84%).

Foreign tax rates ranged between 20.6% and 34.1%. In Germany, the effective current tax charge based on corporate tax, solidarity surcharge and trade tax is 11.07% due to the utilisation of loss carryforwards in the context of minimum taxation.

The effects attributable to deductible and non-deductible items relate primarily to taxable additional income and minoar taxable result as well non-deductible expenses, which do not have to be taken into account as deferred taxes as a result of permanent differences, but which have reduced or increased the basis of taxation.

The effects arising from valuation adjustments and non-application of deferred taxes comprise effects from write up of deferred tax assets of balance differences and the use of tax losses carried forward previously unrecognised.

The item effects from previous years includes actual taxes from previous years, which mainly result from tax refund claims in Germany and the USA for previous years. In the previous year, it resulted, among other things, from the rever-sal of provisions for tax audit risks following the completion of a tax audit in Germany.

The Group tax ratio is the quotient of the stated income taxes (current and deferred taxes) and profit before tax.

The deferred tax liabilities or deferred tax assets relate to the following items:

Deferred tax liabilities/assets

in € million	2023	2022
Financial assets at amortised cost after credit loss allowances	23	35
Positive fair values of hedge accounting derivatives	43	137
Financial liabilities at fair value through profit or loss	199	65
Other assets/liabilities	16	15
Deferred tax liabilities before offsetting	**281**	**252**
Offsetting	-281	-252
Deferred tax liabilities after offsetting	**-**	**-**
Financial assets at fair value through profit or loss	263	223
Positive/negative fair values of hedge accounting derivatives	44	49
Provisions	18	25
Other assets/liabilities	27	28
Losses carried forward	58	46
Deferred tax assets before offsetting	**410**	**371**
Offsetting	-281	-252
Deferred tax assets after offsetting	**129**	**119**

The assessment of the recoverability of deferred tax assets on deductible temporary differences and on loss carryforwards is based on tax planning derived from the general corporate planning.

On at the reporting date, there were unused tax loss carryforwards for corporation tax totalling €2,467 million (31 December 2022: €2,524 million) and for trade tax totalling €2,460 million (31 December 2022: €2,674 million), for which no deferred tax assets were recognised. The loss carryforwards can be utilised indefinitely, subject to any detrimental change of shareholder. In addition, no deferred tax assets were recognised on deductible temporary differences of €328 million (31 December 2022: €322 million) that can be carried forward indefinitely. The origination and reversal of temporary differences resulted in a deferred tax expense of €2 million (2022: tax expense of €4 million).

Tax rate changes did not result in major deferred tax expenses or income in the current year nor in the previous year.

The use of tax losses previously not recognised resulted in a reduction in the current income tax expense in the amount of €0 million (2021: reduction in the current income tax expense in the amount of €2 million). From the use and write-off of loss carryforwards previously recognised, deferred a tax expense in the amount of €21 million (2022: €23).

In 2023 and 2022 there were no differences associated with investments in subsidiaries.

Global minimum tax

pbb Group falls within the scope of the global minimum taxation rules. In December 2023, the European Union directive on global minimum taxation was transposed into national law in Germany with effect from 1 January 2024. The most important other jurisdictions in which pbb operates with an entity and in which this tax will also be levied from 1 January 2024 include the United Kingdom, France, Spain and Sweden. As a result, there is a mechanism in the EU countries, the UK and various other countries to increase the tax burden on the profits of large internationally operating groups to at least 15% in all countries of operation if a business unit is based in a country where this legislation has been introduced. In the USA, no minimum tax has yet been introduced in accordance with the OECD framework.

As the legislation on global minimum taxation was not yet in force at the reporting date, pbb Group was not subject to any tax burden in this respect in the year under review.

The pbb Group does not operate in jurisdictions with a tax rate below the 15% threshold. Nevertheless, the average effective tax rate for the current reporting period for the following jurisdictions – calculated on the basis of IAS 12 – is below 15%:

in € million	Germany	USA	Spain
Aggregated income tax expense	-1	-1	-
Profit before tax	85	1	-
Effective tax rate in % (determination on euro basis)	-1.0	-121.5	0.0

Nevertheless, pbb expects that no corresponding supplementary tax will arise in or for the above countries, as the effective tax burden was reduced by deferred tax income from valuation adjustments and the non-recognition of deferred taxes, as well as by actual tax income due to tax refund claims for assessment periods which are not to be taken into account in the calculations for Pillar 2 purposes.

Overall, pbb Group does not operate in any jurisdiction with an entity where the average effective tax rate for Pillar 2 purposes is below 15%. pbb Group continues to assess the impact of the Global Minimum Tax legislation on its future profitability.

45. Net Gains/Net Losses

The income statement contains the following net gains/net losses recognised in profit or loss by measurement categories:

Net Gains/Net Losses by measurement categories

in € million	**2023**	**2022**
Financial assets		
at fair value through profit ot loss	-	20
from stand-alone derivatives	-11	82
from debt instruments	11	-62
at fair value through other comprehensive income	4	-
at amortised cost	-183	-27
Financial liabilities		
at amortised cost	46	-4

The net gains and lossesshown in the table include additions to and reversals of credit loss allowances, derecognition gains and losses as well as the fair value measurement results from financial instruments recognised in profit or loss. Additionally, an expense of €21 million resulted in the previous year from the modification of the TLTRO III financial liabilities measured at amortised cost.

46. Earnings Per Share

Earnings per share

		2023	**2022**
Net income attributable to shareholders of pbb	in € million	91	188
Thereof: attributable to the ordinary shareholders	in € million	68	171
Thereof: attributable to the AT1 investors	in € million	23	17
Average number of ordinary shares issued	pieces	134,475,308	134,475,308
Adjusted average number of ordinary shares issued pieces	pieces	134,475,308	134,475,308
Basic earnings per share	**in €**	**0.51**	**1.27**
Diluted earnings per share	**in €**	**0.51**	**1.27**

Earnings per share are calculated in accordance with IAS 33 by dividing net income/loss attributable to the ordinary shareholders holders by weighted average number of ordinary shares. Net income/loss is allocated under the assumption of after-tax interests for the AT1 capital, which are accrued pro rata temporis as well as assuming full operation of the discretionary AT1-coupon.

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION (ASSETS)

47. Cash reserve

Cash reserve

in € million	31.12.2023	31.12.2022
Balances with central banks	2,728	1,044
Total	**2,728**	**1,044**

Cash on hand as of 31 December 2023 amounts to €0 million as was the case in previous year.

48. Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss

in € million	31.12.2023	31.12.2023
Positive fair values of stand-alone derivatives	494	562
Interests in companies and funds qualified as debt instruments	3	2
Shares in investment funds	3	2
Debt securities	123	117
Bonds and notes	123	117
Public-sector issuers	84	80
Other issuers	39	37
Loans and advances to customers	324	394
Public-sector loans and advances	137	138
Real estate loans and advances	187	256
Total	**944**	**1,075**

49. Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income

in € million	31.12.2023	31.12.2022
Debt securities	1,354	1,409
Bonds and notes	1,354	1,409
Public-sector issuers	540	653
Other issuers	814	756
Loans and advances to customers	121	283
Public-sector loans and advances	21	83
Other	100	200
Total	**1,475**	**1,692**

50. Financial assets at amortised cost after credit loss allowances (including claims from finance lease agreements)

Financial assets at amortised cost before credit loss allowances

in € million	31.12.2023	31.12.2022
Debt securities	4,014	5,377
Bonds and notes	4,014	5,377
Public-sector issuers	3,286	4,421
Other issuers	728	956
Loans and advances to other banks	2,507	5,763
Public-sector loans and advances	548	544
Investments in money	1,147	4,243
Other loans and advances to other banks	812	976
Loans and advances to customers	39,155	37,839
Public-sector loans and advances	8,250	8,888
Real estate loans and advances	30,875	28,911
Other loans and advances to customers	30	40
Claims from finance lease agreements	135	142
Total	**45,811**	**49,121**

Development in risk provisioning

in € million	1.1.2023	Transfer Stage 1	Transfer Stage 2	Transfer Stage 3	New Business and additions	Repayments and derecognitions	Amounts used	Changes of credit risk (net)	Other changes	31.12.2023
Allowances for credit losses on financial assets	-387	-	-	-	-32	16	35	-203	-12	-583
measured at amortised cost	-387	-	-	-	-32	16	35	-203	-12	-583
Debt securities	-1	-	-	-	-	-	-	-	-	-1
Stage 1	-1	-	-	-	-	-	-	-	-	-1
Loans and advances to customers	-386	-	-	-	-32	16	35	-203	-12	-582
Stage 1	-44	-24	32	2	-32	3	-	48	-23	-38
Stage 2	-131	24	-32	12	-	13	-	-40	24	-130
Stage 3	-211	-	-	-14	-	-	35	-211	-13	-414
Provisions for off-balance-sheet lending business (contingent liabilies and other commitments)	-13	-	-	-	-4	3	-	7	1	-6
Stage 1	-5	-2	1	-	-4	3	-	5	-	-2
Stage 2	-8	2	-1	-	-	-	-	2	1	-4
Total	**-400**	**-**	**-**	**-**	**-36**	**19**	**35**	**-196**	**-11**	**-589**

Development in risk provisioning

in € million	**1.1.2022**	Transfer Stage 1	Transfer Stage 2	Transfer Stage 3	New Business and additions	Repayments and derecognitions	Amounts used	Changes of credit risk (net)	Other changes	**31.12.2022**
Allowances for credit losses on financial assets	-342	-	-	-	-46	14	-	-15	2	-387
measured at amortised cost	-342	-	-	-	-46	14	-	-15	2	-387
Debt securities	-3	-	-	-	-	-	-	2	-	-1
Stage 1	-3	-	-	-	-	-	-	2	-	-1
Loans and advances to customers	-339	-	-	-	-46	14	-	-17	2	-386
Stage 1	-25	-43	33	-	-46	5	-	32	-	-44
Stage 2	-142	43	-33	2	-	9	-	-10	-	-131
Stage 3	-172	-	-	-2	-	-	-	-39	2	-211
Provisions for off-balance-sheet lending business (contingent liabilies and other commitments)	-16	-	-	-	-11	10	-	4	-	-13
Stage 1	-4	-12	3	-	-11	4	-	15	-	-5
Stage 2	-12	12	-3	-	-	6	-	-11	-	-8
Total	**-358**	**-**	**-**	**-**	**-57**	**24**	**-**	**-11**	**2**	**-400**

[1] Adjustment of the previous year's amounts of loss allowance on loans and advances to customers: originally, €27 million was transferred from stage 2 to stage 1 and €39 million from stage 1 to stage 2. The net change in credit risk originally amounted to €50 million in stage 1 and -€53 million in stage 2.

Loss allowances on financial assets measured at fair value through other comprehensive income and on receivables from finance leases amounted to less than €1 million as at 31 December 2023 and 31 December 2022.

As at 31 December 2023, pbb Group has recognised a management overlay of €31 million in order to reflect the emerging dynamics on the US real estate markets. This market is currently characterised by historically low transaction volumes, a sharp decline in market values and a high level of uncertainty. On the one hand, the overlay includes an adjustment of the model-based average estimated probability of default (PD) and loss given default (LGD) for the entire US business. For this purpose, the PDs and LGDs were derived on the basis of a longer-term historical average in order to take into account experience from several economic cycles. Secondly, US real estate loans without indicators of impaired credit quality were collectively provided for in the amount of the expected credit losses over the term if the last default rating was issued more than six months ago.

The management overlay in the amount of €69 million as at 31 December 2022 was fully reversed by pbb Group in the course of 2023. Among other things, this was possible because the risk of a further rise in interest rates assumed in the negative scenario did not materialise. In addition, from pbb's perspective, the valuation parameters better reflected the risks, for example from the trend towards working from home in office properties, during the course of 2023.

If all stage 1 financial assets were in stage 2, the balance of credit loss allowances would increase by €57 million as at 31 December 2023 (31 December 2022: €110 million). For the off-balance sheet business, there would also be an increase of €4 million as at the reporting date (31 December 2022: €18 million).

If all stage 2 financial assets were in stage 1, the balance of credit loss allowances would decrease by €62 million (31 December 2022: €79 million). For the off-balance sheet business, there would also be a reduction of €3 million (31 December 2022: €6 million).

pbb Group used a base scenario with a weighting of 55% (31 December 2022: 55%), a positive scenario with a weighting of 5% (31 December 2022: 5%), and a negative scenario with a weighting of 40% (31 December 2022: 40%) as the basis for the calculation of the loss allowances of Stages 1 and 2. If the positive scenario was given a weighting of 100%, the loss allowances would be reduced by €33 million (31 December 2022: €98 million). If the negative scenario was given a weighting of 100%, the loss allowances would be increased by €22 million (31 December 2022: €144 million).

When determining loss allowances, information about past events, current conditions and forecasts of future economic developments are incorporated in accordance with IFRS 9.5.5.17. Material parameters for economic development are the expectations as regards the gross domestic product and the unemployment rate. pbb Group has used the following values.

Forecast of gross domestic product in percent

	Positive			Basis			Negative		
Country/year	2024	2025	2026	2024	2025	2026	2024	2025	2026
Germany	1.7	2.3	1.8	0.8	1.2	1.8	-1.5	1.8	1.8
France	1.7	2.3	1.8	1.2	1.4	1.8	-0.7	1.1	1.7
Spain	3.0	3.1	1.7	1.7	2.0	1.7	-0.4	1.2	1.5
Italy	1.6	2.4	1.1	0.9	1.2	1.1	-1.7	1.2	1.1
United Kingdom	1.9	3.3	2.0	0.5	1.3	2.0	-1.5	0.8	0.9
USA	2.3	2.8	2.1	1.4	1.8	2.1	1.0	1.5	2.0

Forecasts of unemployment rate in percent

	Positive			Basis			Negative		
Country/year	2024	2025	2026	2024	2025	2026	2024	2025	2026
Germany	2.7	2.5	2.5	3.2	3.2	2.6	4.4	4.8	3.4
France	6.9	6.7	6.5	7.4	7.5	6.9	9.0	10.0	8.1
Eurozone	6.4	6.2	6.0	6.6	6.4	6.6	8.5	9.3	8.1
United Kingdom	3.9	3.9	4.0	4.7	4.6	4.3	7.7	7.8	5.9
USA	3.7	3.8	3.8	4.1	3.9	4.0	4.9	4.4	4.3

Forecasts of five-year swap rate in percent

	Positive			Basis			Negative		
Currency/year	2024	2025	2026	2024	2025	2026	2024	2025	2026
EUR	1.8	1.9	2.2	2.1	2.2	2.3	2.3	2.3	2.4
GBP	2.7	2.6	2.8	3.0	2.9	2.9	3.2	3.1	3.0
USD	2.9	2.9	3.1	3.2	3.2	3.3	3.4	3.4	3.3
CHF	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.2	1.2
SEK	1.8	1.8	2.0	2.1	2.1	2.1	2.2	2.2	2.2

Development in gross carrying amounts

in € million	1.1.2023	Transfer Stage 1	Transfer Stage 2	Transfer Stage 3	New Business and additions	Repayments and derecognitions	Direct write-offs	Other	31.12.2023
Gross carrying amounts of financial assets	50,849	-	-	-	8,446	-12,150	-35	192	47,302
measured at fair value through other comprehensive income	1,728	-	-	-	303	-532	-	-8	1,491
Debt securities	1,450	-	-	-	303	-376	-	-7	1,370
Stage 1	1,450	-1	-	-	303	-375	-	-7	1,370
Stage 2	-	1	-	-	-	-1	-	-	-
Loans and advances to other banks	-	-	-	-	-	-	-	-	-
Loans and advances to customers	278	-	-	-	-	-156	-	-1	121
Stage 1	278	-	-	-	-	-156	-	-1	121
measured at amortised cost	49,121	-	-	-	8,143	-11,618	-35	200	45,811
Debt securities	5,377	-	-	-	-	-1,326	-	-37	4,014
Stage 1	5,377	-	-	-	-	-1,326	-	-37	4,014
Loans and advances to other banks	5,763	-	-	-	1,211	-4,464	-	-3	2,507
Stage 1	5,763	-	-	-	1,211	-4,464	-	-3	2,507
Loans and advances to customers	37,839	-	-	-	6,932	-5,815	-35	234	39,155
Stage 1	28,006	-2,942	3,030	-	6,931	-4,177	-	124	30,972
Stage 2	9,000	2,860	-3,926	191	-	-1,519	-	91	6,697
Stage 3	833	82	896	-191	1	-119	-35	19	1,486
Claims from finance lease agreements	142	-	-	-	-	-13	-	6	135
Stage 1	142	-	-	-	-	-13	-	6	135
Off-balance-sheet business [1]	3,044	-	-	-	953	-1,550	-	-159	2,288
Stage 1	2,570	-213	191	-	901	-1,508	-	-45	1,896
Stage 2	470	208	-259	57	-	-41	-	-115	320
Stage 3	4	5	68	-57	52	-1	-	1	72
Total	**53,893**	**-**	**-**	**-**	**9,399**	**-13,700**	**-35**	**33**	**49,590**

[1] Notional amount of contingent liabilities and other commitments.

Development in gross carrying amounts

in € million	1.1.2022	Transfer Stage 1	Transfer Stage 2	Transfer Stage 3	New Business and additions	Repayments and derecognitions	Direct write-offs	Other	31.12.2022
Gross carrying amounts of financial assets	49,641	-	-	-	12,770	-9,063	-1	-2,498	50,849
measured at fair value through other comprehensive income	1,212	-	-	-	603	-33	-	-54	1,728
Debt securities	911	-	-	-	603	-12	-	-52	1,450
Stage 1	911	-	-	-	603	-12	-	-52	1,450
Loans and advances to customers	301	-	-	-	-	-21	-	-2	278
Stage 1	301	-	-	-	-	-21	-	-2	278
measured at amortised cost	48,429	-	-	-	12,167	-9,030	-1	-2,444	49,121
Debt securities	6,893	-	-	-	-	-924	-	-592	5,377
Stage 1	6,463	-	179	-	-	-674	-	-591	5,377
Stage 2	430	-	-179	-	-	-250	-	-1	-
Loans and advances to other banks	2,646	-	-	-	3,820	-715	-	12	5,763
Stage 1	2,646	-	-	-	3,820	-715	-	12	5,763
Loans and advances to customers	38,710	-	-	-	8,347	-7,378	-1	-1,839	37,839
Stage 1	29,128	-6,127	2,777	-	8,334	-4,258	-	-1,848	28,006
Stage 2	9,002	6,093	-3,162	-	-	-2,966	-	33	9,000
Stage 3	580	34	385	-	13	-154	-1	-24	833
Claims from finance lease agreements	180	-	-	-	-	-13	-	-25	142
Stage 1	180	-	-	-	-	-13	-	-25	142
Off-balance-sheet business[1]	3,233	-	-	-	1,874	-2,064	-	1	3,044
Stage 1	2,294	-664	333	-	1,869	-1,263	-	1	2,570
Stage 2	939	664	-340	-	-	-794	-	1	470
Stage 3	-	-	7	-	5	-7	-	-1	4
Total	**52,874**	**-**	**-**	**-**	**14,644**	**-11,127**	**-1**	**-2,497**	**53,893**

[1] Notional amount of contingent liabilities and other commitments.

In contrast to the amount to be reported in the statement of financial position, the gross carrying amount of financial assets measured at fair value through other comprehensive income does not include the accumulated changes in fair value of €-16 million (31 December 2022: €-36 million).

The maximum default risk to which pbb Group is exposed is reflected in the net carrying amounts presented in the statement of financial position for financial assets measured at amortised cost, and in the fair values presented in the statement of financial position for financial assets measured at fair value through other comprehensive income.Loans and advances to customers of stage 3 were collateralised in an amount of €1,158 million as at the reporting date (31 December 2022: €528 million).

At pbb Group, contractual amounts outstanding of €0 million (31 December 2022: €0 million) existed for financial assets that were written off in 2023 and that continue to be subject to enforcement measures.

Due to collateral provided, pbb Group did not recognise stage 3 credit loss allowances as at 31 December 2023 for credit-impaired financial instruments with a carrying amount of €329 million (31 December 2022: €304 million). Thereof, €293 million (31 December 2022: €259 million) moved to level 3 in the reporting year. The collateral is in the form of mortgages of properties in good locations and in state guarantees.

pbb Group did not hold any salvage acquisitions or other seized collateral as at 31 December 2023 and 31 December 2022.

51. Positive fair values of hedge accounting derivatives

Positive fair values of hedge accounting derivatives

in € million	31.12.2023	31.12.2022
Positive market values of hedge accounting derivatives	251	262
Total	**251**	**262**

52. Valuation adjustment from portfolio hedge accounting (assets)

The line item valuation adjustments from portfolio hedge accounting includes the positive fair values in relation to the hedged risks in the portfolios of hedged items. They amounted to €-56 million as at 31 December 2022 (31 December 2022: €-84 million).

53. Tangible assets

Development of tangible assets

			2023	2022
in € million	Operating equipment	Right of Use assets (IFRS 16)	Total	Total
Acquisition/production costs				
Balance at 1.1.	**15**	**44**	**59**	**58**
Additions	-	4	4	1
Disposals	-	-4	-4	-
Balance at 31.12.	**15**	**44**	**59**	**59**
Depreciation and write-ups				
Balance at 1.1.	**-12**	**-20**	**-32**	**-25**
Amortisation	-1	-6	-7	-7
Balance at 31.12.	**-13**	**-26**	**-39**	**-32**
Carrying amounts				
Balance at 31.12.	**2**	**18**	**20**	**27**

54. Intangible assets

Development of intangible assets

in € million	Software acquired	Internally developed Software	Other intangible assets	2023 Total	2022 Total
Acquisition/production costs					
Balance at 1.1.	**41**	**99**	**22**	**162**	**144**
Additions	12	3	8	23	18
Reclassifications	8	7	-15	-	-
Disposals	-	-3	-	-3	-
Balance at 31.12.	**61**	**106**	**15**	**182**	**162**
Amortisation and write-ups					
Balance at 1.1.	**-31**	**-82**	**-**	**-113**	**-102**
Amortisation	-4	-8	-	-12	-11
Impairment	-	-3	-5	-8	-
Disposals	-	4	-	4	-
Reclassifications	-1	-1	2	-	-
Balance at 31.12.	**-36**	**-90**	**-3**	**-129**	**-113**
Carrying amounts					
Balance at 31.12.	**25**	**16**	**12**	**53**	**49**

Research and development expenditure recognised as an expense amounted to €25 million (2022: €19 million).

55. Repurchase agreements

As a pledgor of genuine repurchase agreements, the pbb Group has pledged assets with a carrying amount of €3.3 billion (31 December 2022: €2.7 billion). The securities are still part of the assets. The consideration received amounted to €4.4 billion (31 December 2022: €3.2 billion). They are reported exclusively under financial liabilities measured at amortised cost. Assets in repurachse agreements are the only transferable assets the acquirer can sell or repledge in the absence of default.

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION (EQUITY AND LIABILITIES)

56. Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss

in € million	31.12.2023	31.12.2022
Negative fair values of stand-alone derivatives	662	686
Total	**662**	**686**

57. Financial liabilities at amortised cost

Financial liabilities at amortised cost

in € million	31.12.2023	31.12.2022
Liabilities to other banks	6,079	7,507
Liabilities to central banks	924	2,616
Registered Mortgage Pfandbriefe	389	354
Registered Public Pfandbriefe	868	543
Other registered securities	183	192
Other liabilities to other banks	3,715	3,802
Liabilities to customers	18,829	17,889
Registered Mortgage Pfandbriefe	3,203	3,027
Registered Public Pfandbriefe	5,072	5,869
Other registered securities	1,866	1,838
Other liabilities to customers	8,688	7,155
Bearer bonds	20,402	21,641
Mortgage Pfandbriefe	12,418	11,977
Public Pfandbriefe	1,889	2,043
Other bearer bonds	6,095	7,621
Subordinated liabilities	603	635
Securitised subordinated liabilities	578	600
Non-securitised subordinated liabilities	25	35
Total	**45,913**	**47,672**

IIn 2022, pbb Group participated in the ECB's Targeted Longer Term Refinancing Operations (TLTRO III) with a nominal volume of €8.4 billion. On 27 October 2022, the Governing Council of the ECB decided to adjust the interest rate for TLTRO III. This resulted in an expense of €21 million in 2022. The modified carrying amount of the refinancing reduced by this effect will be amortised through profit or loss in net interest income until final maturity in June 2023 or June 2024, meaning that the financial liabilities will once again bear interest at almost the original effective interest rate. However, this amortisation effect only partially compensates for the benefit of the TLTRO III refinancing until the interest rate adjustment by the ECB Governing Council. As at the balance sheet date, the carrying amount of the TLTRO III liabilities reported under central bank liabilities was €0.9 billion (31 December 2022: €2.6 billion).

58. Negative Fair Value of Hedge Accounting Derivatives

Negative fair values of hedge accounting derivatives

in € million	31.12.2023	31.12.2022
Negative market values of hedge derivatives	789	1,125
Total	**789**	**1,125**

59. Valuation adjustment from portfolio hedge accounting (liabilities)

The item “Valuation adjustment from portfolio hedge accounting (liabilities)” comprises negative fair values as regards the hedged risks in the hedged portfolios of hedged items. They totalled €-49 million as at 31 December 2023 (31 December 2022: €-112 million).

60. Provisions

Provisions

in € million	31.12.2023	31.12.2022
Provisions for pensions and other post employment defined benefit obligations	62	39
Restructuring provisions	-	1
Provisions for off-balance-sheet lending business	6	13
Other provisions	49	82
Total	**117**	**135**

There are defined contribution and defined benefit plans for the employees of pbb Group. In the defined contribution plans pbb makes payments for commitments by industry-wide organisations. In almost all non-German entities, a defined percentage of fixed salary is paid into externally managed pension funds for employees as part of defined contribution pension schemes. Expenses in respect of defined contribution plans amounted €4 million (2022: €4 million). The expense is expected to remain largely constant in 2024. Expenses in respect of defined contribution plans for persons with a key function in the pbb Group, amounted to less than €1 million (2022: less than €1 million). The employer's contribution to the statutory pension insurance amounted to €6 million (2022: €5 million).

There are defined benefit pension commitments for many employees in Germany. There are no defined benefit pension commitments in the non-German entities. For the defined benefit plans the employees receive a direct commitment from their respective company. The receipt of retirement pensions or disability pensions starts after a vesting period is fulfilled, at the earliest after reaching a minimum age in the case of part of full incapacity for work, at the latest when goind into retirment, usually after completion of the 65th year of life. In case of active employees, there are predominatnly modern modular pension plans. For the other eligible persons there are also final salarybased defined benefit plans. The annual pension module depends, among other things, on the gross annual salary paid and the member's length of service. The surviving dependant's pension usually amounts to 60% of the pension of the spouse respectively the entitlement on that. The pension plan is administered by pbb itelf with the aid of an external service provider.

Pension provisions are recognised for obligations arising from direct commitments. The defined benefit plans have been principally closed for new entrants since 1 April 2004. There have been no plan amendments, curtailments and settlements in the years 2023 and 2022.

The risk of insolvency is covered within the framework of legal requirements by Pensionssicherungsverein a.G. in relation to the total amount of pension obligations.

The following actuarial assumptions were used to measure the defined benefit pension obligations:

Actuarial assumptions

in %	31.12.2023/ 1.1.2024	31.12.2022/ 1.1.2023
Discount rate	3.53	4.20
Rate of increase in pension obligations	2.50	2.50
Rate of increase in future compensation and vested rights[1)]	2.50	2.50

[1)] pbb Group expects a rate of increase in future compensation and vested rights of 0% for the active Management Board members in the financial years 2023 and 2022.

The rate of increase in career for members of the Management Board amounts 0.0% (31 December 2022: 0.0%), for directors and non-pay-scale staff 1.5% (31 December 2022: 1.5%) and for payscale staff 0.5% (31 December 2022: 0.5%). The guidance tables 2018G from HEUBECK AG were used as the biometric basis.

The defined benefit pension commitments of pbb do not contain any unusual or entity-specific risks. pbb is faced by the common demographic risks, for example from longevity or invalidity of the entitled employees, and common financial risks like for example a change of the discount rate. pbb took out reinsurance to protect itself against parts of these risks. The reinsurance is a qualifying insurance policy in accordance with IAS 19 and thus is a plan asset. The fair value of plan assets is a component of the net liability from defined benefit plans which is deducted from the present value of the defined benefit obligation. The reinsurance does not consist of any unusual or plan-specific risks.

Principally, the pension payments of the reinsured pension obligations are funded by the income from the plan assets. If the income does not cover the pension payments pbb has to pay the pensions out of its own funds. For the non-reinsured pension obligations the payments are also made out of own funds.

Statement of financial position items (net defined benefit liability)

in € million	31.12.2023	31.12.2022
Present value of defined benefit obligation	232	214
Fair value of plan assets	-170	-175
Total	**62**	**39**

Development of net defined benefit liability

in € million	2023	2022
Balance at 1.1.	**39**	**109**
Pension expenses	4	6
Remeasurements	24	-69
Reclassifications in reimbursements	-	-
Direct payments to beneficiaries	-5	-7
Balance at 31.12.	**62**	**39**

Development of defined benefit obligation

in € million	2023	2022
Balance at 1.1.	**214**	**286**
Current service costs	2	4
Interest expenses	9	4
Remeasurements	20	-67
Actuarial gains/losses from demographic assumptions	-	-
Actuarial gains/losses from financial assumptions	18	-70
Actuarial gains/losses from experience assumptions	2	3
Payments to beneficiaries	-13	-13
Balance at 31.12.	**232**	**214**

Plan assets consist exclusively of reinsurance pledged to plan beneficiaries. The plan assets accordingly do not contain any own financial instruments or any own used tangible assets. No further material contributions to the plan assets are aimed in 2024. pbb does not use special asset-liability matching strategies to manage the pledged reinsurance.

Development of fair value of plan assets

in € million	2023	2022
Balance at 1.1.	**175**	**177**
Interest income	7	2
Remeasurements	-4	2
Payments to beneficiaries	-8	-6
Reclassifications in/from reimbursements	-	-
Balance at 31.12.	**170**	**175**

Development of pension expenses

in € million	2023	2022
Service costs	2	4
Current service costs	2	4
Net interest expenses	2	2
Interest expenses on defined benefit obligation	9	4
Interest income on plan assets	-7	-2
Total	**4**	**6**

Pension expenses are expected to be similar in 2024 compared to 2023. Pension expenses are part of general and administrative expenses.

Remeasurements of the net defined benefit liability result from actuarial gains and losses and the return on plan assets excluding amounts included in net interest on the net defined benefit liability.

Remeasurement recognised in other comprehensive income (equity)

in € million	2023	2022
Actuarial gains/losses from demographic assumptions	-	-
Actuarial gains/losses from financial assumptions	-18	70
Actuarial gains/losses from experience assumptions	-2	-3
Remeasurements from plan assets	-4	2
Total	**-24**	**69**

Development of reimbursement

in € million	2023	2022
Balance at 1.1.	**1**	**1**
Additions	-	-
Disposals	-	-
Balance at 31.12.	**1**	**1**

The reimbursements result from unpledged reinsurance policies.

The quantitative sensitivity analysis – which uses the same measurement methods as the obligation recognised in the statement of financial position – for the material actuarial assumptions is as follows:

Actuarial assumptions

in € million		Change of sensitivity level (+ increase/- decrease)	Gross obligation 31.12.2023	Gross obligation 31.12.2022
Basic value of the calculation of sensitivity			232	214
Discount rate	in percentage points	+ 0.5	218	202
	in percentage points	- 0.5	246	227
Rate of increase in pension obligations	in percentage points	+ 0.5	243	224
	in percentage points	- 0.5	221	204
Rate of increase in future compensation and vested rights	in percentage points	+ 0.5	232	214
	in percentage points	- 0.5	232	213

The assumption of mortality only has an immaterial effect because the risk of longevity is mainly covered by plan assets.

The weighted average duration of the defined benefit obligations amounted to 12 years at 31 December 2023 (31 December 2022: 12 years).

Development of restructuring provisions and other provisions

in € million	Restructuring provisions	Other provisions
Balance at 1.1.2022	**1**	**105**
Additions	-	24
Reversals	-	-26
Amounts used	-	-17
Other	-	-4
Balance at 31.12.2022	**1**	**82**
Balance at 1.1.2023	**1**	**82**
Additions	-	31
Reversals	-1	-48
Amounts used	-	-19
Other	-	3
Balance at 31.12.2023	**-**	**49**

Provisions in off-balance sheet lending business primarily comprise provisions for guarantee risks, letters of credit, irrevocable loan commitments and litigation risks. The development of these provisions is presented in in detail in the Note "Financial assets at amortised cost after credit loss allowances (including claims from finance lease agreements)".

The provisions for obligations from share-based payment transactions, reported as part of other provisions, are described in the Note "Related parties disclosures".

Other provisions include provisions for variable remuneration of €19 million (31 December 2022: €22 million), for termination benefits of € 16 million (31 December 2022: €10 million), for legal and tax risks of €1 million (31 December 2022: €18 million) and for legal expenses of €1 million (31 December 2022: €20 million).

Legal Risks (Litigation Risks)

Given the nature of business and international expansion of activities and the large number of relevant requirements and regulations, pbb is involved in litigation, arbitration and administrative proceedings in some countries. pbb recognises provisions for the uncertain obligations arising from these proceedings if the potential outflow of resources is sufficiently likely and the amount of the obligation can be estimated. The probability of outflow of resources, which often cannot be estimated with certainty, is highly dependent on the outcome of the proceedings. The assessment of this probability and the quantification of the obligation are largely based on estimates. The actual liability can vary considerably from this estimate. Accounting for the individual legal procedure, pbb analyses developments of the individual case as well as of comparable cases. Depending on the significance and complexity of the respective case, pbb is drawing on its own expertise or opinions by external consultants and in particular by legal advisors. The provisions recognised for the proceedings are not reported separately as pbb believes that the outcome of the proceedings would be seriously compromised by their disclosure.

No legal proceedings exist for which the Management Board believes the probability of an outflow of resources – or another impact on pbb Group's business activities – to be likely or which are of material significance to pbb Group for other reasons with an provision requirement in excess of €5 million. However, pbb is subject to prudential proceedings, which bear the risk of a material outflow of resources, or another impact on pbb Group's business activities.

61. Other liabilities

Other liabilites include lease liabilites of €16 million. (31 December 2022: of €22 million).

62. Maturities of specific financial assets and liabilities

Maturities of specific financial assets and liabilities (without derivatives and without finance lease)

in € million	repayable on demand/ unspecified	up to 3 months	more than 3 months up to 1 year	more than 1 year up to 5 years	more than 5 years	**Total**
						31.12.2023
Cash reserve	2,728	-	-	-	-	2,728
Financial assets at fair value through profit or loss	3	5	5	266	171	450
Debt securities	-	-	-	84	39	123
Loans and advances to customers	-	5	5	182	132	324
Shares in investment funds qualified as debt instruments	3	-	-	-	-	3
Financial assets at fair value through other comprehensive income	-	224	401	369	481	1,475
Debt securities	-	123	383	368	480	1,354
Loans and advances to customers	-	101	18	1	1	121
Financial assets at amortised cost before credit loss allowances	841	3,985	5,783	23,068	11,999	45,676
Debt securities	-	157	159	2,566	1,132	4,014
Loans and advances to other banks	812	1,150	-	250	295	2,507
Loans and advances to customers	29	2,678	5,624	20,252	10,572	39,155
Total financial assets	**3,572**	**4,214**	**6,189**	**23,703**	**12,651**	**50,329**
Financial liabilities at amortised cost	1,465	4,938	8,310	20,403	10,797	45,913
Liabilities to other banks	321	1,152	2,881	1,137	588	6,079
Thereof: registered securities	-	49	100	793	497	1,439
Liabilities to customers	1,131	1,803	2,265	5,491	8,139	18,829
Thereof:registered securities	-	204	524	2,137	7,276	10,141
Bearer bonds	13	1,966	3,164	13,201	2,058	20,402
Subordinated liabilities	-	17	-	574	12	603
Total financial liabilities	**1,465**	**4,938**	**8,310**	**20,403**	**10,797**	**45,913**

Maturities of specific financial assets and liabilities (without derivatives and without finance lease)

in € million	repayable on demand/ unspecified	up to 3 months	more than 3 months up to 1 year	more than 1 year up to 5 years	more than 5 years	Total
						31.12.2022
Cash reserve	1,044	-	-	-	-	1,044
Financial assets at fair value through profit or loss	2	6	4	178	323	513
Debt securities	-	-	-	80	37	117
Loans and advances to customers	-	6	4	98	286	394
Shares in investment funds qualified as debt instruments	2	-	-	-	-	2
Financial assets at fair value through other comprehensive income	-	122	394	840	336	1,692
Debt securities	-	20	362	720	307	1,409
Loans and advances to customers	-	102	32	120	29	283
Financial assets at amortised cost before credit loss allowances	1,013	2,419	10,506	20,210	14,831	48,979
Debt securities	-	175	825	1,979	2,398	5,377
Loans and advances to other banks	976	248	3,996	250	293	5,763
Loans and advances to customers	37	1,996	5,685	17,981	12,140	37,839
Total of financial assets	**2,059**	**2,547**	**10,904**	**21,228**	**15,490**	**52,228**
Financial liabilities at amortised cost	1,928	6,175	6,701	20,956	11,912	47,672
Liabilities to other banks	355	2,875	1,940	1,780	557	7,507
Thereof: registered securities	-	15	52	594	428	1,089
Liabilities to customers	1,536	803	2,847	4,439	8,264	17,889
Thereof: registered securities	-	267	310	2,238	7,920	10,735
Bearer bonds	37	2,469	1,894	14,163	3,078	21,641
Subordinated liabilities	-	28	20	574	13	635
Total of financial liabilities	**1,928**	**6,175**	**6,701**	**20,956**	**11,912**	**47,672**

63. Equity

Share capital equals the maximum liability of the shareholder for the liabilities of the corporation to its creditors. The share capital as of 31 December 2023 and during the entire financial year 2023 amounted to €380,376,059.67 which is divided into 134,475,308 ordinary bearer shares with no par value representing a theoretical interest in the share capital of approximately €2.83 per share. In the fiscal years 2023 and 2022, pbb did not hold any treasury shares.

Please refer to the disclosures pursuant to section 315a (1) HGB included in the “Supplemental Information” section of the Combined Management Report for information on authorised and contingent capital.

Additional paid-in capital includes contributions from a previous financial year as well as premiums from the issue of shares; except for an amount of €25,383,131.91 (31 December 2022: €25,383,131.91) the additional paid-in capital is freely available pursuant to section 272 (2) no. 4 HGB. Retained earnings were generally created only from net income of the current financial year or previous periods including the current consoliated profit.

Pre-tax profit of €91 million in particular had a positive effect on the development of equity. By contrast, actuarial losses from pension obligations increased by €21 million due to the discount rate used for measurement (31 December 2023: 3.53%; 31 December 2022: 4.20%), which decreased in line with the market interest rate trend. Accumulated other comprehensive income from financial assets at fair value through other comprehensive income increased by €19 million compared to the end of the previous year due to interest rate and credit-related effects.

The additional equity instruments include Additional Tier 1 (AT1) capital in the total nominal amount of €300 million less transaction costs of €2 million. AT1 capital qualifies as equity because there is no obligation to repay, or to make debt servicing payments on an ongoing basis. The bond issued by pbb in 2018 carries an initial coupon of 5.75% and has no final maturity. The coupon for the new five-year interest period from 28 April 2023 is 8.474%. There are certain conditions attached to the coupon payments. The coupon on the AT1-capital of €17 million payed in April 2023 reduced retained earnings and is disclosed separately in the statement of changes in equity.

In accordance with the resolution of the Annual General Meeting on 25 May 2023, pbb paid its shareholders a dividend of €0.95 per no-par value share carrying dividend rights (€128 million) for the financial year 2022.

Dividends

	2023	2022
Dividends recognized as distributions to owners in € per share	0.95	1.18
Dividends proposed or declared but not recognized as distributions to owners prior to approval of the financial statements for publication, in € million	-	128
Dividends proposed or declared but not recognized as distributions to owners prior to approval of the financial statements for issue, in € per share	-	0.95

64. Trust Business

As at 31 December 2023 and 31 December 2022, there were no trust assets or liabilities reported in the statement of financial position.

NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS

65. Disclosures to the items in the consolidated statement of cash flows

The consolidated statement of cash flows shows the cash flows of the financial year broken down by operating activities, investing activities and financing activities. Cash and cash equivalents correspond to the balance sheet item cash reserve, and include cash in hand and credit balances at central banks.

Operating activities are defined broadly, and correspond to operating result. Cash flow from operating activities includes payments (inflows and outflows) attributable financial assets at fair value through profit or loss/positive fair values of hedging derivatives, financial assets at fair value through other comprehensive income, financial assets at amortised cost and other assets. Inflows and outflows attributable to financial liabilities measured at fair value through profit or loss/negative fair values from hedging derivatives, liabilities measured at amortised cost (without inflows/outflows from subordinated liabilities) and other liabilities are also included under operating activities. The interest and dividend payments resulting from operating activities are shown under cash flow from operating activities. This also relates to cash flows frum subordinated liabilities. In addition, payments for the interest portion of lease liabilities as well as short-term lease contracts with a maturity of less than 12 months are part of the cash flow from operating activities.

Cash flow from investing activities comprises payments for investment and security holdings as well as for tangible and intangible assets.

Cash flow from financing activities comprises inflows from capital increases, payments into reserves and silent participations, inflows and outflows for subordinated capital as well as payments for the amortisation part of lease liabilities.

Liabilities development from financing activities

in € million	2023	2022
Subordinated liabilities		
Balance at 1.1.	**635**	**655**
changes from financing cash flows	-32	-20
Other changes	-	-
Balance at 31.12.	**603**	**635**

NOTES TO DERIVATIVE TRANSACTIONS AND HEDGED ITEMS IN HEDGE ACCOUNTING

Risks are the possibilities to deviate from the planned future targets resulting from unpredictability of the future and disruptions. Interest rate risks and foreign exchange risks are primarily relevant for pbb Group. These arise from open positions for example in the case of mismatches of maturities or the variability respectively fixing of interest rates. Interest rate risks and in to a lesser extent foreign exchange risks are accounted in hedge accounting. Other risks of the hedged items like for example credit risk are not accounted in hedge accounting but are controlled throughout the Group.

Generally pbb Group hedges interest rate risks. However, in individual cases this may not be possible or sensible. The hedge ratio is determined in relation to the expectation for example of the interest rate development or the costs of hedging. If the risk is not hedged completely for example because the interest rate of the underlying asset does not match completely with the interest rate of the hedging instrument hedge ineffectiveness may arise. A further source of ineffectiveness may be different credit risks of the counterparties of the hedged item and hedging instrument.

Hedging relationships between financial instruments are classified as a fair value hedge, a cash flow hedge or hedge of a net investment in a foreign operation in accordance with IAS 39. Hedging instruments used to hedge interest rate risks are mainly interest rate derivatives, for example interest rate swaps and interest rate options.

Specific disclosures required by IFRS 7 are shown in the risk and opportunity report, amongst others about credit risk, market risk and liquidity risk.

Fair Value Hedge Accounting Under IAS 39, with a fair value hedge, a recognised asset, a recognised liability, offbalance-sheet fixed obligation or a precisely designated part of such an asset, liability or obligation, is hedged against the risk of a change in fair value which is attributable to a specific risk and possibly has an effect on profit or loss for the period.

If the hedge of the fair value in the course of the reporting period meets the criteria of IAS 39.88, the hedge is accounted as follows:

> The profit or loss arising when the hedging instrument is remeasured at fair value (for a derivative hedging instrument) or the currency component of its carrying amount measured in accor-dance with IAS 21 (for non-derivative hedging instruments) is recognised in profit or loss for the period and
> The carrying amount of a hedged item is adjusted affecting profit or loss by the profit or loss arising from the hedged item and attributable to the hedged risks. This is applicable if the hedged item is otherwise measured at cost. The profit or loss attributable to the hedged risk is recognised in profit or loss for the period if the hedged item is an a financial asset measured at fair value through other comprehensive income. The amortisation of the hedge adjustment is started on the date of the revoking of the hedge relationship.

pbb Group uses fair value hedge accounting for micro-hedge and macro-hedge relationships. With the focus of asset and liability management on macro interest rate management of the banking book, fewer micro fair value hedges are being recognised, so that the portfolio of micro hedge relationships is continuously decreasing.

Interest rate risks are hedged under micro fair value hedge accounting. Any ineffectiveness within the permissible range pursuant to IAS 39 is reported under net income from hedging relationships. Positive and negative market values of hedging instruments are reported at fair value in positive fair value of hedge accounting derivatives or negative fair values of hedge accounting derivatives, respectively. The adjustment of the hedged item's carrying amount by the profit or loss attributable to the hedged risk directly affects the hedged item. The retrospective effectiveness test is conducted using the regression analysis. The dollar-offset method is used to quantify prospective ineffectiveness. If the hedge relationship is terminated for reasons other than the derecognition of the hedged item, the difference between the carrying amount of the hedged item at that point and the value at which it would have been carried, had the hedge never existed (the unamortised fair value adjustment), is amortised through profit or loss over the remaining term of the original hedge and recognised in net interest income. If the hedged item is derecognised, for example due to disposal or repayment, the unamortised fair value adjustment is recognised immediately in profit or loss.

In the context of portfolio hedge accounting within the meaning of IAS 39, interest rate risks from loans and advances as well as from liabilities are hedged on a portfolio basis. The portfolio hedge accounting is aimed to account the effects from the macro interest steering for hedged positions. The fair values as regards the hedged risks in the hedged cash flows of the portfolios of hedged items are reported either on the assets or on the liabilities side as valuation adjustments from portfolio hedge accounting. The changes in the fair value of hedged risks from the portfolios of hedged items are recognised in net income from hedging relationships. The market values of hedging instruments are recognised in statement of financial position at fair value in positive fair values of hedge accounting derivatives or negative fair values of hedge accounting derivatives, respectively. The changes in value are shown in net income from hedging relationships, thus largely compensating the effect on profit or loss from the valuation of the cash flows from the portfolios of hedged items. The cash flows from the portfolios of hedged items are determined monthly within the framework of a dynamic hedge designation and discontinuation process. The resulting valuation adjustments are amortised over the remaining term of the time band and recognised in net interest income. In case of a derecognition of cash flows of hedged items from the portfolio of hedged items, the associated valuation adjustment is reversed on a pro-rata basis and recognised in net income from realisations.

Embedded floors for credit transactions can be designated as part of portfolio hedge accounting in accordance with IAS 39. In portfolio hedge accounting, there is no regular designation, but a one-off designation. Value adjustment items are amortised over the remaining term from early termination.

Cashflow Hedge Accounting According In accordance to IAS 39, a cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with the recognised asset or liability (for instance some or all future interest payments on variable-interest debt) or a highly probable forecast transaction that could affect profit or loss.

Under cash flow hedge accounting, hedging instruments are measured at fair value. The measurement result has to be broken down into an effective and an ineffective portion of the hedge relationship. As at 31 December 2023, and 31 December 2022, pbb Group did not designate any derivatives to cash flow hedges. The cash flow hedge reserve remaining from designations will be reversed in line with the hedged cash flows from underlying transactions. In this context, a prospective effectiveness test is carried out on a quarterly basis and, in the event of ineffectiveness, the cash flow hedge reserve is reversed through profit or loss accordingly.

66. Derivative transactions

In order to minimize (reduce) both the economic and the regulatory credit risk, bilateral netting agreements have been concluded. By means of such netting agreements, the positive and negative fair values of the derivatives contracts included under the master agreement can be offset against one another, and the future regulatory risk add-ons for these products can be reduced. Through this netting process, the credit risk is limited to a single net claim on the party to the contract.

For both regulatory reports and the internal measurement and monitoring of the credit commitments, such risk-reducing techniques are utilised only if they are considered to be enforceable under the respective legal system in the event that the business associate becomes insolvent. Legal advice is taken in order to check enforceability.

Similar to the master agreements, pbb Group concludes collateral agreements with its business associates to collateralise the net claim or liability remaining after netting (obtained or pledged collateral). Usually, this colalteral management (by depositing cash collateral) reduces credit risk by means of prompt measurement and adjustment of the exposure to the customers.

Volume of derivatives as of 31 December 2023	Nominal amount				Fair value/carrying amount		
	Remaining maturities						Fair value change for effectiveness calculation
in € million	up to 1 year	more than 1 to 5 years	more than 5 years	**Total**	positive	negative	
Stand-alone derivatives [1]	**6,112**	**11,930**	**934**	**18,976**	**494**	**662**	
Interest rate derivatives	3,160	10,864	934	14,958	456	627	
OTC derivatives	3,160	10,864	934	14,958	456	627	
Interest rate swaps	533	5,137	914	6,584	379	549	
Interest rate options	2,627	5,727	20	8,374	77	78	
Currency derivatives	2,497	-	-	2,497	19	31	
OTC derivatives	2,497	-	-	2,497	19	31	
Forward currency transactions	2,497	-	-	2,497	19	31	
Other derivatives	455	1,066	-	1,521	19	4	
Cross currency basis swaps	455	1,066	-	1,521	19	4	
Derivatives in fair value hedge accounting [2)3)]	**5,451**	**17,957**	**15,657**	**39,065**	**251**	**789**	**343**
Interest rate derivatives	5,451	17,957	15,517	38,925	229	789	350
OTC derivatives	5,451	17,957	15,517	38,925	229	789	350
Interest rate swaps	5,305	17,414	14,782	37,501	229	781	353
Interest rate options	146	543	735	1,424	-	8	-3
Other derivatives	-	-	140	140	22	-	-7
Cross currency basis swaps	-	-	140	140	22	-	-7

[1)] In statement of financial position disclosed under “Financial assets at fair value through profit or loss” respectively “Financial liabilities at fair value through profit or loss”.

[2)] In statement of financial position disclosed under “Positive fair values of hedge accounting derivatives” respectively “Negative fair values of hedge accounting derivatives”.

[3)] Including exposure to Eurex Clearing AG after netting of derivatives and cash collateral, regardless of their use. Netting with Eurex derivatives in the amount of €14.8 billion led to a reclassification from stand-alone derivatives to the derivatives under fair value hedge accounting.

Volume of derivatives as of 31 December 2022	Nominal amount				Fair value/carrying amount		
	Remaining maturities						Fair value change for effectiveness calculation
in € million	up to 1 year	more than 1 to 5 years	more than 5 years	Total	positive	negative	
Stand-alone derivatives [1]	**7,332**	**9,191**	**857**	**17,380**	**562**	**686**	
Interest rate derivatives	3,472	8,603	857	12,932	484	679	
OTC derivatives	3,472	8,603	857	12,932	484	679	
Interest rate swaps	1,493	3,772	815	6,080	354	549	
Interest rate options	1,979	4,831	42	6,852	130	130	
Currency derivatives	3,475	-	-	3,475	56	3	
OTC derivatives	3,475	-	-	3,475	56	3	
Forward currency transactions	3,475	-	-	3,475	56	3	
Other derivatives	385	588	-	973	22	4	
Cross currency basis swaps	385	588	-	973	22	4	
Derivatives in fair value hedge accounting [2][3]	**6,924**	**17,417**	**21,086**	**45,427**	**262**	**1,125**	**-614**
Interest rate derivatives	6,924	17,392	20,771	45,087	217	1,125	-639
OTC derivatives	6,924	17,392	20,771	45,087	217	1,125	-639
Interest rate swaps	6,612	16,685	19,802	43,099	217	1,117	-664
Interest rate options	312	707	969	1,988	-	8	25
Other derivatives	-	25	315	340	45	-	25
Cross currency basis swaps	-	25	315	340	45	-	25

[1] In statement of financial position disclosed under “Financial assets at fair value through profit or loss” respectively “Financial liabilities at fair value through profit or loss”.

[2] In statement of financial position disclosed under “Positive fair values of hedge accounting derivatives” respectively “Negative fair values of hedge accounting derivatives”.

[3] Including exposure to Eurex Clearing AG after netting of derivatives and cash collateral, regardless of their use. Netting with Eurex derivatives in the amount of €10.6 billion led to a reclassification from stand-alone derivatives to the derivatives under fair value hedge accounting.

The fair value change for the effectiveness test of derivatives in portfolio hedge accounting amounted to €29 million in 2023 and resulted from interest rate derivatives/interest rate swaps (2022: €-94 million from interest rate derivatives/interest rate swaps).

Counterparties	**31.12.2023**		**31.12.2022**	
	Fair value		Fair value	
in € million	positiv	negativ	positiv	negativ
Central governments and central banks of OECD member states	2	-	1	-
OECD banks	731	1,236	817	1,442
OECD financial institutions	-	26	3	40
Other companies and private individuals	12	189	3	329
Total	**745**	**1,451**	**824**	**1,811**

The reserve for cash flow hedge accounting, where derivatives were no longer designated in the financial years 2023 and 2022, amounted to €-30 million (31 December 2022: €-26 million) after deferred taxes. In 2023, €-4 million (2022: €2 million) before taxes was reclassified from the cash flow hedge reserve to net interest income.

67. Hedged items under Hedge Accounting

Hedged items under Hedge Accounting 31 December 2023 in € million	Micro fair value hedge					Potfolio hedge
		thereof:				
	Carrying amount	hedge adjustment included in carrying amount	hedge adjustment remaining after discontinuation of hedging relationship	Value change for the effectiveness test in the period	Valuation adjustment	Change for effectiveness calculation in reporting period
Financial assets at fair value through other comprehensive income	379	-	14	4	-	-
Interest related hedge accounting	379	-	14	4	-	-
Financial assets at amortised cost	11,369	-146	564	272	-56	-7
Interest related hedge accounting	11,271	-143	564	265	-56	-7
Currency related hedge accounting	98	-3	-	7	-	-
Financial liabilities measured at amortised cost	21,249	-623	235	-623	-49	-17
Interest related hedge accounting	21,249	-623	235	-623	-49	-17

Hedged items under Hedge Accounting 31 December 2022 in € million	Micro fair value hedge					Potfolio hedge
		thereof:				
	Carrying amount	hedge adjustment included in carrying amount	hedge adjustment remaining after discontinuation of hedging relationship	Value change for the effectiveness test in the period	Valuation adjustment	Change for effectiveness calculation in reporting period
Financial assets at fair value through other comprehensive income	388	-8	25	-46	-	-
Interest related hedge accounting	388	-8	25	-46	-	-
Financial assets at amortised cost	11,816	-727	997	-2,439	-84	-98
Interest related hedge accounting	11,564	-717	997	-2,412	-84	-98
Currency related hedge accounting	252	-10	-	-27	-	-
Financial liabilities measured at amortised cost	22,000	-1,580	624	3,101	-112	190
Interest related hedge accounting	22,000	-1,580	624	3,101	-112	190

The item “Valuation adjustment from portfolio hedge accounting (assets)” comprises fair values as regards the hedged risks in the hedged cash flows from the portfolios of hedged items (assets). The item “Valuation adjustment from portfolio hedge accounting (liabilities)” comprises fair values as regards the hedged risks in the hedged cash flows from the portfolios of hedged items (liabilities).

Ineffectiveness of the hedge [1]

in € million	2023	2022
Result from micro fair value hedge accounting (interest rate risk)	-4	2
Result from portfolio hedge accounting (interest rate risk)	5	-2
Total	**1**	**-**

[1] Reported in net income from hedge accounting.

Interbank offered rates (IBOR) are used as reference rates for pricing and calculating payment flows for a large number of financial instruments. Due to the weaknesses of the previous interbank rates revealed for the first time as part of the LIBOR scandal, legislators and supervisory authorities worldwide are working towards establishing a system with transaction-based, risk-free reference rates (RFR) or reforming the calculation of reference rates. In the EU, the EU Benchmark Regulation (EU-BMR), which has been in force since 1 January 2018, forms the legal basis for this. Instead of IBOR rates, alternative reference interest rates are used, in particular risk-free overnight interest rates, which are calculated on the basis of actual turnover as an average interest rate for overnight money (borrowing) in the interbank business or via deposits from large customers. For example, alternative reference interest rates based on the risk-free overnight interest rates €STR, SONIA, SOFR and SARON have been established in the GBP, USD and CHF currency areas. This process is still ongoing in the EUR currency area.

The European Money Markets Institute (EMMI) revised the calculation methodology of the EURIBOR interest rate in 2019 and switched to a hybrid method. As a result of the EURIBOR reform, the calculation was changed and adapted to the requirements, but the reference rate itself was not changed. EMMI has been calculating and publishing the reformed EURIBOR interest rate since July 2019. The EU-BMR conformity of the revised EURIBOR interest rate enables market participants, and thus also pbb, to use EURIBOR interest rates as a reference rate for both existing and new contracts until further notice. pbb expects that the EURIBOR interest rate will remain the reference interest rate for at least the next few years.

In the 2020 financial year, pbb converted the fair value discount curves used for discounting, measurement and in risk models for all products to the new risk-free reference interest rates. In the 2021 financial year, the existing contracts based on LIBOR in GBP and CHF were converted to alternative interest rates. In view of the last publication of USD LIBOR on 30 June 2023, transactions referencing this were converted to the alternative SOFR.

In September 2019, the Financial Reporting Committee (FAB) of the Institute of Public Auditors in Germany (IDW), together with the IDW's Banking Committee (BFA), published the accounting note "Handelsbilanzielle Folgen der Änderung bestimmter Referenzzinssätze ("IBOR-Reform") für Finanzinstrumente" (IDW RH FAB 1.020) on the possible effects of the IBOR reform on the commercial balance sheet. pbb has taken this accounting note into account in the preparation of the 2023 annual financial statements.

OTHER NOTES TO THE FINANCIAL INTRUMENTS

68. Undiscounted cash flows of financial liabilities

Contractually agreed undiscounted cash flows of the financial liabilities according to IFRS 7.39

in € billion	31.12.2023	31.12.2022
Up to 3 months	5	6
From derivative financial instruments	-	-
From non-derivative financial instruments	5	6
More than 3 months to 1 year	10	8
From derivative financial instruments	-	-
From non-derivative financial instruments	10	8
More than 1year to 5 years	23	24
From derivative financial instruments	-	1
From non-derivative financial instruments	23	23
More than 5 years	14	16
From derivative financial instruments	-	1
From non-derivative financial instruments	14	15
Total	**52**	**54**

The undiscounted cash flows are presented in accordance with the contractually maturity, meaning that options or termination rights are not taken into account. This presentation does not reflect the economic management which is based on expected cash flows. The liquidity risk strategy and management is described in the Risk and Opportunity Report.

69. Assets assigned or pledged as collateral

Assets (without cash collaterals) have been pledged as collateral for the following liabilities and received collaterals:

Liabilities

in € million	31.12.2023	31.12.2022
Financial liabilities measured at amortised cost	4,598	3,518
Total	**4,598**	**3,518**

The following assets were pledged as collateral for the aforementioned liabilities:

Assets pledged

in € million	31.12.2023	31.12.2022
Financial assets at fair value through other comprehensive income	1,143	1,285
Financial assets at amortised cost	2,381	1,736
Total	**3,524**	**3,021**

The assets pledged mainly resulted from repurchase agreements. The transactions were carried out at the normal standard terms for repurchase transactions and concluded on an arm's-length basis.

In addition, cash collateral was provided for irrevocable payment obligations for the bank levy in the amount of €42 million (31 December 2022: €36 million), for the Deposit Protection Fund in the amount of €3 million (31 December 2022: €3 million) and for the Compensation Scheme of German Banks in the amount of €4 million (31 December 2022: €3 million). The recognition of collateral is shown in the note "Contingent liabilities, other obligations and contingent assets".

70. Collaterals permitted to resell or repledge

The fair value of the collateral received for which there is a right to sell or repledge without default of the collateral provider exclusively includes collateral from reverse repo transactions. As the collateral taker, pbb Group has the right to sell or repledge the collateral, provided that it returns equivalent securities upon termination of the transaction. As at 31 December 2023, the fair value of the collateral received amounted to €1,156 million (31 December 2022: €3,164 million); of this amount, €1,156 million (31 December 2022: €1,470 million) was repledged.

71. Transfer of financial assets

When pbb Group transfers financial assets that do not qualify for derecognition (see also Note "Financial Instruments"), they continue to be reported in the statement of financial position.

Transfer of financial assets as of 31 December 2023

	Transferred financial assets that are not derecognised in their entirety			
	Transferred assets		Corresponding liabilities	
in € million	**Carrying amounts**	thereof: Repo transactions	**Carrying amounts**	thereof: Repo transactions
Financial assets at fair value through other comprehensive income	1,143	1,143	1,110	1,110
Debt securities	1,143	1,143	1,110	1,110
Financial assets at amortised cost	2,381	2,136	2,254	2,011
Debt securities	2,136	2,136	2,011	2,011
Loans and advances to customers	245	-	243	-
Total	**3,524**	**3,279**	**3,364**	**3,121**

Transfer of financial assets as of 31 December 2022

in € million	Transferred financial assets that are not derecognised in their entirety			
	Transferred assets		Corresponding liabilities	
	Carrying amounts	thereof: Repo transactions	**Carrying amounts**	thereof: Repo transactions
Financial assets at fair value through other comprehensive income	1,284	1,284	1,245	1,245
Debt securities	1,144	1,144	1,118	1,118
Loans and advances to other banks	140	140	127	127
Financial assets at amortised cost	1,722	1,409	1,610	1,299
Debt securities	1,409	1,409	1,299	1,299
Loans and advances to customers	313	-	311	-
Total	**3,006**	**2,693**	**2,855**	**2,544**

At balance sheet date the fair value of financial assets at amortised cost amounted to €2,348 million (31 December 2022: €1,661 million). The fair value of the corresponding liabilities amounted to €2,233 million (31 December 2022: €1,559 million). The net position from the fair values of assets and liabilities amounted to €114 million (31 December 2022: €102 million). pbb Group does not derecognise these financial assets, since not substantially all risks (in particular credit risk) and rewards of ownership are transferred.

In addition, securities with a carrying amount of €125 million (31 December 2022: €200 million) were transferred to Eurex as a collateral for clearing fund contribution and initial margin for derivative transactions.

pbb Group generally has no countinuing involvement in transferred and derecognised financial assets.

72. Fair values of financial instruments

The fair value of financial instruments, in the opinion of pbb Group, is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market at the measurement date under current market conditions (exit price). The fair values were determined as of the balance sheet date based on the market information available and on valuation methods described here.

All financial assets and liabilities that are measured at fair value are grouped into the three fair value hierarchies by pbb Group. Reclassifications within the fair value hierarchy are made at the end of the reporting period. The three-level hierarchy is based on the degree to which the input for the fair value measurement is observable:
> Level 1 – quoted priced (unadjusted) in active markets for identical financial assets or financial liabilities (market prices)
> Level 2 – inputs that are observable either directly or indirectly, other than quoted prices included within Level 1
> Level 3 – valuation techniques that include inputs that are not based on observable market data (unobservable inputs)

Fair values and fair value hierarchy of financial instruments

in € million	Carrying amount	Fair value	Level 1	Level 2	Level 3
	31.12.2023				
			Fair value		
Assets in the scope of IFRS 13	**50,570**	**49,840**	**7,649**	**11,061**	**31,130**
Measured at fair value in the statement of financial position	2,670	2,670	1,336	1,137	197
Financial assets at fair value through profit or loss	944	944	3	754	187
Positive fair values of stand-alone derivatives	494	494	-	494	-
Debt securities	123	123	-	123	-
Loans and advances to customers	324	324	-	137	187
Shares in investment funds qualified as debt instruments	3	3	3	-	-
Financial assets at fair value through other comprehensive income	1,475	1,475	1,333	132	10
Debt securities	1,354	1,354	1,333	13	8
Loans and advances to customers	121	121	-	119	2
Positive fair values of hedge accounting derivatives	251	251	-	251	-
Not measured at fair value in the statement of financial position	47,900	47,170	6,313	9,924	30,933
Cash reserve	2,728	2,728	2,728	-	-
Financial assets at amortised cost[1)]	45,228	44,442	3,585	9,924	30,933
Debt securities	4,013	3,937	2,765	516	656
Loans and advances to other banks	2,507	2,500	794	1,688	18
Loans and advances to customers	38,573	37,865	26	7,580	30,259
Claims from finance lease arrangements	135	140	-	140	-
Valuation adjustment from porfolio hedge accounting (assets)	-56	-	-	-	-
Liabilities in the scope of IFRS 13	**47,315**	**46,035**	**15,875**	**18,616**	**11,544**
Measured at fair value in the statement of financial position	1,451	1,451	-	1,451	-
Financial liabilities at fair value through profit or loss	662	662	-	662	-
Negative fair values of stand-alone derivatives	662	662	-	662	-
Negative fair values of hedge accounting derivatives	789	789	-	789	-
Not measured at fair value in the statement of financial position	45,864	44,584	15,875	17,165	11,544
Financial liabilities measured at amortised cost	45,913	44,584	15,875	17,165	11,544
Liabilities to other banks	6,079	6,033	321	4,335	1,377
Liabilities to customers	18,829	18,263	8	9,237	9,018
Bearer bonds	20,402	19,819	15,546	3,187	1,086
Subordinated liabilities	603	469	-	406	63
Valuation adjustment from porfolio hedge accounting (liabilities)	-49	-	-	-	-

1) Less credit loss allowances.

Fair values and fair value hierarchy of financial instruments

					31.12.2022
			Fair Value		
in € million	Carrying amount	Fair value	Level 1	Level 2	Level 3
Assets in the scope of IFRS 13	**52,722**	**51,549**	**5,941**	**15,532**	**30,076**
Measured at fair value in the statement of financial position	3,029	3,029	1,397	1,360	272
Financial assets at fair value through profit or loss	1,075	1,075	2	817	256
Positive fair values of stand-alone derivatives	562	562	-	562	-
Debt securities	117	117	-	117	-
Loans and advances to customers	394	394	-	138	256
Shares in investment funds qualified as debt instruments	2	2	2	-	-
Financial assets at fair value through other comprehensive income	1,692	1,692	1,395	281	16
Debt securities	1,409	1,409	1,395	-	14
Loans and advances to customers	283	283	-	281	2
Positive fair values of hedge accounting derivatives	262	262	-	262	-
Not measured at fair value in the statement of financial position	49,693	48,520	4,544	14,172	29,804
Cash reserve	1,044	1,044	1,044	-	-
Financial assets at amortised cost[1)]	48,733	47,476	3,500	14,172	29,804
Debt securities	5,376	5,260	2,518	2,198	544
Loans and advances to other banks	5,763	5,741	945	3,524	1,272
Loans and advances to customers	37,452	36,328	37	8,303	27,988
Claims from finance lease agreements	142	147	-	147	-
Valuation adjustment from porfolio hedge accounting (assets)	-84	-	-	-	-
Liabilities in the scope of IFRS 13	**49,371**	**47,793**	**16,575**	**19,547**	**11,671**
Measured at fair value in the statement of financial position	1,811	1,811	-	1,811	-
Financial liabilities at fair value through profit or loss	686	686	-	686	-
Negative fair values of stand-alone derivatives	686	686	-	686	-
Negative fair values of hedge accounting derivatives	1,125	1,125	-	1,125	-
Not measured at fair value in the statement of financial position	47,560	45,982	16,575	17,736	11,671
Financial liabilities measured at amortised cost	47,672	45,982	16,575	17,736	11,671
Liabilities to other banks	7,507	7,406	355	4,197	2,854
Liabilities to customers	17,889	17,308	1	9,567	7,740
Bearer bonds	21,641	20,707	15,952	3,781	974
Subordinated liabilities	635	561	267	191	103
Valuation adjustment from porfolio hedge accounting (liabilities)	-112	-	-	-	-

1) Less credit loss allowances.

According to the general principles of IFRS 13 concerning fair value measurement techniques, an entity shall, in all cases, maximise the use of relevant observable inputs and minimise the use of unobservable inputs. All financial assets and liabilities measured at fair value are assigned to one level of the fair value hierarchy, depending on the respective inputs used.

Disclosures to the measurement methods and input parameters

Measurement Process Both the Finance and the Risk Management & Control divisions play a role in the measurement process. The Finance division supplies accounting data. This includes:

> identification data, such as business identification numbers or International Securities Identification Numbers (ISINs)
> static data such as notional amounts, name and country of the counterparty and (remaining) terms
> accounting data such as carrying amounts, accruals and the effects of hedge accounting

Risk Management & Control calculates additional data used to measure fair value such as interest rates, credit spreads and market prices, as well as internal ratings and LGDs for certain financial instruments.

Risk Management & Control uses the determined input parameters to calculate (and provide to Finance) the fair value or measurement price of financial instruments based on accepted and validated measurement methods. Finance consolidates the data received from Risk Management & Control with the data held for accounting and reporting purposes, and verifies completeness.

Level 2 instruments measured at fair value as of 31 December 2023

Measurement methods	Observable parameter
DCF methods	Euro zone inflation rates
(discounted cash flow)	Reference interest rates
	Seasonalities of Euro zone inflation rates
	Spot market exchange rates
	Yield curves
Option pricing models	Cap volatilities
	CMS spread options (strike price)
	CMS spread options (option price)
	Euro zone inflation rates
	Reference interest rates
	Seasonalities of Euro zone inflation rates
	Swaption volatilities
	Spot market exchange rates
	Exchange rates volatilities
	Yield curves

Level 3 instruments measured at fair value as of 31 December 2023

Measurement methods	Non-observable parameters	Observable parameter
DCF methods	PD/LGD model spread	+/-2 rating levels for PD; +/-0,1 for LGD
Proxy model	Proxy models	+/- triple standard deviation

Financial instruments not measured at fair falue as of 31 December 2023

Measurement methods	Observable parameter (level 2)	Non-observable parameter (level 3)
DCF methods	(Own) credit spreads and Liqui-AddOns, if necessary	Internal rating classes
	Reference interest rates	Recovery rates
	Risk-free interest rate	Estimated remaining maturities
	Observable future cash flows	Estimated future cash flows
	Benchmark interest rates	(Own) credit spreads (secondary market grid)
Bachelier cap-floor model (for floored plain vanilla floater)	Additional cap volatilities including smile	Additional cap volatilities including smile
Bachelier cap-floor model (for fixed coupons options)	Additional swaption volatilities including smile	Additional cap volatilities including smile
Prices on non-active markets	Prices of proxy trades	-

Sensitivities

The calculation of sensitivity is based on shock scenarios for correlations and volatilities pursuant to the level 3 measurement methods table. These amounts were calculated independently from each other.

Non-observable spreads in a PD (probability of default)/LGD (loss given default) model are used for the valuation of intended syndication transactions. The application of alternative spreads results in a change in fair value of €+1 million and €-2 million, respectively.

Alongside this, FVOCI securities and FVOCI receivables are measured using a proxy approach. The alternative scenario shows an only minor fair value change (plus or minus less than €1 million).

Changes in level 3 instruments measured at fair value

in € million	Financial assets at fair value through profit or loss	Financial assets at fair value through other comprehensive income	Financial liabilities at fair value through profit or loss
Balance at 1.1.2022	**346**	**28**	**-**
Profit or loss	-21	-8	-
Additions (new business)	153	-	-
Disposals/repayments	-222	-4	-
Balance at 31.12.2022	**256**	**16**	**-**
Balance at 1.1.2023	**256**	**16**	**-**
Profit or loss	-4	-4	-
Disposals/repayments	-65	-2	-
Balance at 31.12.2023	**187**	**10**	**-**

73. Contractual Modifications

The amortised cost of financial assets of stage 2 and 3 impairments where the contractual cash flows have not changed to a significant extent amounted to €1,573 million prior to modification (31 December 2022: €991 million). This resulted in a net modification result of €0 million in 2023 and 2022. These modifications involved forbearance measures on the part of the pbb Group, primarily in the form of deferrals.

As at 31 December 2023, financial assets with a gross carrying amount of €310 million were held (31 December 2022: €40 million) which were subject to non-substantial modifications in the year under review during their allocation to stage 2 impairments and, independent of their modification, were transferred to stage 1 given their lower risk of default. No stage 3 financial assets were transferred to stage 1 impairments in 2023 and 2022 following a non-substantial modification.

74. Netting of financial instruments

The following tables show the gross carrying amounts of recognised financial assets respectively liabilities, the gross carrying amounts of the items offset in the statement of financial position and the net amounts of the financial assets and liabilities recognised in the statement of financial position. They also show the rights of set-off that did not lead to an offsetting in the statement of financial position, the collateral received for financial assets, the collateral pledged for financial liabilities and the net amounts of financial assets and liabilities remaining following the application of the netting agreements and deduction of the collateral.

Gross carrying amounts of the items offset in the statement of financial position
On-balance sheet netting of derivatives which are settled through Eurex Clearing led to a reduction in total assets of €1.4 billion as at 31 December 2023 (31 December 2022: 1.7 billion).

Netting agreements
In order to minimise the legal risk as well as the economic and regulatory counterparty default risk, standardised bilateral netting agreements in the derivatives business are concluded. The national respectively international agreements used are the German, the French and the Spanish Master Agreement for Financial Futures and the ISDA Master Agreement issued by the International Swaps and Derivatives Association. The derivatives cannot be offset in the statement of financial position since their conditions are not identical (for example different terms or currency underlyings).

Collateral
In addition, pbb Group also enters into collateral agreements to hedge the net receivables and net liabilities arising following offsetting according to the netting agreements (collateral received or pledged). The collateral used is primarily cash collateral; however, securities are sometimes also used by way of title transfer.

Netting of financial instruments as of 31.12.2023

in € billion	Gross carrying amounts of recognised financial assets/liabilities	Gross carrying amounts of the items offset in the statement of financial position	Net amounts presented in the statement of financial position	Rights of set-off that did not lead to an offsetting in the statement of financial position	Received respectively pledged collateral	Remaining net amount
Financial assets	**2.1**	**1.4**	**0.7**	**0.4**	**0.3**	**-**
Positive fair values of derivatives	2.1	1.4	0.7	0.4	0.3	-
Financial liabilities	**2.9**	**1.4**	**1.5**	**0.4**	**1.1**	**-**
Negative fair values of derivatives	2.9	1.4	1.5	0.4	1.1	-

Netting of financial instruments as of 31.12.2022

in € billion	Gross carrying amounts of recognised financial assets/liabilities	Gross carrying amounts of the items offset in the statement of financial position	Net amounts presented in the statement of financial position	Rights of set-off that did not lead to an offsetting in the statement of financial position	Received respectively pledged collateral	Remaining net amount
Financial assets	**2.5**	**1.7**	**0.8**	**0.5**	**0.3**	**-**
Positive fair values of derivatives	2.5	1.7	0.8	0.5	0.3	-
Financial liabilities	**3.5**	**1.7**	**1.8**	**0.5**	**1.3**	**-**
Negative fair values of derivatives	3.5	1.7	1.8	0.5	1.3	-

OTHER NOTES

75. Contingent liabilities and other commitments

Irrevocable loan commitments form the largest part of other commitments. Irrevocable loan commitments comprise all commitments of a creditor which can grant a loan and advance at a later date and which can cause a credit risk. These are mainly credit commitments which are not fully drawn.

Contingent liabilities and other commitments represent the maximum default risk within the meaning of IFRS 7. pbb Group has a claim for reimbursement of expenses in case a contingent liability is utilised.

Contingent liabilities and other commitments

in € million	31.12.2023	31.12.2022
Contingent liabilities	**63**	**70**
Guarantees and warranties	63	70
Other commitments	**2,225**	**2,999**
Irrevocable loan commitments	2,225	2,999
Commitments from bank levies	**49**	**42**
Collateral pledged	49	42
Total	**2,337**	**3,111**

As at the balance sheet date, the fair value of contingent liabilities was €63 million (31 December 2022: €70 million) and the fair value of irrevocable loan commitments was €2,209 million (31 December 2022: €2,947 million).

As at 31 December 2023, contingent receivables amounted to €15 million (31 December 2022: €0 million). These are attributable to an asset claim.

The liabilities from bank levies include cash collateral relating to irrevocable payment obligations to the Financial Market Stabilisation Authority from the bank levy, the Deposit Protection Fund and the Compensation Scheme of German Banks. These result from the utilisation of the option not to pay contributions in full, but to make partial payments in the form of an irrevocable payment obligation by providing cash collateral. As at 31 December 2023, the collateral provided for the European bank levy amounted to €42 million (31 December 2022: €36 million), for the Deposit Protection Fund to €3 million (31 December 2022: €3 million) and for the Compensation Scheme of German Banks to €4 million (31 December 2022: €3 million). In 2023, the collateral for the European bank levy was accordingly increased by €6 million and for the Compensation Scheme of German Banks by €1 million. In addition, pbb Group is obliged to make additional contributions upon request.

pbb Group recognises collateral in accordance with the meeting reports of the Banking Committee of the Institute of Public Auditors in Germany. This states that the transfer of cash as cash collateral at the institution subject to the contribution obligation (collateral provider) leads to the recognition of a financial receivable from the collateral taker (restructuring fund) and to the derecognition of the cash. The institution preparing the balance sheet must also check on each balance sheet date whether there is a sufficient probability that the collateral will be utilised. If a utilisation or economic burden from the irrevocable payment obligation is expected in this case, a provision must be recognised.

A French bank, which is independent of pbb Group, has brought an action against the Single Resolution Board (SRB) for the European bank levy in order to obtain the return of its cash collateral following the surrender of its banking licence. The General Court of the European Union (General Court) dismissed the French bank's action on 25 October 2023. The French bank has appealed against the judgement. According to pbb Group's assessment, the judgement of the General Court, which is not yet final, has no impact on the accounting treatment of the collateral. According to pbb Group's assessment, no provisions need to be recognised as it is unlikely that the collateral will be utilised by the SRB. The business operations of pbb Group are designed to continue (going concern premise), which means that a return of the banking licence with the possible consequence of a payment of the outstanding collateral is also unlikely.

76. Leases

Operate lease as a lessee
As a lessee, pbb Group currently exclusively recognises right-of-use assets referring to land and buildings used in line with IFRS 16. pbb Group entered all of its rental contracts on an arm’s length basis. Some of these contracts contain renewal options potentially extending the lease term for several periods, price adjustment provisions in the form of stepped rents or index clauses, as well as early termination provisions. Regarding lease extension options, and early termination options, pbb Group took what is presently considered the most likely scenario into consideration. pbb Group measured lease liabilities at the corresponding lease payments, which were discounted with the incremental borrowing rate applicable to the respective liability. pbb Group has not made use of rent concessions that would have been granted as a result of the COVID-19 pandemic.

IFRS 16 provides options to exclude leases with a lease term of 12 months or less, as well as low-value assets (defined with a threshold value of €5,000 at pbb Group) from the scope of application. pbb Group has applied these options: expenses for this kind of leases were recognised through profit or loss on a straight-line basis over the contractual term of the underlying asset. Such expenses were disclosed as other operating expenses, or administrative expenses if the payments referred to rental expenses for business premises.

pbb Group discloses right-of-use assets in ‘tangible assets’ (see ‘tangible assets’ note), while lease liabilities are disclosed under ‘other liabilities’ (see ‘other liabilities’ note). Depreciation of right-of-use assets is recognised in the note on ‘net income from write-downs and write-ups of non-financial assets’ (see respective note). Immaterial interest expenses resulting from lease liabilities are disclosed in ‘net interest income’.

For further information on the depreciation, additions or other adjustments made to right-of-use assets, please refer to the statement of changes in tangible assets as disclosed in the “tangible assets” note.

Contractual maturities of undiscounted cash flows from lease liabilities

in € million	31.12.2023	31.12.2022
up to 1 year	5	5
more than 1 year to 5 years	10	13
more than 5 years	1	4
Total	**16**	**22**

Lease in the income statement

in € million	2023	2022
Depreciation	6	6
Interest expense	-	-
Short term leases, less than 12 month	1	1
Total	**7**	**7**

Lease in the statement of cash flows

in € million	2023	2022
Payments for short term leases, less than 12 month (Cash flow from operating activities)	-	-
Interest portion of lease liabilities payments (Cash flow from operating activities)	-	-
Repaymens portion of lease liabilities payments (Cash flow from financing activities)	6	5
Total	**6**	**5**

Finance lease as a lessor

The finance lease receivables due from the lessee are broken down in the following tables by gross and net investment value and by the corresponding maturities.

in € million	31.12.2023	31.12.2022
Gross investment	**157**	**158**
Unearned finance income	-22	-16
Net investment/present value of minimum lease payments	**135**	**142**

Allocation by maturities

in € million	31.12.2023	31.12.2022
Gross investment	**157**	**158**
up to 1 year	16	16
more than 1 year to 2 years	17	16
more than 2 years to 3 years	17	17
more than 3 years to 4 years	17	17
more than 4 years to 5 years	17	17
more than 5 years	73	75
Present value of minimum lease payments	**135**	**142**
up to 1 year	12	13
more than 1 year to 2 years	12	14
more than 2 years to 3 years	13	14
more than 3 years to 4 years	14	15
more than 4 years to 5 years	15	15
more than 5 years	69	71

pbb Group’s finance leases refer to the financing structure for an office building.

In the financial year under review and the previous financial year, no any sale-and-leaseback transactions or third-party sublease agreements were entered into.

77. Key regulatory capital ratios

The Management Board manages the Group's capitalisation, based on regulatory capital ratios in accordance with the CRR and additional regulations announced by the ECB (Supervisory Review and Evaluation Process – "SREP").

Please refer to Risk and Opportunity Report for capitalisation management as well as for key regulatory capital ratios.

78. Group auditor's fee

Group auditor's fee

in € thousand	2023	2022
Audit services	1,741	1,756
Other assurance services	232	319
Tax advisory services	-	-
Other non-audit services	8	100
Total	**1,981**	**2,175**

The auditors' fee for Deloitte GmbH Wirtschaftsprüfungsgesellschaft primarily referred to the audit of the consolidated financial statements and the single-entity annual financial statements, including legal and contractually agreed extensions of the audit assignment of pbb as well as the audit of the financial statements of a subsidiary. Interim financial statements were reviewed in addition.

Other assurance services mainly related to the issuing of a comfort letter in connection with the issue of debt securities, the audit of the reporting obligations and rules of conduct in accordance with the German Securities Trading Act (WpHG) and the audit of the summarised Non-financial report.

The other services related to a review of the analyses of supervisory findings.

The auditor's independence was not impaired by the services provided outside the audit.

79. Related parties disclosures

According to IAS 24 (Related-Party Disclosures), a party is related to an entity if, directly or indirectly through one or more intermediaries, the party controls or is controlled by the reporting entity, has an interest in the entity that gives it significant influence over the entity or has joint control over the entity as well as associates and joint ventures. In addition, retirement benefit schemes for postemployment benefits for employees are also included under related parties.

Related Entities

At the reporting date, pbb Group had receivables to associates not accounted for using the equity method in the amount of €7 million (31 December 2022: €11 million); as in the previous year, there were no liabilities.

On 31 December 2023 liabilities to defined contribution plans amounted to €1 million (31 December 2022: less than €1 million).

Management in key positions

Management in key positions are persons who are directly or indirectly responsible for planning, directing and controlling the activities of pbb Group; for pbb Group, this means the members of the Management Board and the Supervisory Board.

For 2023, pension payments for former members of the Management Board and their surviving dependants totalled €4,768 thousand (2022: €4,758 thousand). The remuneration of the members of pbb's Supervisory Board in office during the year under review amounted to €699 thousand (2022: €683 thousand). This comprised exclusively fixed remuneration (including remuneration for memberships in Supervisory Board committees).

Vested remuneration claims of related persons[1)]

in € thousand	Short-term benefits[2)]	Post-employment benefits	Other long-term benefits	Termination benefits	Share-based payments[2)]	2023 Total	2022 Total
Total	**3,978**	**1,737**	**311**	**-**	**830**	**6,856**	**7,771**

[1)] Reporting follows the "vesting principle", disclosing those remuneration components which were vested during the relevant 2023 reporting period.
[2)] Remuneration partly preliminary.

Pension obligations to related persons

in € thousand	31.12.2023	31.12.2022
Total[1)]	**68,116**	**63,967**

[1)] Including €53,350 thousand (2022: €52,781 thousand) for pensioners and their surviving dependants.

Disclosure pursuant to section 314 no. 6 of the HGB, by groups of individuals

Remuneration paid to Management Board members

in € thousand	2023[1)] Remuneration	2023[1)] Total
Management Board members who were in office during the financial year 2023	3,212	3,212
Management Board members who retired prior to the financial year 2023	-	-
Total	**3,212**	**3,212**

[1)] Remuneration paid to Management Board members who were in office in 2022 amounted to €3,247 thousand. Management Board members who retired prior the financial year 2022 did not receive any remuneration in 2022.

As of the balance sheet date, there were no receivables to related persons from loans or advances or other commitments.

Provisions for pensions

in € thousand	2023[1)] Additions/ reversals	2023[1)] Total
Management Board members who were in office during the financial year 2023	3,543	14,405
Management Board members who retired prior to the financial year 2023	570	53,351
Total	**4,113**	**67,756**

[1)] Provisions for pensions for Management Board members who were in office during the financial year 2022 amounted to €10,862 thousand as at 31 December 2022. Provisions for pensions to Management Board members who were retired prior the financial year 2022 amounted to €52,781 thousand as at 31 December 2022.

Remuneration paid to Supervisory Board members of pbb

in € thousand	2023[2)] Total fixed remuneration
Supervisory Board members who were in office during the financial year 2023	699
Supervisory Board members who retired prior to the financial year 2023	-
Total	**699**

[1)] Remunerations based on employment contracts that employee representatives of the Supervisory Board receive additionally to their function in the Supervisory Board are not shown.
[2)] Remuneration paid to Supervisory Board members who were in office during the financial year 2022 amounted to €683 thousand for 2022. Supervisory Board members who retired prior the financial year 2022 did not receive any remuneration in 2022.

Except for employee representatives to the Supervisory Board, who are remunerated by pbb under their individual employment contracts, the members of pbb's Supervisory Board did not receive any remuneration for personal services during 2023.

Statement according to article 19 MMVO

According to pbb's knowledge, the members of the Management Board and the Supervisory Board as well as persons closely related to these members did not hold any shares of the Company in a reportable extent as at 31 December 2023 and as at 31 December 2022. In 2023 and 2022, according to pbb's knowledge, no pbb shares or financial instruments relating to such shares in a reportable extend were acquired or sold by members of the Management Board and the Supervisory Board or by persons closely related to such members.

Amount of cash-settled share-based payment transactions

The total amount of outstanding virtual shares in relation to the share-based payment arrangements developed as follows:

Amount of cash-settled share-based payment transactions

Quantity (number)	2023	2022
Balance (outstanding) at 1.1.	367,761	314,773
granted during the reporting period	207,107	176,337
expired during the reporting period	-	-
exercised during the reporting period	151,365	123,349
Balance (outstanding) at 31.12.	423,503	367,761
of which: exercisable	-	-

The fair value of the virtual shares granted during the reporting period amounted to €1 million (2022: €1 million) as at the balance sheet date. The obligation from share-based payment transactions as at 31 December 2023 amounted to €4 million (2022: €4 million). It is reported in the statement of financial position under provisions.

The virtual shares exercised during the reporting year were converted at a weighted average price of the pbb share of €8.95 (2022: €11.11).

The total amount expensed for share-based payment transactions during the financial year 2023 was €1 million (2022: €2 million).

An amount of €0 million (2022: €0 million) was expensed for former members of the Management Board.

80. Employees

Average number of employees

	2023	2022
Employees (excluding apprentices)	848	826
Thereof: senior staff in Germany	19	19
Total	**848**	**826**

81. Members of the Supervisory Board and of the Management Board

Supervisory Board of pbb in financial year 2022

Name Place of residence Function in Supervisory Board Initial appointment	Principal occupation Functions in the Committees of the Supervisory Board	Supervisory Board memberships and other directorships in 2023
Dr Günther Bräunig Frankfurt/Main, Germany Chairman (until 25.5.2023) 14.8.2009	**Management consultant and former Chairman of the Management Board of KfW** Chairman of the Executive and Nomination Committee and of the Remuneration Committee (until 25.5.2023); Member of the Audit and Digitalisation Committee and of the Risk Management and Liquidity Strategy Committee (until 25.5.2023)	**Deutsche Telekom AG, Bonn, Germany** – Member of the Supervisory Board (until 5.4.2023)
Dr Louis Hagen Starnberg/Germany Chairman (since 25.5.2023) 25.5.2023	**Management consultant and former Chairman of the Management Board of Münchner Hypothekenbank eG** Chairman of the Executive and Nomination Committee and of the Remuneration Committee (since 25.5.2023); Member of the Audit and Digitalisation Committee and of the Risk Management and Liquidity Strategy Committee (since 25.5.2023)	**LBBW Asset Management Investmentgesellschaft mbH, Stuttgart** – Member of the Supervisory Board **Baader Bank AG, Unterschleißheim** – Member of the Supervisory Board
Hanns-Peter Storr Schwäbisch Gmünd, Germany Member; Deputy Chairman 12.5.2021	**Entrepreneur** Chairman of the Risk Management and Liquidity Strategy Committee; Member of the Audit and Digitalisation Committee	**BHW Bausparkasse AG, Hameln, Germany** – Member of the Supervisory Board
Karim Bohn Augsburg/Germany Member (since 30.11.2023) 30.11.2023	**Chief Financial Officer der Canyon Bicycles GmbH**	
Gertraud Dirscherl Landshut Member 02.02.2022	**Entrepreneur** Chairwoman of the Audit and Digitalisation Committee; Member of the Remuneration Committee and the Risk Management and Liquidity Strategy Committee	**Hans DEHN SE, Neumarkt i.d. Oberpfalz –** Member of the Supervisory Board **DEHN SE, Neumarkt i.d. Oberpfalz –** Member of the Supervisory Board
Dr Thomas Duhnkrack Kronberg/Taunus, Germany Member 21.7.2015	**Entrepreneur** Member of the Audit and Digitalisation Committee and of the Executive and Nomination Committee (until 15.11.2023)	**Hauck Aufhäuser Lampe Privatbank AG, Frankfurt/Main, Germany** – Member of the Supervisory Board (until 28.4.2023)
Prof Dr Kerstin Hennig Schmitten Member 19.07.2022	**University professor EBS University (until 30.9.2023)** **Professor Frankfurt School of Finance & Management (since 1.11.2023)** Member of the Risk Management and Liquidity Strategy Committee (since 05.08.2022)	**DWS Grundbesitz GmbH, Frankfurt/Main** – Member of the Supervisory Board **DEMIRE Deutsche Mittelstand Real Estate AG, Frankfurt/Main** – Member of the Supervisory Board
Susanne Klöß-Braekler Munich, Germany Member 12.5.2021	**Independent Supervisory and Advisory Board Member, Investor, Senior Advisor** Member of the Executive and Nomination Committee and of the Remuneration Committee	**ING-DiBa AG, Frankfurt/Main, Germany** – Chairman of the Supervisory Board **Oddo BHF AG, Frankfurt/Main, Germany** – Member of the Supervisory Board **Cembra Money Bank AG, Zürich, Switzerland** – Member of the Supervisory Board
Georg Kordick Poing, Germany Employee Representative 22.2.1990	**Bank employee**	–
Olaf Neumann Munich, Germany Employee Representative 12.5.2021	**Bank employee**	–
Heike Theißing Munich, Germany Employee Representative 7.7.2011	**Bank employee** Member of the Remuneration Committee	**–**

Management Board of pbb in financial year 2023

Name and place of residence	**Function in the Management Board**	**Supervisory Board memberships**
Andreas Arndt Munich	CEO and until 30 November 2023 CFO	-
Thomas Köntgen Frankfurt/Main	Deputy CEO, Real Estate Finance and until 7 August 2023 Public Investment Finance	-
Andreas Schenk Dreieich	CRO	-
Marcus Schulte Grünwald	Treasurer and since 1 December 2023 CFO	-

Andreas Arndt left the Management Board at the end of February 2024. Kay Wolf was appointed as a member of the Management Board with effect from 1 February 2024 and has been Chairman of the Management Board since 1 March 2024. Dr Pamela Hoerr was appointed as a member of the Management Board with effect from 17 January 2024.

82. Holdings of pbb

Holdings of pbb as of 31 December 31.12.2023

		Interest in %					
Additional statement according to HGB Name Place of business and country	Purpose of business	Total (Sec 16 (4) Aktiengesetz)	Of which held indirectly	Differing voting rights in %	Currency	Equity in thousands	Net income/ loss in thousands
Consolidated companies							
IMMO Invest Real Estate GmbH[1)] Munich, Germany	Purchase of salvage acquisitions	100.00	-	-	EUR	948	-
Associated companies not measured at equity due to minor significance							
Eco Estate GmbH Frankfurt/Main, Germany	ESG consulting	35.00			EUR	97	-385
SOMA Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Darmstadt KG[2)] Dusseldorf, Germany	Model of bank holding	33.33	-	-	EUR	5,048	2,779

[1)] Profit transfer by shareholders on the basis of profit and loss transfer agreement.
[2)] Financial figures from the financial year 2022.

83. Country-by-Country Reporting

The requirements of Article 89 CRD (Capital Requirements Directive CRD IV) concerning to so-called Country-by-Country Reporting were endorsed in German law by Section 26a KWG (German Banking Act). In financial years 2023 and 2022 no entity, branch or representative office of pbb received public subsidies. On 31 December 2023, the ratio of net profit and total balance sheet of pbb Group was 0.2% (31 December 2022: 0.4%). The further figures required by Section 26a KWG are disclosed in the following table:

Country-by-Country Reporting (Additional statement according to Section 26a KWG) as of 31 December 2023

Type of business Name and place of business	Country	Number of employees[1]	Turnover[2) 3)] (in € million)	Income/loss before tax[3] (in € million)	Income taxes[3] (in € million)
Deposit taking credit institution					
Deutsche Pfandbriefbank AG, Munich	Germany	708	567	87	-1
Branch of a deposit taking credit institution					
Deutsche Pfandbriefbank AG, London branch	United Kingdom	40	12	-	-
Deutsche Pfandbriefbank AG, Madrid branch	Spain	8	2	-	-
Deutsche Pfandbriefbank AG, Paris branch	France	30	12	1	1
Deutsche Pfandbriefbank AG, Stockholm branch	Sweden	11	4	1	-
Representative office of a deposit taking credit institution					
Deutsche Pfandbriefbank AG, representative office New York	USA	9	6	1	1
Provider of ancillary services					
IMMO Invest Real Estate GmbH, Munich	Germany	-	-	-	-

1) Full-time equivalents not including apprentices, interns/working students and short-term employees with fixed terms < 1 year.
2) Operating income as turnover equivalent.
3) Figures before consolidation.

84. Report on Post-balance Sheet Date Events

At the beginning of 2024, market confidence in pbb Group's prospects deteriorated significantly. This was triggered, among other things, by publications by other banks, particularly US banks, about credit loss allowances recognised on US commercial real estate financings and the resulting general concern that further significant impairments might also become necessary at other banks involved in this segment. As a listed bank with a business model focussed on commercial real estate finance and a 10% share of US business, pbb was particularly affected by the growing concern. As a result, corresponding sell recommendations from analysts, among other things, led to a significant increase in spreads on bonds and a marked decline in pbb's share price.

On 14 February 2024, Standard & Poor's lowered pbb's ratings by one and two notches respectively, while maintaining a negative outlook. In simple terms, the rating downgrade was one notch for the long-term preferred ratings including the issuer rating and the preferred senior unsecured debt rating, while the ratings for subordinated liabilities including the non-preferred senior unsecured rating were lowered by two notches. The short-term issuer rating also deteriorated by one notch.

pbb Group has sufficient long-term unsecured funding and is not planning any senior unsecured issues for the current year. As at 31 December 2023, unsecured funding comprised retail deposits of €6.6 billion, of which €5.7 billion were fixed-term deposits with an average maturity of more than three years. For 2024, the collateralised refinancing requirement on the capital market is largely covered by higher refinancing activity in the second half of 2023 and at the beginning of 2024 with moderate REF new business expectations for 2024. The capital ratios as at 31 December 2023 were well above the regulatory requirements. pbb Group is closely monitoring the situation on the markets and adapting its business activities accordingly.

Kay Wolf joined pbb as a member of the Management Board on 1 February 2024. On 1 March 2024, he succeeded Andreas Arndt as Chairman of pbb's Management Board, who left the Management Board the day before. Dr Pamela Hoerr joined pbb's Management Board on 17 January 2024.

Munich, 5 March 2024

Deutsche Pfandbriefbank AG
The Management Board

Kay Wolf	Thomas Köntgen	Dr. Pamela Hoerr	Andreas Schenk	Marcus Schulte

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Combined Management Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.

Munich, 5 March 2024

Deutsche Pfandbriefbank AG
The Management Board

Kay Wolf	Thomas Köntgen	Dr. Pamela Hoerr	Andreas Schenk	Marcus Schulte

Independent Auditor's Report

To Deutsche Pfandbriefbank AG, Munich/Germany

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE COMBINED MANAGEMENT REPORT

Audit Opinions

We have audited the consolidated financial statements of Deutsche Pfandbriefbank AG, Munich/Germany, and its subsidiaries (the Group) which comprise the consolidated statement of financial position as at 31 December 2023, the consolidated statement of profit and loss, the consolidated statement of other comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2023, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the combined management report for the parent and the group of Deutsche Pfandbriefbank AG, Munich/Germany, for the financial year from 1 January to 31 December 2023. In accordance with the German legal requirements, we have not audited the sections "Organisation and Principles of Internal Control System" and "Appropriateness and Effectiveness of the Internal Control and Risk Management System" of the combined management report, which are marked as "unaudited", nor the content of the combined corporate governance statement, including the further reporting on corporate governance included therein, nor the combined separate non-financial report, each of which is made reference to in the combined management report.

In our opinion, on the basis of the knowledge obtained in the audit,

> the accompanying consolidated financial statements comply, in all material respects, with the IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) German Commercial Code (HGB) and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2023 and of its financial performance for the financial year from 1 January to 31 December 2023, and

> the accompanying combined management report as a whole provides an appropriate view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the combined management report does not cover the content of the sections "Organisation and Principles of Internal Control System" and "Appropriateness and Effectiveness of the Internal Control and Risk Management System" of the combined management report stated above, nor the content of the combined corporate governance statement stated above, including the further reporting on corporate governance included therein, nor the combined separate non-financial report stated above.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the combined management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the combined management report in accordance with Section 317 HGB and the EU Audit Regulation (No. 537/2014; referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the combined management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements
Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2023. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In the following we present the determination of risk provisioning in the lending business, which we have determined to be a key audit matter in the course of our audit.

Our presentation of this key audit matter has been structured as follows:

a) description (including reference to corresponding information in the consolidated financial statements)
b) auditor's response

Determination of risk provisioning in the lending business

a) As at 31 December 2023, a total of bEUR 45.2 in "Financial assets at amortised cost after credit loss allowances" are recognised in the consolidated financial statements of Deutsche Pfandbriefbank AG, which makes up 88.8% of total assets. The existing risk provisioning of mEUR 583 has already been deducted from these assets. Risk provisioning includes both individually determined stage 3 specific allowances of mEUR 414 and stage 1 and 2 credit loss allowances determined using a model-based approach of mEUR 169 that include a management overlay of mEUR 31 on account of the uncertainties regarding the further development of the US property market. Additional contingent liabilities and other commitments amount to bEUR 2.3, for which provisions of mEUR 6 have been made in the lending business, which fully relate to stage 1 and 2 portfolio allowances determined using a model-based approach.

   The Bank assesses the recoverability of loans and advances in the lending business on a regular basis and whenever there are objective indications that the assets may be impaired. The expected stage 3 credit loss is determined based on individual cash flows in several probability-weighted scenarios. The amount of risk provision equals the difference between the carrying amount of the asset and the present value of the expected future cash flows. The latter is calculated based on the initial effective interest rate. The expected future cash flows take into account the marketability of collaterals such as land charges/mortgages. Where applicable, corresponding provisions are made for off-balance sheet transactions subject to either an imminent risk of utilisation by doubtful borrowers (guarantees, warranties) or to expected impairments due to payment obligations (irrevocable loan commitments).

   Upon initial recognition of the loans and advances, the impairments in the lending business are based on expected credit losses for twelve months (stage 1). The twelve-month expected credit loss is that part of the lifetime expected credit losses that is equal to the expected credit losses from defaults that may occur statistically within twelve months after the reporting date. In case of a significant increase in the financial asset's credit risk within the context of subsequent measurement (stage 2), the impairment has to reflect the expected default events over the life of the transaction. For determining stage 1 and 2 credit losses, the Bank generally uses a model-based procedure based on the internal risk parameters (probability of default, loss given default) and on the rules agreed in the loan agreements underlying the loans and advances, such as contractually agreed cash flows. The internal risk parameters are transformed by taking into account forward-looking information. Stage 1 and 2 credit losses are measured using different scenarios weighted by their probability of occurrence.

As at the balance sheet date 31 December 2023, a management overlay of mEUR 31 was added to the stage 1 and 2 credit losses that was determined by taking into account the development expected by the executive directors of the Bank for the market values of the properties in the US portfolio in the form of increased losses given default. In addition, pbb makes a provision in the amount of the expected loss over the residual term for all US financial instruments with a current rating prior to 30 June 2023 by performing a collective stage transfer of these transactions in stage 2.

Given the fact that the lending business is one of the Bank's core business activities and both individual and model-based measurement of loans and advances as well as the determination of the settlement amount of provisions as is necessary according to the impairment rules under IFRS 9 requires the executive directors to make judgements and estimates, for example with respect to the design of the measurement models, estimates such as the expected future payments received, the measurement of collateral or other expected defaults, there is a higher risk that the amount of the credit loss allowances, if necessary, may not be appropriate. This matter was of particular relevance as part of our audit since the recoverability of loans and advances in the lending business and, in correspondence with that, the appropriate determination of allowances is prone to uncertainties.

The disclosures on the determination of allowances in the lending business can be found in the notes to the consolidated financial statements in note 7 "Financial Instruments", subsection "Impairment", in note 29 "Judgements and Estimations", subsection "Allowances", as well as in note 50 "Financial Assets at Amortised Cost after Credit Loss Allowances (Including Claims from Finance Lease Agreements)", subsection "Development in risk provisioning".

b) Based on our risk assessment, our risk-based audit approach involved an examination of the relevant system of internal control and the performance of substantive procedures. The test of design and implementation and of operating effectiveness comprised the controls with respect to the processes for identifying indications for impairment (risk early recognition process), customer ratings as well as cash flow-based determination of impairment (stage 3 credit losses or specific allowances). Moreover, we conducted a test of design and implementation and of operating effectiveness of the controls with respect to the determination of stages 1 and 2 credit losses.

In addition, we conducted an evaluation of the appropriate identification of indications for impairment based on individual cases selected according to risk aspects, as well as of the measurement of loans and advances for which the Bank considered it necessary to carry out an impairment test, including the acceptability of the estimated values. Within the scope of this evaluation, we particularly reviewed those methods, assumptions and data used by the Bank for determining the estimated values. With respect to the measurement of loans and advances, we reviewed the underlying assumptions, especially the amount and timing as well as the discounting of expected future payments received in the different scenarios as well as their weighting. In this context, we also evaluated the measurement of collateral taken into account in the scenarios.

Furthermore, we traced the determined stage 1 and 2 credit losses based on a representative sample and evaluated the methodology for deriving the management overlay and the appropriateness of the underlying assumptions, especially with respect to the identified credit portfolio and the adjustments of losses given default, in respect of the estimated values. In this context, our evaluation also took into account industry reports and research results from real estate market observation.

For the purpose of assessing the determination of stage 1 and 2 credit losses and assessing the measurement of collateral, we called in our internal specialists.

In addition, we audited the accuracy and completeness of the disclosures made in the notes to the consolidated financial statements.

Other Information

The executive directors and/or the supervisory board are responsible for the other information. The other information comprises

- the report of the supervisory board,
- the combined corporate governance statement pursuant to Section 289f and Section 315d HGB including the further reporting on corporate governance included therein, to which reference is made in the combined management report,
- the combined separate non-financial report pursuant to Sections 315b and 315c HGB in conjunction with Sections 289b to 289e HGB, to which reference is made in the combined management report and which is published together with the combined management report,
- the executive directors' confirmation regarding the consolidated financial statements and the combined management report pursuant to Section 297 (2) sentence 4 and Section 315 (1) sentence 5 HGB
- the unaudited content of the combined management report marked as "unaudited", and
- all other parts of the annual report,
- but not the consolidated financial statements, not the audited content of the combined management report and not our auditor's report thereon.

The supervisory board is responsible for the report of the supervisory board. The executive directors and the supervisory board are responsible for the statement according to Section 161 German Stock Corporation Act (AktG) concerning the German Corporate Governance Code, which is part of the combined corporate governance statement. Otherwise the executive directors are responsible for the other information.

Our audit opinions on the consolidated financial statements and on the combined management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information identified above and, in doing so, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the audited content of the combined management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Combined Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e. fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the combined management report that as a whole provides an appropriate view of the Group’s position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a combined management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the combined management report.

The supervisory board is responsible for overseeing the Group’s financial reporting process for the preparation of the consolidated financial statements and of the combined management report.

Auditor’s Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the combined management report as a whole provides an appropriate view of the Group’s position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor’s report that includes our audit opinions on the consolidated financial statements and on the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this combined management report.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also

- identify and assess the risks of material misstatement of the consolidated financial statements and of the combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.
- evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- conclude on the appropriateness of the executive directors’ use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group’s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor’s report to the related disclosures in the consolidated financial statements and in the combined management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRS as adopted by the EU and with the additional requirements of German commercial law pursuant to Section 315e (1) HGB.

- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- perform audit procedures on the prospective information presented by the executive directors in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the actions taken or safeguards applied to eliminate independence threats.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements for the current period and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Report on the Audit of the Electronic Reproductions of the Consolidated Financial Statements and of the Combined Management Report Prepared for Publication Pursuant to Section 317 (3a) HGB

Audit Opinion

We have performed an audit in accordance with Section 317 (3a) HGB to obtain reasonable assurance whether the electronic reproductions of the consolidated financial statements and of the combined management report (hereinafter referred to as "ESEF documents") prepared for publication, contained in the file, which has the SHA-256 value db9ba3fbf6b3d1322068d5e6141342a65444290c227c75c2c3530bd5f4649b2f, meet, in all material respects, the requirements for the electronic reporting format pursuant to Section 328 (1) HGB ("ESEF format"). In accordance with the German legal requirements, this audit only covers the conversion of the information contained in the consolidated financial statements and the combined management report into the ESEF format, and therefore covers neither the information contained in these electronic reproductions nor any other information contained in the file identified above.

In our opinion, the electronic reproductions of the consolidated financial statements and of the combined management report prepared for publication contained in the file identified above meet, in all material respects, the requirements for the electronic reporting format pursuant to Section 328 (1) HGB. Beyond this audit opinion and our audit opinions on the accompanying consolidated financial statements and on the accompanying combined management report for the financial year from 1 January to 31 December 2023 contained in the "Report on the Audit of the Consolidated Financial Statements and of the Combined Management Report" above, we do not express any assurance opinion on the information contained within these electronic reproductions or on any other information contained in the file identified above.

Basis for the Audit Opinion

We conducted our audit of the electronic reproductions of the consolidated financial statements and of the combined management report contained in the file identified above in accordance with Section 317 (3a) HGB and on the basis of the IDW Auditing Standard: Audit of the Electronic Reproductions of Financial Statements and Management Reports Prepared for Publication Purposes Pursuant to Section 317 (3a) HGB (IDW AuS 410 (06.2022)). Our responsibilities in this context are further described in the "Group Auditor's Responsibilities for the Audit of the ESEF Documents" section. Our audit firm has applied the requirements of the IDW Quality Management Standards.

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Documents

The executive directors of the parent are responsible for the preparation of the ESEF documents based on the electronic files of the consolidated financial statements and of the combined management report according to Section 328 (1) sentence 4 no. 1 HGB and for the tagging of the consolidated financial statements according to Section 328 (1) sentence 4 no. 2 HGB.

In addition, the executive directors of the parent are responsible for such internal controls that they have considered necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements for the electronic reporting format pursuant to Section 328 (1) HGB.

The supervisory board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group Auditor's Responsibilities for the Audit of the ESEF Documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB. We exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinion.
- obtain an understanding of internal control relevant to the audit on the ESEF documents in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- evaluate the technical validity of the ESEF documents, i.e. whether the file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815, in the version in force at the balance sheet date, on the technical specification for this electronic file.
- evaluate whether the ESEF documents enable a XHTML reproduction with content equivalent to the audited consolidated financial statements and to the audited combined management report.
- evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Delegated Regulation (EU) 2019/815, in the version in force at the balance sheet date, enables an appropriate and complete machine-readable XBRL copy of the XHTML reproduction.

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 25 May 2023. We were engaged by the supervisory board on 3 and 7 August 2023. We have been the group auditor of Deutsche Pfandbriefbank AG, Munich/Germany, since the financial year 2021.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

OTHER MATTER – USE OF THE AUDITOR'S REPORT

Our auditor's report must always be read together with the audited consolidated financial statements and the audited combined management report as well as with the audited ESEF documents. The consolidated financial statements and the combined management report converted into the ESEF format – including the versions to be submitted for inclusion in the Company Register – are merely electronic reproductions of the audited consolidated financial statements and the audited combined management report and do not take their place. In particular, the ESEF report and our audit opinion contained therein are to be used solely together with the audited ESEF documents made available in electronic form.

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Martin Kopatschek

Munich/Germany, 6 March 2024

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

Signed: Prof. Dr Carl-Friedrich Leuschner
Wirtschaftsprüfer
(German Public Auditor)

Signed: Martin Kopatschek
Wirtschaftsprüfer
(German Public Auditor)

TRANSLATION
– German version prevails –

Future-oriented Statements

This report contains future-oriented statements in the form of intentions, assumptions, expectations or forecasts. These statements are based on the plans, estimates and predictions currently available to the management board of pbb. Future-oriented statements therefore only apply on the day on which they are made. We do not undertake any obligation to update such statements in light of new information or future events. By their nature, future-oriented statements contain risks and factors of uncertainty. A number of important factors can contribute to actual results deviating considerably from future-oriented statements. Such factors include the condition of the financial markets in Germany, Europe and the USA, the possible default of borrowers or counterparties of trading companies, the reliability of our principles, procedures and methods for risk management as well as other risks associated with our business activity.

Imprint

Deutsche Pfandbriefbank AG (Publisher)
Parkring 28
85748 Garching
Germany

T +49 (0)89 2880 - 0
info@pfandbriefbank.com
www.pfandbriefbank.com

The German version of this Annual Report is the authoritative version and only the German version of the Combined Management Report and the Consolidated Financial Statements were audited by the auditors.