Disclosure Report

In accordance with Part 8 of the Capital Requirements Regulation (CRR)

as of 31 Dezember 2021

Deutsche Pfandbriefbank Group

Overview

Deutsche Pfandbriefbank Group („pbb Group“)

EU KM1: Key metrics

	All figures in € million, unless otherwise stated	a 31.12.2021	b 30.09.2021	c 30.06.2021	d 31.12.2020
	Available own funds (amounts)				
1	Common Equity Tier 1 (CET1) capital	2,875	2,703	2,777	2,854
2	Tier 1 capital	3,173	3,001	3,074	3,152
3	Total capital	3,766	3,594	3,693	3,798
	Risk-weighted exposure amounts				
4	Total risk-weighted exposure amount	16,792	18,116	17,992	17,744
	Capital ratios (as a percentage of risk-weighted exposure amount)				
5	Common Equity Tier 1 ratio (%)	17.1	14.9	15.4	16.1
6	Tier 1 ratio (%)	18.9	16.6	17.1	17.8
7	Total capital ratio (%)	22.4	19.8	20.5	21.4
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)				
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.5	2.5	2.5	2.5
EU 7b	thereof: to be made up of CET1 capital (percentage points)	1.4	1.4	1.4	1.4
EU 7c	thereof: to be made up of Tier 1 capital (percentage points)	1.9	1.9	1.9	1.9
EU 7d	Total SREP own funds requirements (%)	10.5	10.5	10.5	10.5
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)				
8	Capital conservation buffer (%)	2.50	2.50	2.50	2.50
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	-	-	-	-
9	Institution specific countercyclical capital buffer (%)	0.02	0.02	0.02	0.02
EU 9a	Systemic risk buffer (%)	-	-	-	-
10	Global Systemically Important Institution buffer (%)	-	-	-	-
EU 10a	Other Systemically Important Institution buffer (%)	-	-	-	-
11	Combined buffer requirement (%)	2.52	2.52	2.52	2.52
EU 11a	Overall capital requirements (%)	13.02	13.02	13.02	13.02
12	CET1 available after meeting the total SREP own funds requirements (%)	11.0	8.7	9.2	9.9
	Leverage ratio [2)]				
13	Total exposure measure	52,549	52,758	52,386	52,335
14	Leverage ratio (%) [3)]	6.0	5.7	5.9	6.0
	Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)				
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)	-	-	-	-
EU 14b	thereof: to be made up of CET1 capital (percentage points)	-	-	-	-
EU 14c	Total SREP leverage ratio requirements (%)	3.1	3.1	3.1	-
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)				
EU 14d	Leverage ratio buffer requirement (%)	-	-	-	-
EU 14e	Overall leverage ratio requirements (%)	3.1	3.1	3.1	-
	Liquidity Coverage Ratio				
15	Total high-quality liquid assets (HQLA) (Weighted value - average)	5,808	5,778	5,728	5,292
EU 16a	Cash outflows - Total weighted value	2,346	2,269	2,211	2,171
EU 16b	Cash inflows - Total weighted value	370	414	512	510
16	Total net cash outflows (adjusted value)	1,978	1,855	1,699	1,660
17	Liquidity coverage ratio (%)	308	321	347	325
	Net Stable Funding Ratio [4)]				
18	Total available stable funding	49,695	49,121	49,963	-
19	Total required stable funding	42,084	42,284	42,078	-
20	NSFR ratio (%)	118	116	119	-

[1] As the EU KM1 table pursuant to Article 447 of the CRR was disclosed for the first time as at 30 June 2021, data is not yet shown for all prior periods T-1 to T-4 in accordance with Implementing Regulation (EU) 2021/637 (Pillar 3 framework), Annex II. Until the application of the CRR II regulations (effective from 28 June 2021), pbb Group published disclosures as at the reporting dates of 30 June and 31 December of each financial year. Since 30 June 2021, pbb Group has made quarterly disclosures in accordance with Article 433a of the CRR.

[2] CRR II revamped the regulations on the leverage ratio, which is why the leverage ratios reported since 30 June 2021 and the leverage ratio as at 31 December 2020 are only comparable to a limited extent.

[3] The Leverage Ratio as of 31 December 2021 was corrected to 6.0 %. The original publication of the Disclosure Report as of 31 December 2021 of 22 April 2022 was accordingly replaced.

[4] As the Net Stable Funding Ratio (NSFR) was disclosed for the first time as at 30 June 2021, no values are shown for the 31 December 2020 disclosure date.

Note:

The monetary values shown in this Disclosure Report are stated in millions of euros in accordance with Article 19 no. 4 of Implementing Regulation (EU) 2021/637. The figures have been rounded in line with standard commercial practice. Rounding means that the totals shown in the tables may differ slightly from the totals calculated by adding up the individual values shown. Individual values of less than €500,000 are not shown due to commercial rounding; these are shown as zero or as zero balances indicated by a hyphen. The principle of materiality pursuant to Article 432 (1) of the CRR is observed when disclosing information.

With regard to the CRR and CRR II/CRD IV and CRD V regulations (hereinafter referred to uniformly as “CRR” and “CRD” respectively if and to the extent that no statements are made on the CRR II and CRD V provisions that have been applicable for the first time since 28 June 2021; such statements shall then make explicit reference to “CRR II” and “CRD V”), uncertainty remains as to how some of the regulations are to be interpreted, and the final versions of some of the related mandatory regulatory technical standards are still unavailable. As a result, we will adjust our assumptions and models on an ongoing basis as our understanding and interpretation of the rules, and those of the sector as a whole, evolve. With this in mind, our current CRR/CRD metrics may not be comparable to our previous expectations. Our CRR/CRD metrics may also not be comparable to metrics reported by our competitors with similar designations, as their assumptions and estimates may differ from our own.

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Introduction

Deutsche Pfandbriefbank („pbb“)

Deutsche Pfandbriefbank Group (“pbb Group”) consists primarily of the parent entity Deutsche Pfandbriefbank AG (“pbb”). pbb, which has its registered office in Munich/Garching, is a specialist lender for commercial real estate finance and public investment finance in Europe and the United States of America, focusing on business eligible for inclusion in Pfandbrief cover. It issues Mortgage Pfandbriefe, collateralised by real property liens, as well as Public Sector Pfandbriefe, collateralised by claims against the public sector and, measured by outstanding volume, is one of the largest issuers of Pfandbriefe, which also makes it an important player in the European covered bond markets. In its core markets, pbb maintains a strong local presence for its clients, covering all functions of the financing process. Thanks to its loan structuring expertise, its cross-border business approach, and cooperation with other financing partners, pbb is in a position to provide complex financings as well as cross-border transactions.

pbb is listed in the Prime Standard segment of the Regulated Market at the Frankfurt Stock Exchange. Its shares are included in the SDAX® index.

pbb is classified as a significant supervised institution in a euro area member state under the Single Supervisory Mechanism (SSM), meaning that it is subject to direct supervision by the European Central Bank (ECB).

pbb is not, however, classed as a Global Systemically Important Institution (G-SII). Disclosure pursuant to Article 441 of the CRR (Indicators of global systemic importance) is not relevant for pbb Group.

Objective of the Disclosure Report

As the parent company of the regulatory group of institutions, pbb (LEI code: DZZ47B9A52ZJ6LT6VV95) is using this Disclosure Report to implement the disclosure requirements pursuant to Part 8 of the Capital Requirements Regulation, Regulation (EU) 2019/876 (CRR II) amending Regulation (EU) No 575/2013 (CRR I), for pbb and its subordinated affiliated companies (pbb Group) as at 31 December 2021.

Provisions on the disclosure requirements are set out in Articles 431 to 455 of the CRR; additional requirements can be found in section 26a (1) sentence 1 of the German Banking Act (Kreditwesengesetz, KWG). To comply with these disclosure requirements, pbb applies the uniform disclosure formats of the European Banking Authority (EBA) in accordance with Implementing Regulation (EU) 2021/637 (Pillar 3 framework). The reporting currency is the euro. The relevant disclosure period is from the end of 2020 to the end of 2021, although the reference period for certain tables and information may differ depending on the relevant disclosure cycle pursuant to Article 433a of the CRR. pbb is classed as a large institution pursuant to Article 4 (1) no. 146 of the CRR, meaning that it implements the frequency requirements pursuant to Article 433a of the CRR.

Unlike the annual report under commercial law, the Disclosure Report focuses primarily on the regulatory perspective. Together with pbb Group’s Annual Report, it gives the reader a comprehensive overview of pbb Group’s current risk profile and risk management. In accordance with Article 433a (1) (a) of the CRR, this Disclosure Report includes in particular information on:

- pbb Group’s regulatory and balance sheet structure (scope)
- the principles of corporate governance
- own funds and capital ratios
- own funds requirements and risk-weighted exposure amounts
- debt and asset encumbrance
- pbb Group’s general risk management system (risk management objectives and policy)
- risk management with regard to individual risk types.

The Disclosure Report also contains additional information on:

- the approach to sustainability risks and
- measures taken in response to the COVID-19 crisis.

Institutions may, in accordance with Article 432 of the CRR, omit one or more items of information referred to in Part 8 Titles II and III of the CRR where the information provided by those disclosures is not regarded as material or those items include information that is regarded as proprietary or confidential. pbb has not made use of this option.

The information pursuant to Article 450 of the CRR on the main features of pbb Group's remuneration policy and practices will be published as an appendix to this Disclosure Report on pbb's website (www.pfandbriefbank.com) under Investors / Mandatory Publications / Disclosure Report in accordance with Part 8 of CRR following the completion of the 2021 remuneration review, which is scheduled for the second quarter of 2022.

Formal procedures and regulations to comply with disclosure requirements

One major element for complying with the Pillar 3 disclosure requirements, apart from the Disclosure Report itself, is the written documentation of the procedures and regulations used in the course of the disclosure process. According to Article 431 (3) of the CRR, pbb Group has thus adopted formal procedures and regulations designed to assure (adequate) compliance with the disclosure requirements in accordance with the CRR, and has implemented and documented them in a Disclosure Policy. This policy describes all material, inherent principles of disclosure in accordance with Part 8 of the CRR, e.g. the nature and scope of disclosure, including the use of disclosure waivers, the adequacy of information, the disclosure medium and disclosure deadlines, the frequency of publication, responsibilities and the integration of the disclosure process into internal bank processes and structures. The policy also contains directives on the regular verification of the adequacy and practicality of disclosure practices applied within pbb Group, as well as defined disclosure standards and processes. The Disclosure Policy is reviewed and aligned with current market requirements on a regular basis.

As part of the disclosure process, pbb Group has established various control procedures which are used to check whether the data disclosed is complete, accurate and adequate. The procedures and regulations implemented for disclosure are also regularly monitored by Internal Audit and reviewed by the auditor of the annual financial statements. The Disclosure Report itself is not audited by the auditor of the pbb Group's financial statements, which explains why the Pillar 3 disclosures in this report are not certified.

The Disclosure Report is approved by the entire Management Board of pbb. An attestation issued by the Management Board pursuant to Article 431 (3) of the CRR can be found at the end of this Disclosure Report.

Means of disclosure

In accordance with Article 434 of the CRR, the Disclosure Report is published as a standalone report on pbb's website (www.pfandbriefbank.com) under Investors / Mandatory Publications/ Disclosure Report in accordance with Part 8 of the CRR. pbb informs the European Central Bank (ECB), Deutsche Bundesbank and the German Federal Financial Supervisory Authority (BaFin) of the date and medium of publication.

Scope of application

In accordance with Article 13 (1) of the CRR, the Disclosure Report includes the disclosure on the basis of the consolidated situation for pbb Group. Additional disclosure at individual institution level or on a sub-consolidated basis in accordance with Articles 6 and 13 of the CRR is not required for pbb as the ultimate parent institution of the regulatory group of institutions. pbb is itself an EU parent institution pursuant to Article 4 (1) no. 29 of the CRR.

The basis is the scope of prudential consolidation pursuant to Articles 18 to 24 of the CRR. There are no differences between the scope of prudential consolidation and the accounting scope of consolidation for pbb's consolidated financial statements (IFRS) as at the disclosure date. Disclosure on the basis of the consolidated situation requires that business relationships within pbb Group are offset and that intra-group transactions are eliminated. The regulatory values and ratios are calculated on the basis of the International Financial Reporting Standards (IFRS) and the International Accounting Standards (IAS).

Waiver pursuant to the CRR

In the 2021 financial year, as in the previous year, pbb made use of the relief provided by the waiver pursuant to Article 7 (3) of the CRR. Pursuant to a decision made by the European Central Bank (ECB), pbb, as the supervised parent company of pbb Group, is permitted to only include certain prudential requirements on a consolidated group basis and not also on an individual institution level.

pbb continues to meet the requirements set out in Article 7 (3) of the CRR:

> There is no current or foreseen material practical or legal impediment within pbb Group to the prompt transfer of own funds or repayment of liabilities to the parent institution (pbb). The company that is key to pbb Group's financial stability, pbb, has its registered office in Germany. pbb is also pbb Group's only credit institution. pbb's stake in those subsidiaries consolidated for prudential purposes regularly exceeds 50 % of the voting rights (100 % at two subsidiaries and 71.43 % in the case of CAPVERIANT GmbH). pbb has a controlling influence over each subsidiary. In addition, a formal intra-group decision-making process for the transfer of own funds between pbb as the parent company and superordinate institution of pbb Group and the subsidiaries enables prompt transfer. As in the previous year, there were no transfers of own funds or repayments of liabilities as defined by Article 7 (1) (a) of the CRR in the 2021 reporting year.

> pbb Group has an integrated risk management system that encompasses the entire Group and includes pbb and its subsidiaries that are included in the scope of prudential consolidation of pbb Group. pbb's Management Board is responsible for the risk management system and makes decisions on the strategies and key issues relating to risk management and risk organisation. The principles, methods and processes that make up pbb Group's risk management system are defined centrally by pbb and are applied within pbb Group (subject to the implementation required under company law and any necessary modifications at the level of individual group companies). pbb employees are involved in all decision-making bodies of pbb Group companies as members of the companies' executive bodies, enabling sufficient involvement in all strategic decisions of pbb Group. This also allows risk appetite and risk management to be addressed in a uniform manner across all pbb Group companies. pbb also has a Risk Control unit which is responsible for the uniform application of risk management within pbb Group. This is designed to ensure that risk measurement procedures and risk reporting are uniform, and that risk indicators are comparable, within pbb Group.

In addition, and as in the previous year, pbb made use of a waiver granted by the ECB pursuant to section 2a (2) of the KWG in the 2021 financial year. This waiver means that pbb is exempt, at individual institutional level, from applying the requirements set out in section 25a (1) sentence 3 nos. 1, 2 and 3 (b) and (c) of the KWG with regard to the risk control function for

the management of risks, with the exception of the liquidity risk. The requirements for applying the waiver set out in Article 7 (3) of the CRR are met: There is no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities to the parent institution in a member state. The risk evaluation, measurement and control procedures relevant for consolidated supervision cover the parent institution in a member state.

pbb Group has not made use of individual consolidation in accordance with Article 9 of the CRR.

Scope

Organisational and legal structure

This chapter contains information on the legal and organisational structure of pbb Group pursuant to section 26a (1) sentence 1 of the KWG and, within this context, on the key criteria of pbb Group's business model and strategy, strategic focus and management system.

pbb Group consists primarily of the parent entity pbb. At the same time, in accordance with Article 4 (1) of the CRR, pbb is the parent company of the regulatory group as defined in section 10a of the KWG in conjunction with Articles 11 et seqq. of the CRR, meaning that it is responsible for meeting the regulatory disclosure requirements. pbb is a public limited company (Aktiengesellschaft) under German law, registered in the commercial register of the Local Court (Amtsgericht) of Munich, Germany (HRB 41054).

pbb's headquarters are located in Garching, near Munich. The address of the principal place of business is Parkring 28, 85748 Garching, Germany. pbb also has offices at four locations across Germany (Eschborn, Dusseldorf, Hamburg and Berlin). It has branches abroad in London, Madrid, Paris and Stockholm. pbb operates the vast majority of its international financing activities from these locations. pbb also has a representative office in New York.

Business model and strategy

The strategic business segments of pbb Group are Real Estate Finance (REF) and, complementing this, Public Investment Finance (PIF); the focus is on business eligible for inclusion in Pfandbrief cover. The geographic focus is on Europe and the USA. Its significant core markets are Germany, France, the United Kingdom, the Nordic countries and selected Central and Eastern European countries, as well as Spain- and the Benelux countries. In the US, pbb concentrates mainly on the metropolitan areas of New York, Washington D.C., Boston, Chicago, San Francisco, Seattle and Los Angeles.

Lending is pbb's core business: it plays an important role in this area, supplying credit to the real estate sector and supporting the public sector on selective project financings for the provision and improvement of public infrastructure. pbb has started to incorporate ESG in its business model, the multi-year planning and portfolio management. The "Green Loan" programme was stepped up and has become part of the strategic business model. This means that green loans will be expanded in the origination of new business, based on a strategic analysis of opportunities and risks of the existing business as a whole. pbb focuses in particular on primary client business and syndications. Besides traditional financing solutions tailored to clients' needs, pbb offers its clients derivatives for hedging risks associated with lending. pbb does not maintain a trading book for securities or derivatives portfolios held to realise short-term gains.

In the lending business, pbb either acts as a sole lender or, particularly for large-volume transactions, cooperates with financing partners. In this regard, pbb has a wide network of banks and other partners, including insurance companies and private equity firms. In this so-called syndicate business, when acting as arranger, the pbb Group takes over the complete coordination between the syndicate members and the borrower or, in the role of an agent, deals with tasks in connection with the management of syndicated loans.

In addition, pbb acts as underwriter, initially being the sole provider of financing and then selling parts of such loans to interested partners within the scope of syndications.

Regarding digital products and business models, pbb's subsidiary CAPVERIANT GmbH ("CAPVERIANT") operates a platform that brings together public-sector borrowers and institutional investors. The platform was launched in Germany in 2018 and then rolled out to the French market in 2019. The French government-owned financial institution Caisse des Dépôts

acquired a stake of around 28.57 % in CAPVERIANT with economic effect as of 1 January 2021. The cooperation is expected to promote the growth and market penetration of CAPVERIANT in France.

Strategic portfolios

In real estate finance, pbb's range of services is targeted primarily at professional real estate investors (both national and international) such as real estate companies, institutional investors, real estate funds and – particularly in Germany – also SMEs and clients with a regional focus on Germany. pbb targets more complex transactions with medium-sized to larger financing volumes. Financed objects mainly involve office buildings, properties for residential use and retail and logistics properties. Other property types are financed as portfolio additions. The regional focus is on the core markets eligible for inclusion in Pfandbrief cover in Europe and in certain US metropolitan areas. Here, pbb offers both local and cross-border financing expertise. A majority of the loans granted are investment financings, i.e. loans for the acquisition or follow-up financing of existing properties generating cash flows. Development financings (including residential real estate developers in Germany) are of complementary significance.

In Public Investment Finance, pbb finances projects for the provision and improvement of public infrastructure. Clients in this segment include regional or provincial governments, municipalities, urban development companies, publicly-owned hospitals, and investment or real estate holding companies. Public private partnerships and other structured transactions are being pursued in addition. The regional focus is on France. This segment is complemented by bond purchases, including (in particular) for the purposes of managing the cover assets pool and the Group's liquidity.

Value Portfolio

The Value Portfolio (VP) consists almost entirely of existing financings to the public sector which are not linked to specific projects (budget financing). pbb does not originate any new business in this area. The portfolio is primarily refinanced at matched maturities. It generates interest income, and matures in accordance with the underlying fixed terms. If and when economically feasible, pbb also uses portfolio or individual asset sales to bring about a more rapid reduction.

Consolidation & Adjustment (C&A)

C&A reconciles the segment results with the consolidated group result. Besides internal reconciliation and consolidation items, certain expenses and income that are outside the responsibility of the operating segments are reported here. These include assets for the asset/liability management and the liquidity portfolio.

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 non-euro lending (especially in the US, the UK and Sweden) directly in the respective currency. As a consequence, costs for foreign exchange swaps are avoided and the need for excess Pfandbrief cover to be funded on an unsecured basis is reduced.

pbb issues Mortgage Pfandbriefe and Public Sector Pfandbriefe, and is one of the largest issuers of Pfandbriefe (measured by outstanding volume). The Pfandbrief market is highly liquid, with a broad investor base (source: Association of German Pfandbrief Banks).

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

The main investors in debt instruments are banks, investment funds and insurance companies, but also central banks and sovereign wealth funds. In this segment, pbb Group's particular strategic focus is on further developing its funding franchise, with the objective of further diversifying and expanding its investor base. Therefore, at the beginning of 2021 the first „Green Bond“ was issued to offer investment opportunities for investors with sustainability requirements.

In addition, the Bank is active in the deposit-taking business with private investors in Germany. Via its online platform (www.pbbdirekt.com) as well as through third-party providers, pbb offers overnight and fixed-term deposits denominated in euros and US dollars.

Regarding measures provided by the European Central Bank (ECB), in 2020 and 2021 pbb Group participated in the ECB's targeted longer term refinancing operations (TLTRO III) due to the attractive conditions offered.

Strategic focus

pbb Group's business strategy focuses on sustainable business success. Crucial success factors are the assessment and appropriate pricing of credit risk in the lending business on the one hand, and access to funding markets at adequate terms on the other. Managing the existing portfolio – so as to identify changing risks at an early stage, and mitigate them by taking appropriate measures – is another important factor.

The Management Board of pbb as has committed to further strengthen pbb Group's profitability in the financial years 2022 to 2024. Strategically, the focus concerning income lies predominantly on the aforementioned business activities in the REF core segment. The expansion of the product range is expected to further increase profitability, whilst strictly adhering to cost targets.

Its risk-conservative approach remains the cornerstone of pbb's core business as well as the new strategic initiatives, based on pbb's expertise in its markets. Ultimately, the common objective of these measures is to make a positive contribution to profitability.

With regard to the products in the core business, pbb has expanded the product range to include a non-senior component within the scope of these competencies, in order to facilitate selective and limited risk-taking.

pbb has launched a comprehensive ESG programme to address new regulatory requirements, and to capture market opportunities and risks arising in the context of ESG. This programme will cover all ESG topics that are relevant to pbb – strategy, environment, social and governance (ESG), as well as ESG risk, data management, communication and reporting – in projects and working groups. With specific regard to sustainability, which forms an essential element of the programme (including green finance), environmental sustainability issues will be reviewed in relation to the business activities (lending with green loans and refinancing with green bonds in particular) and operations.

The need to transform the real economy and the real estate industry will create business potential and challenges arising from the substantial investment needs our clients have. In future, pbb Group aims to act not only primarily as a capital provider, but also as a transformation partner for its clients and the commercial real estate industry. With this in mind, pbb Group has set itself the goal of under-standing both the opportunities and challenges facing its clients in the context of sustainability and the associated pressure to transform in line with its strategic client orientation, it strives to supporting its clients as an active partner in the transformation process, also making use of its extensive network. This includes providing support for financing the acquisition of green properties and green developments, but in particular transformation projects, such as refurbishment work, therefore improving the energy efficiency of existing buildings. The green loan and the transition loan were established for this as an important basis and have been available to clients as new products since 2021.

pbb Group aims to take specific measures to back up its stated ambitions. The initial focus is on meeting all common client needs in the context of sustainability and sustainable financial solutions. Where pbb Group has a chance to set itself apart from its peers by offering selected additional products and services, it takes a proactive approach to examining their introduction. To achieve this, pbb intends to expand its internal expertise in the real estate arena, as well as property scoring and potential analysis, and complementing it by entering into targeted partnerships.

Economic aspects (such as securing long-term income streams) and ecological considerations (such as the type of heating, building materials etc.) all play an important role for the financing of commercial building projects or public infrastructure projects. Taking ESG aspects into account not only makes a positive contribution to the overarching sustainability targets, but also serves to help avoid the business model's ESG/sustainability risks. As a result, pbb Group will consistently increase the proportion of sustainable financing and define corresponding targets.

To meet ppb Group's responsibility as a transformation partner and the expectations of its stakeholders, pbb Group concerns itself intensively with the topic of sustainability, also within the company itself. As part of a materiality analysis conducted regularly, the most relevant sustainability topics are identified and corresponding targets and measures derived from it. Besides industry-specific aspects, such as the role of pbb Group as a transformation partner and the long-term transformation of the business portfolio and business operations, pbb Group pays special attention to strong corporate governance, social issues and its employees.

As a globally active company, pbb Group accepts its unconditional responsibility to respect and uphold human rights and to prevent these from being violated, during the course of its own business activities, but also along its entire supply and value chain and amongst all its stakeholders. The Human Rights Policy and the Code of Conduct determine a corresponding framework.

pbb Group also intends to further advance its digital transformation. The approach chosen for this comprises three main thrusts; focusing on further development of client interfaces, enhancing process efficiency, and new products and business models.

Internal management system

pbb Group's internal management system is geared towards 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 steering are based on a consistent and integrated key performance indicator system (KPI system), which assists executives in the management of the Group. 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 help identify the reasons for any deviations in the key performance indicators. Current market developments, such as changes in 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 Group's future business development

The internal management system has remained unchanged compared to the previous year. The following financial key performance indicators have been defined:

Return on equity after taxes

One key profitability indicator is the return on equity after taxes. It is calculated by dividing net income/loss in accordance with IFRS by the average IFRS equity available in the financial year, excluding accumulated (outgoing) other comprehensive income (OCI) from cash flow hedge accounting, financial assets at fair value through OCI as well as additional equity instruments (AT1 capital) and non-controlling interests. Profit before taxes 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.

Nominal amount of financing (REF)

The notional amount of the funding in the Real Estate Finance (REF) segment is a significant factor influencing the future earnings power and has therefore been redefined as an additional financial key performance indicator. The financing volume can be managed, above all, by the volume of new business (including extensions 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.

Risk management based on risk-bearing capacity

pbb Group's internal capital adequacy assessment 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.

Common Equity Tier 1 ratio

The CET1 ratio, a key management parameter, is determined on a regular basis; it is calculated by dividing Common Equity Tier 1 (CET1) capital by risk-weighted assets (RWAs). The Advanced Internal Rating Based Approach (Advanced IRBA) is used to determine regulatory capital requirements for the clearly predominant portion of the real estate portfolio and the credit risk standardised approach (CRSTA) for the remaining portfolio.

Non-financial key performance indicators within the meaning of GAS 20.105 are currently not explicitly managed. pbb Group is focusing intensely on environmental, social, and governance (ESG) aspects, for this reason, the Group launched a cross-divisional ESG programme in 2021 in line with its holistic ESG strategy. This programme bundles and further develops all ESG activities organisationally and operationally, and is expected to define non-financial performance indicators in the future. Alongside the sustainable finance focal point – which has already seen the implementation of green bonds and green loans – and the further development of the Bank's business model, additional ESG indicators as well as the green asset ratios and the taxonomy alignment ratio for the banking book (in line with current regulatory developments) are at the heart of the programme. Due to the high complexity involved in calculating those indicators – which has also led to a delay of the first-time disclosure obligation of the green asset ratios until 2024 – and the great ambiguities in the interpretation of the statutory requirements, no non-financial performance indicators were defined or determined in 2021.

Corporate governance principles

This chapter presents information on the corporate governance arrangements pursuant to Article 435 (2) of the CRR and the principles of due and proper management of pbb Group pursuant to section 26a (1) sentence 1 of the KWG.

Since its IPO in July 2015, pbb has been subject to the German Corporate Governance Code (GCGC) in accordance with section 161 of the German Public Limited Companies Act (Aktiengesetz, AktG). The Declaration of Compliance with the German Corporate Governance Code most recently dated 25 February 2022 can be found on pbb's website under The Company / Corporate Governance. Any updated versions of the Declaration of Compliance published after the reporting date can also be found on pbb's website.

Reference is also made at this point to the Report of the Supervisory Board, which can be found in pbb Group's 2021 Annual Report, as well as to the Corporate Governance Statement, which is published on pbb's website. These sources are particularly relevant for the disclosure requirements as per Article 435 (2) (d) and (e) of the CRR regarding the risk committee and the information provided to the Management Board and the Supervisory Board, which is also described in the chapter entitled "General organisation and risk management principles".

In the 2021 financial year, the Supervisory Board established four additional committees to perform its duties: the Executive and Nomination Committee, the Audit and Digitalisation Committee, the Risk Management and Liquidity Strategy Committee, and the Remuneration Committee. The Supervisory Board and its committees held the following number of meetings in 2021:

- Supervisory Board: 10 meetings (one constituting and four extraordinary)
- Executive and Nomination Committee: eight meetings (three extraordinary)
- Audit and Digitalisation Committee: five meetings
- Risk Management and Liquidity Strategy Committee: four regular meetings and generally monthly credit meetings held as conference calls
- Remuneration Committee: four meetings

Further information on the activities and composition of the Supervisory Board and its committees can be found in the 2021 Annual Report, the Report of the Supervisory Board and the Corporate Governance Statement.

Flow of information to the Management Board and the Supervisory Board in matters relating to risk

Flow of information to the Management Board

The following risk reports from Risk Management & Control (RMC) provide pbb's Management Board with regular information on key figures and ratios, as well as material risk aspects that are significant for the Bank's business and risk management over time.

One very central and, at the same time, comprehensive report is the Group Risk Report, which is distributed not only to the Management Board but also to the Supervisory Board at regular intervals. It serves to provide key information on all Group-wide risk aspects. The quarterly report is divided into three parts. The first part consists of a management summary on the material risk aspects within the Group. The second part provides a detailed overview of capital adequacy, including the types of risk to be capitalised, default risk, market risk, liquidity risk, operational risk, business risk, stress tests and current topics. The third part is the appendix, which contains more detailed information on individual risk types. In addition to the quarterly reports, there is a monthly Group Risk Report, which essentially consists of a management summary of the above-mentioned risks.

The monthly ICAAP Flash Report contains information on pbb Group's risk-bearing capacity from a normative and economic perspective. A management summary shows the status of risk-bearing capacity, limit utilisation and includes comments on key developments based on preliminary figures.

The quarterly ICAAP Forecast Report (for Q1, Q2 and Q4) serves to provide forward-looking key ICAAP information. It includes projections for regulatory ratios (e.g. CET1 ratio, Tier 1 ratio) and the risk-bearing capacity for the baseline scenario, as well as for stress scenarios.

The daily "Market Risk and Performance Report pbb Group" contains information on value-at-risk (VaR), including VaR limits and their utilisation for all business areas, sensitivities for all relevant market risk categories and economic performance. Special events and key changes are commented on from a market risk perspective.

The daily liquidity reports for pbb Group and pbb AG show the baseline, risk and stress scenario for pbb Group and pbb. The reporting is based on contractual cash flows, modelled and optional cash flows, as well as assumptions regarding new business and extensions. The current and expected liquidity reserve is another component. Special events and key changes are commented on from a liquidity risk perspective.

The quarterly "Key Risk Indicator Report pbb Group" contains Group-wide key risk indicators (KRIs) that are used to monitor OpRisk exposure so that any potential increase in operational risk can be identified early on.

The "Annual Operational Risk Report pbb Group" provides an annual summary of pbb Group's operational risk profile. It includes analyses of OpRisk losses, results from reporting, such as the Key Risk Indicator Report, results of operational risk scenarios and the operational risk self-assessment.

The pbb Group report on daily limit breaches shows all limit breaches at counterparty and country level. Both new and existing limit breaches are reported to the CRO and to the members of pbb's Management Board responsible for Treasury and REF/PIF on a daily basis. A quarterly summary is provided to pbb's Management Board as part of the Group Risk Report.

The structure and content of the various reports are based, in particular, on the requirements set out in the German Minimum Requirements for Risk Management (MaRisk). If the Management Board or the Supervisory Board wish to make any changes to manner in which the information is presented or to the content, these requests are communicated either bilaterally with the reporting unit or at Group Risk Committee meetings.

Flow of information to the Supervisory Board

As far as the Supervisory Board is concerned, information on topics relevant to risk is provided not only to the full Supervisory Board but also to the Risk Management and Liquidity Strategy Committee. It supports the Supervisory Board's supervision of risk management and liquidity management; it concerns itself with the risk strategy, reviews the Management Board's risk reporting, and is involved in the credit approval process to the extent laid down in the Rules of Procedure. The committee also regularly discusses new business developments as well as the liquidity and funding status; it looks at all types of risks associated with the banking business, such as credit, market, liquidity and operational risks, taking the Group's risk-bearing capacity into account. The commit-tee also concerns itself with the syndication business, foreclosures and development financings, with write-downs of financial assets affected by impaired creditworthiness, the reporting of own funds in accordance with the German Solvency Regulation, country limits, asset/liability management, and the results of supervisory audits. In addition, it deals with individual loans requiring approval under the Rules of Procedure for the Management Board, with new business, regular re-submissions and approvals for change applications.

Management and supervisory functions of the Management Board and the Supervisory Board

As at the reporting date, pbb's Management Board members hold four and pbb's Supervisory Board members hold 15 management or supervisory functions which are actually carried out. These are distributed among the individual members of the Management Board and Supervisory Board as follows:

Management and supervisory functions of the Management Board and the Supervisory Board (EU OVB)

Name	Number of actually performed management or supervisory mandate	Number of management or supervisory mandate in accordance with the method referred to Article 91 (3) and (4) of Directive 2013/36/EU
Supervisory Board of pbb as of 31 December 2021 [1]		
Dr. Günther Bräunig	3	3
Hans-Peter Storr	2	2
Dr. Thomas Duhnkrack	2	2
Susanne Klöß-Braekler	4	4
Georg Kordick	1	1
Olaf Neumann	1	1
Oliver Puhl	1	1
Heike Theißing	1	1
Management Board of pbb as of 31 December 2021		
Andreas Arndt	1	1
Thomas Köntgen	1	1
Andreas Schenk	1	1
Marcus Schulte	1	1
Total	**19**	**19**

[1] Ms Gertraud Dirscherl joined the Supervisory Board on 2 February 2022. She replaces Ms Dagmar Kollmann, who resigned at her own request effective 31 October 2021.

Details on the individual functions and mandates can be found in Note 81 "Members of the Supervisory Board and of the Management Board" in pbb Group's 2021 Annual Report.

Selecting members of the Management Board and the Supervisory Board

The Supervisory Board has defined specific objectives for its composition in accordance with recommendation C.1 of the GCGC in the version dated 16 December 2019 in its Rules of Procedure, and has adopted a competence profile for the Supervisory Board as a whole which is published on the pbb website. In addition to these objectives, the Supervisory Board has introduced a catalogue of criteria for new Supervisory Board members, which takes into account Company-specific and professional requirements.

pbb has developed catalogues of criteria for filling positions on the Management Board or the Supervisory Board. These are described below and pbb considers them to be met by the current holders of these positions. The actual knowledge, skills and experience of the members of the Management Board and the Supervisory Board are published in their professional career histories on the company's website under Company / Management and Company / Supervisory Board.

The following catalogues of criteria also form part of a "Suitability Policy" adopted by the Management Board and Supervisory Board; this policy also implements the requirements set out in EBA/ESMA Guidelines 2017/12, and describes processes and criteria for appointing members of the Management Board and Supervisory Board and also for carrying out (regular) suitability

checks for such members. The following criteria have to be used to evaluate the individual suitability of a member of the Management Board/Supervisory Board:

- Zeitaufwand: Ausreichend Zeit für die Erfüllung der Funktionen im Institut
- Einhaltung der Mandatsbeschränkung, insbesondere gemäß Artikel 91 (3) CRD V und § 25d Abs. 3 KWG (Aufsichtsrat) und § 25c Abs. 2 KWG (Vorstand)
- Ausreichendes Maß an Kenntnissen, Fähigkeiten und Erfahrung, um alle Aufgaben zu erfüllen
- Guter Leumund, Aufrichtigkeit und Integrität
- Unvoreingenommenheit und Unabhängigkeit.

Catalogue of criteria for the Management Board

According to section 25c of the KWG, an institution's senior managers (= members of the Management Board) have to have the requisite professional skills, be reliable and dedicate sufficient time to their tasks. The term “requisite professional skills” means that senior managers must have sufficient theoretical and practical knowledge in the business areas concerned and must have managerial experience.

- Functional expertise
  - As much experience as possible in at least one business area of pbb, e.g. Public Investment Finance or Real Estate Finance (front or back office), alternatively in corporate or commercial banking and ideally in selected corporate centre functions;
  - Knowledge of the refinancing of bank business models is an advantage;
  - Potential candidates for a CFO or CRO position must have acquired the requisite professional expertise in key areas as members of executive bodies or in key line management functions. This also applies to capital market/treasury.
- Sector expertise
  - Several years of experience in the financial sector, preferably in commercial or asset-based banking.
- Level of seniority
  - Candidates either already have to be admitted as a senior bank manager or, when they are first appointed, it must be possible for them to obtain such admission without any prolonged waiting period;
  - Long-standing managerial experience obtained from positions in executive bodies or key line management functions, including long-term and broad leadership experience, as well as experience in process/restructuring management;
  - Strong entrepreneurial mindset and experience in dealing with entrepreneurial tasks, including developing the business model and the strategy and/or performing business management tasks (preferably for a bank).
- Expertise
  - According to section 25c of the KWG, Management Board members are required to have expertise in the following areas in particular: strategic management, corporate development, lending authority, bank management, sales;
  - Particularly with regard to lending knowledge and skills, sound judgement of loan decisions is a top priority. Long-standing, qualified and autonomous loan decision-making experience is required in this context;
  - In terms of bank management, knowledge and experience in the context of profit and risk control, as well as methodological knowledge in the various bank management areas is highly relevant.

> Personality

- High degree of persuasiveness and determination based on well thought-out argumentation;
- Respectful and team-oriented leadership approach;
- Strong ability to establish and maintain sustainable, trust-based relationships with employees, peers as well as external stakeholders of pbb;
- Strong commitment to developing the company along with the ability to identify, implement and communicate required changes;
- Credible and trustworthy representative of pbb in public, including relevant (customer) markets.

> Additional requirement for the CEO

- Candidates for the position of CEO must have experience in dealing with external stakeholders (investors, the media, rating agencies, etc.) and several years of management experience at management board level in addition to the requisite professional expertise in key areas (such as strategic planning, corporate management) as members of executive bodies or in key line management functions.

> Additional requirement for the CFO

- Candidates for the position of CFO must have the requisite professional expertise in key areas (such as accounting, auditing, controlling) as members of executive bodies or in key line management functions.

> Additional requirement for REF/PIF

- Candidates for the Management Board position responsible for the REF/PIF division must have the requisite professional expertise in key areas (sales, lending and real estate expertise, as well as customer contacts) as members of executive bodies or in key line management functions.

> Additional requirement for the CRO

- Candidates for the position of CRO must have the requisite professional expertise in key areas (such as lending business, risk management, back office, compliance) as members of executive bodies or in key line management functions.

> Additional requirement for Treasury

- Candidates for the Management Board position responsible for the Capital Markets/Treasury division must have the requisite professional expertise in key areas (such as capital markets, refinancing) as members of executive bodies or in key line management functions.

> Additional requirement for the Management Board member responsible for IT

- Candidates for the Management Board position responsible for IT must have the requisite professional expertise in key areas as members of executive bodies or in key line management functions, or this must be ensured by measures taken by the bank to allow the candidate to acquire this expertise.

Competence profile for the Supervisory Board

In accordance with recommendation C.1 of the GCGC (version dated16 December 2019), the Supervisory Board adopted a competence profile for the Supervisory Board which is published on pbb's website. This contains the following main requirements:

> At least five members of the Supervisory Board, more than three of whom are shareholder representatives, are to be independent as set out in recommendation C.6 and C.7 of the GCGC. Within the meaning of this recommendation within the Code, Supervisory Board members are not to be considered independent in particular if they have a personal or business relationship with pbb, its governing bodies, a controlling shareholder or an entity affiliated with the controlling shareholder that may cause a substantial and not merely temporary conflict of interest. As far as employee representatives are concerned, it is assumed that their independence is not affected by the mere fact that they hold the position of employee representatives and have an employment relationship with the company at the same time.

> No more than two former members of the Management Board can be members of the Supervisory Board. Former Management Board members should not chair the Supervisory Board, or one of its committees.

> As a rule, the members of the Supervisory Board should not be older than 70 years, and the term of office of a Supervisory Board member should generally end upon the close of the ordinary Annual General Meeting following their reaching the age of 70.

> As a rule, members of the Supervisory Board should not serve for more than three full terms of office (as defined by section 102 (1) of the AktG).

> Compliance with the legal requirements regarding the maximum number of mandates (see section 25d (3) and (3a) of the KWG) and networking of the committees (see section 25d (7) sentence 4 of the KWG).

> The Supervisory Board as a whole should cover all necessary areas of expertise which might result from the factors described below in particular. These areas of expertise should, wherever possible, be covered by individual members of the Supervisory Board, with at least one member covering each area of expertise. These include:

- Corporate strategy and future strategic development
- Business model/main areas of activity, in particular real-estate expertise
- Experience of the US financial market
- Experience of the European financial markets
- Technological (digital) influences
- Accounting and audit of the annual financial statements within the meaning of section 100 (5) of the AktG/section 25d (9) sentence 3 of the KWG
- Risk management
- Compliance
- Law/corporate governance
- Management and monitoring of comparable companies.

Catalogue of criteria for the Supervisory Board

According to section 25d of the KWG, the members of an institution's management or supervisory body must be reliable, have the expertise required to control, assess and monitor the business conducted by the company concerned, and must dedicate sufficient time to their tasks. Candidates should have the following expertise:

> Functional expertise

- Very good knowledge of the banking business, as well as extensive, broad-based entrepreneurial experience;
- In-depth understanding of the assessment of annual reports and reports submitted to the Supervisory Board, as well as of the regulatory environment in which banks operate.

> Sector expertise

- o Long-standing experience in the financial services sector, financial administration or in financial control; several years of experience in a division of pbb are an advantage.

> Level of seniority

- Long-standing practical experience of managing a company or a bank/organisation/company with international operations; or
- long-standing practical experience in a leading position within a major company or a leading position within a public authority.

> Personality

- Very good advisory skills, persuasiveness, as well as diplomacy, as well as
- Ability to build confidence along with responsible performance of supervisory tasks.

> Other experience

- For chairing the Supervisory Board: Candidates must be admitted as a senior bank manager as defined by the German Banking Act and must have bank management experience acquired as CEO or have long-standing experience as a management board member.
- For chairing/membership of the Audit and Digitalisation Committee: Special expertise in auditing (of annual financial statements) as defined by section 25d (9) sentence 2 of the KWG is required; at least one member of the Audit and Digitalisation Committee must have expertise in the field of accounting and at least one other member must have expertise in the auditing of annual financial statements (section 107 (4) sentence 3 of the AktG); the chairperson of the Audit and Digitalisation Committee should generally not also be the chairperson of the Supervisory Board at the same time.
- For chairing the Risk Management and Liquidity Strategy Committee: Special lending expertise required; the chairperson of the Risk Management and Liquidity Strategy Committee should not also be the chairperson of the Supervisory Board or the chairperson of another committee at the same time.

Succession planning

To minimise the risk of substantial loss of know-how, and to ensure that both the Management Board and the Supervisory Board are capable of acting at all times, the Supervisory Board has set different appointment and election dates for members of the Management Board and Supervisory Board alike. The Supervisory Board, and especially the Executive and Nomination Committee, also concerns itself with the continuous monitoring and refinement of the mid- to long-term succession planning. In line with the Suitability Policy, the Supervisory Board, when making proposals to the Annual General Meeting for the election of new share-holder representatives, ensures beforehand that the proposed candidates fulfil the statutory, regulatory, professional and personal requirements applicable to the respective position, and that when taking into account the knowledge of the respective candidate, specific goals for the composition of the Supervisory Board derived from the profile of skills and expertise for the entire Board are (or would be) complied with. Furthermore, the Supervisory Board makes sure that the respective candidates are able to dedicate the time required for the position.

After Ms Kollmann resigned at her own request – effective 31 October 2021 – after many years of successful work, options and candidates for her replacement on the Supervisory Board were examined in detail at an early stage. In addition to the mandatory statutory and regulatory requirements (first and foremost expertise, reliability, avoidance of conflicts of interest, and maximum number of mandates), all considerations are based on the competence profile for the Supervisory Board as well as on pbb's Guideline on Fostering Diversity. On this basis, the Supervisory Board resolved at its extraordinary meeting at the end of January 2022 to apply for the court appointment of Ms Gertraud Dirscherl to the Supervisory Board, which the Local Court (court of registration) approved on 2 February 2022. Given her many years as an auditor and former KPMG partner in the area of Corporate Finance, Ms Dirscherl meets all the requirements and is an excellent match for the Supervisory Board thanks to her expertise and experience. The court appointment has a term until the end of the 2022 Annual General Meeting. The Supervisory Board will propose to the Annual General Meeting to elect Gertraud Dirscherl as member of the Supervisory Board.

Diversity strategy for selecting members

When filling management positions within the company, the Supervisory Board and the Management Board consider the principle of diversity and, in particular, endeavour to ensure that the under-represented gender is appropriately represented (as set out in sections 76 (4), 111 (5) of the AktG). This prompted the Management Board and the Supervisory Board to adopt a Guideline on Fostering Diversity in the Management Board and the Supervisory Board. In principle, every candidate must be reliable and sufficiently qualified. Besides holding the necessary professional skills with regard to management and sector experience, candidates shall be trustworthy and of high integrity. Likewise, the selection of candidates shall take their requisite independence into account. Where several candidates are being considered, the goal of achieving maximum diversity shall also be considered. Moreover, the composition of executive bodies is supposed to reflect pbb Group's international activities as well as the structure of the work-force. Specific requirements exist with regard to the age and gender of Supervisory Board and Management Board members. For instance, the members of the Management Board should generally not be older than 60 years. To take account of the under-represented gender in each case, the Supervisory Board has set the following targets to be met by 30 June 2022:

- Target female quota for Supervisory Board members: 30 %
- Target female quota for Management Board members: 20 %.

As at 31 December 2021, the female quota within the Supervisory Board fell compared to the previous year's reporting date, from 33 % to 25 %, as a result of Dagmar Kollmann retiring from her position as at 31 October 2021 and the related job vacancy on the Supervisory Board until year-end. Following the judicial appointment of Gertraud Dirscherl to the Supervisory Board as at 2 February 2022, the Board is now complete again, and the female quota back at 33 %. Given that no changes were made to the composition of the Management Board, the female quota remained at 0 %. The Supervisory Board remains committed to ensuring that the respective under-represented gender is appropriately represented when filling vacancies on, or expanding, the Management Board, in a targeted manner – given candidates who have the requisite skills and qualifications. The appointments of Andreas Arndt and Marcus Schulte were extended in order to ensure the necessary personnel stability and continued sustainable development of pbb. The Supervisory Board continues to adhere to its target female quota. Further details regarding the diversity strategy can be found in the Corporate Governance Statement published on pbb's website.

Remuneration policy

The information pursuant to Article 450 of the CRR on the main features of pbb Group's remuneration policy and practices will be published as an appendix to this Disclosure Report on pbb's website (www.pfandbriefbank.com) under Investors / Mandatory Publications/ Disclosure Report in accordance with Part 8 of CRR following the completion of the 2021 remuneration review, which is scheduled for the second quarter of 2022.

Regulatory and accounting consolidation

This chapter shows the information pursuant to Article 436 of the CRR on the scope of consolidation for accounting purposes (accounting scope of consolidation) and the regulatory scope of consolidation for pbb Group.

Regulatory and accounting scope of consolidation

According to Part 8 of the CRR, companies which form part of the group of institutions as defined in section 10a of the KWG in conjunction with Articles 11 et seqq. of the CRR (regulatory scope of consolidation) must be included in the Disclosure Report. By contrast, the accounting scope of consolidation is based on International Financial Reporting Standards (IFRS) as shown in the Annual Report of the pbb Group. As at 31 December 2021, there is no difference between the regulatory scope of consolidation pursuant to Articles 18 to 24 of the CRR and the accounting scope of consolidation for the IFRS consolidated financial statements, as in the previous year.

The following table EU LI3 in accordance with Article 436 (b) of the CRR shows the subsidiaries of pbb that are consolidated for accounting and regulatory purposes.

EU LI3: Outline of the differences in the scopes of consolidation (entity by entity)

a	b	c	d	e	f	g	h
	Method of accounting consolidation	Method of regulatory consolidation					Description of the entity
Name of the entity		Full consolidation	Proportional consolidation	Equity method	Neither consolidated nor deducted	Deducted	
Deutsche Pfandbriefbank AG, Munich, Germany	Full consolidation	X	-	-	-	-	Credit institution
IMMO Invest Real Estate GmbH, Munich, Germany	Full consolidation	X	-	-	-	-	Investment company
Immo Immobilien Management Beteiligungsgesellschaft mbH in Liquidation, Munich, Germany	Full consolidation	X	-	-	-	-	Real estate company
CAPVERIANT GmbH, Munich, Germany	Full consolidation	X	-	-	-	-	Marketplace of municipal finance

As at the disclosure date, the regulatory scope of consolidation comprised pbb as the parent company of the group of institutions, as well as three other companies. The total regulatory capital and the total exposures pursuant to the CRR are determined by pbb Group based on the IFRS consolidated financial statements pursuant to section 10a (5) of the KWG. pbb prepared its consol-idated financial statements as at 31 December 2020 in accordance with Regulation (EC) No. 1606/2002 of the European Parliament and of the Council of 19 July 2002, based on the International Financial Reporting Standards (IFRS). The single-entity financial statements of the consolidated companies are included in pbb's consolidated financial statements based on uniform accounting policies. All fully consolidated companies have the calendar year as their financial year.

As was the case in the previous year, the pbb Group did not have any non-consolidated subsidiaries as at 31 December 2021.

Change during the business year

There were no changes in the regulatory or accounting scope of consolidation of pbb Group in 2021. There were no companies to be consolidated for the first time, or to be deconsolidated.

With regard to CAPVERIANT GmbH, Munich, which is consolidated for regulatory and accounting purposes, the French state-owned financial institution Caisse des Dépôts et Consignation (CDC) acquired shares in the subsidiary, which had been a wholly-owned subsidiary of pbb up until then, in the second quarter of 2021 based on an agreement concluded in advance. In addition, CDC increased the equity of CAPVERIANT GmbH by subscribing to a capital increase. As a result of the equity interest acquired by CDC in CAPVERIANT GmbH of approximately 28.57 %, the shareholding of pbb in the subsidiary was reduced to approximately 71.43 %.

CAPVERIANT GmbH was issued a licence to provide investment services (investment broking and investment advice) pursuant to section 15 (1) of the Investment Firm Act (Wertpapierinstitutsgesetz - WpIG) by the German Federal Financial Supervisory Authority (BaFin) on 15 March 2022.

Exemption pursuant to Article 19 (1) of the CRR

As at 31 December 2021, pbb Group does not apply the exemption provided in Article 19 (1) of the CRR in conjunction with section 31 (3) of the KWG for any of its subsidiaries.

Special purpose entities

As in the previous year, pbb Group does not use any special-purpose entities as at 31 December 2021.

Subsidiaries with a capital shortfall

As in the previous year, pbb Group does not have any unconsolidated subsidiaries as at 31 December 2021, meaning that it also does not have any subsidiaries that have a capital shortfall within the meaning of Article 436 (g) of the CRR and whose participating interest is deducted from the liable capital of the parent company (pbb) (deduction method).

Transfer of own funds or repayment of liabilities

There is no material practical or legal impediment within pbb Group to the prompt transfer of own funds or repayment of liabilities to the parent company. The company that is key to the Group’s financial stability, pbb, has its registered office in Germany. As in the previous year, there were no transfers of own funds or repayments of liabilities as defined by Article 7 (1) (a) of the CRR in the 2021 reporting year.

Quantitative information on the scopes of consolidation

In accordance with Article 436 (c) of the CRR, table EU LI1 shows a breakdown of the assets and liabilities in pbb’s consolidated financial statements (IFRS) prepared in accordance with the requirements on regulatory consolidation, broken down by type of risks relevant for regulatory capital requirements in accordance with Part 3 of the CRR. pbb’s consolidated statement of financial position (according to the regulatory scope of consolidation) is broken down into the parts relevant for the purposes of the credit risk framework, counterparty credit risk framework, securitisation framework and market risk framework, as well as the part of the statement of financial position items that is not subject to regulatory capital requirements or a capital deduction.

Table EU LI2 in accordance with Article 436 (d) of the CRR also shows the main sources of differences between the carrying amounts in the financial statements (under the regulatory scope of consolidation) and the exposure values used for regulatory purpose (exposure at default, EaD) according to the COREP reporting of own funds and own funds requirements.

EU LI1: Differences between the accounting scope and the scope of prudential consolidation and mapping of financial statement categories with regulatory risk categories

		a	b	c	d	e	f	g
		Carrying values as reported in published financial statements [1]	Carrying values under scope of regulatory consolidation [2]	Carrying values of items				
	All figures in € million			Subject to the credit risk framework [3]	Subject to the CCR framework [4]	Subject to the securitisation framework [5]	Subject to the market risk framework [6]	Not subject to own funds requirements or subject to deduction from own funds [7]
	Breakdown by asset classes according to the balance sheet in the published financial statements							
1	Cash reserve	6,607	6,607	6,607	-	-	-	-
2	Financial assets at fair value through profit or loss	1,180	1,180	640	540	-	169	-
3	Positive fair values of stand-alone derivatives	540	540	-	540	-	17	-
4	Debt securities	132	132	132	-	-	-	-
5	Loans and advances to customers	505	505	505	-	-	152	-
6	Shares in investment funds qualified as debt instruments	3	3	3	-	-	-	-
7	Financial assets at fair value through other comprehensive income	1,258	1,258	1,258	-	-	-	-
8	Debt securities	943	943	943	-	-	-	-
9	Loans and advances to other banks	-	-	-	-	-	-	-
10	Loans and advances to customers	315	315	315	-	-	-	-
11	Financial assets at amortised cost after credit loss allowances	48,087	48,087	45,998	2,089	-	8,271	-
12	Financial assets at amortised cost before credit loss allowances	48,429	48,429	46,340	2,089	-	8,517	-
13	Debt securities	6,893	6,893	6,893	-	-	793	-
14	Loans and advances to other banks	2,646	2,646	618	2,028	-	60	-
15	Loans and advances to customers	38,710	38,710	38,649	61	-	7,664	-
16	Claims from finance lease agreements	180	180	180	-	-	-	-
17	Credit loss allowances on financial assets at amortised cost	-342	-342	-342	-	-	-246	-
18	Positive fair values of hedge accounting derivatives	1,009	1,009	-	1,009	-	6	-
19	Valuation adjustment from portfolio hedge accounting (assets)	5	5	5	-	-	-	-
20	Tangible assets	32	32	32	-	-	-	-
21	Intangible assets	42	42	19	-	-	-	23
22	Other assets	50	50	21	-	-	-	29
23	Current income tax assets	3	3	3	-	-	-	-
24	Deferred income tax assets	129	129	111	-	-	-	18
25	**Total assets**	**58,402**	**58,402**	**54,514**	**3,638**	**0**	**8,446**	**70**

	All figures in € million	a	b	c	d	e	f	g
		Carrying values as reported in published financial statements [1]	Carrying values under scope of regulatory consolidation [2]	Carrying values of items				
				Subject to the credit risk framework [3]	Subject to the CCR framework [4]	Subject to the securitisation framework [5]	Subject to the market risk framework [6]	Not subject to own funds requirements or subject to deduction from own funds [7]
	Breakdown by liability classes according to the balance sheet in the published financial statements							
1	Financial liabilities at fair value through profit or loss	559	559	-	559	-	42	-
2	Negative fair values of stand-alone derivatives	559	559	-	559	-	42	-
3	Financial liabilities measured at amortised cost	52,656	52,656	-	685	-	4,627	51,971
4	Liabilities to other banks	10,633	10,633	-	649	-	22	9,984
5	Liabilities to customers	20,100	20,100	-	36	-	101	20,064
6	Bearer bonds	21,268	21,268	-	-	-	4,504	21,268
7	Subordinated liabilities	655	655	-	-	-	-	655
8	Negative fair values of hedge accounting derivatives	1,372	1,372	-	1,372	-	113	-
9	Valuation adjustment from portfolio hedge accounting (liabilities)	70	70	-	-	-	-	70
10	Provisions	231	231	16	-	-	-	215
11	Other liabilities	55	55	-	-	-	-	55
12	Current income tax liabilities	34	34	-	-	-	-	34
13	**Liabilities**	**54,977**	**54,977**	**16**	**2,616**	**0**	**4,782**	**52,345**
14	Equity	3,425	3,425	-	-	-	-	3,425
15	**Total equity and liabilities**	**58,402**	**58,402**	**16**	**2,616**	**0**	**4,782**	**55,770**

[1] Carrying amounts in the financial statements in accordance with the International Financial Reporting Standards (IFRS) as reported in pbb's consolidated financial statements.
[2] There are no differences between the scope of prudential consolidation and the accounting scope of consolidation for pbb's consolidated financial statements (IFRS) as at the disclosure date.
[3] According to Pillar 3 Framework, Annex VI, exposures for which the exposure value is calculated pursuant to Part 3, Title II, Chapter 2 “Standardised Approach” and Chapter 3 “IRB Approach” of the CRR.
[4] According to Pillar 3 Framework, Annex VI, exposures for which the exposure value is calculated pursuant to Part 3, Title II, Chapter 6 “Counterparty credit risk” of the CRR (derivatives). This column also includes exposures for which the exposure value is calculated pursuant to Part 3, Title II, Chapter 4 “Credit risk mitigation” of the CRR (securities financing transactions).
[5] According to Pillar 3 Framework, Annex VI, exposures for which the exposure value is calculated pursuant to Part 3, Title II, Chapter 5 “Securitisation” of the CRR.
[6] According to Pillar 3 Framework, Annex VI, exposures for which the exposure value is calculated pursuant to Part 3, Title IV “Own funds requirements for market risk” of the CRR.
[7] Column g shows the amounts deducted from the regulatory own funds in the balance sheet assets. Positions assigned a risk weight of 1.250 % are not included in this figure; these are assigned to the appropriate risk category (columns c to f).

Breakdown of assets and liabilities

pbb Group's regulatory scope of consolidation and its scope of consolidation for accounting purposes are identical as at the disclosure date; there are no differences in amounts due to differences in the composition of the scope of consolidation (EU LI1, columns a and b).

In line with pbb Group's business model, which focuses on commercial real estate finance and also on public investment finance, focusing on business eligible for inclusion in Pfandbrief cover, assets are subject primarily to an own funds requirement for credit risk (column c).

In addition, transactions executed in foreign currencies are subject to an own funds requirement for market risk (column f). This means that these assets/liabilities are allocated to more than one risk type, which is why sum of the values from columns (c) to (g) does not have to correspond to the carrying amount in column (b). As pbb Group does not maintain a trading book for securities or derivatives portfolios held to realise short-term gains, the transactions with regard to market risk are subject exclusively to the own funds requirement for the foreign exchange risk in the banking book.

Transactions subject to counterparty credit risk (derivative and securities financing transactions) are shown in column d. pbb Group uses standard market master agreements, including the relevant collateral agreements, in connection with its derivatives and securities lending/repo transactions. The master agreements used for both derivatives and securities lending/repo transactions contain netting agreements according to which, in the event of insolvency for example, one single claim is established by netting all trans-actions concluded under a master agreement, meaning that in the event that the counterparty defaults, pbb is only entitled to, or obliged to pay, the net amount of the positive and negative market values of the individual transactions ("close-out netting"). This reduces the default risk in relation to the counterparty in question to a single net claim. In this respect, counterparty credit risk in the EU LI1 table refers to both assets and liabilities.

As at the end of the previous year, pbb Group did not have any exposures from securitisation (column e) in its portfolio as at the disclosure date.

The capital deduction items for regulatory adjustments in accordance with the CRR (for example for intangible assets) are shown in column g. Further information on these regulatory adjustments can be found in the chapter "Own funds". Positions assigned a risk weight of 1,250 % are not included in column g; these are assigned to the appropriate risk framework (columns c to f).

The description of the main differences between the carrying amounts in financial statements based on regulatory scope of consolidation and the regulatory exposure values is shown in table EU LI2 below.

EU LI2: Main sources of differences between regulatory exposure amounts and carrying values in financial statements

		a	b	c	d	e
			Items subject to			
	All figures in € million	Total	Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	**Assets carrying value amount under the scope of regulatory consolidation (as per EU LI1) [1)]**	**58,402**	**54,694**	**0**	**3,638**	**8,446**
2	Liabilities carrying value amount under the regulatory scope of consolidation (as per EU LI1) [1)]	58,402	16	-	2,616	4,782
3	Total net amount under the regulatory scope of consolidation [2)]	-	54,678	-	1,022	3,664
4	**Off-balance-sheet amounts**	**3,301**	**3301**	**0**	**0**	———
5	Differences in valuations	-	-	-	-	———
6	Differences due to different netting rules, other than those already included in row 2	-3,214	-	-	-3,214	———
7	Differences due to consideration of provisions	325	325	-	-	———
8	Differences due to the use of credit risk mitigation techniques (CRMs)	-	-	-	-	———
9	Differences due to credit conversion factors	-1,191	-1,191	-	-	———
10	Differences due to Securitisation with risk transfer	-	-	-	-	———
11	Other differences	-47	23	-	-	———
12	**Exposure amounts considered for regulatory purposes [3)]**	**57,576**	**57,152**	**0**	**424**	**59**

[1)] Carrying amounts in financial statements based on IFRS consolidated financial statements applying the regulatory scope of consolidation (EU LI1, column b).
[2)] Net amount after offsetting assets and liabilities, calculated as the difference of row 1 minus line 2.
[3)] Regulatory exposure values (exposure at default, EAD)

Main differences between carrying amounts in financial statements and regulatory exposure values

The assets in pbb's consolidated financial statements (IFRS) based on the regulatory scope of consolidation amount to € 58,402 million as at the disclosure date (EU LI2, line 1). The regulatory exposure values (exposure at default, EAD) amount to € 57,576 million (line 12).

The CRR-compliant EAD for default risk positions represents the outstanding exposure in the event of default and corresponds to the IFRS carrying amount (including accrued interest) for most products. In cases involving an existing committed available line, this – multiplied by the product-specific credit conversion factor (CCF) – is included as a further component of EAD. The CCF expresses how much of the available line is expected to be drawn down within one year before a possible default. Derivatives and repo transactions are an exception. Here, the EAD does not match the carrying amount, but has to be calculated using a different methodology in accordance with the CRR. This applies, for example, to derivatives according to the regulatory SA-CCR method.

The main reasons behind the differences between the carrying amounts in the financial statements (IFRS) and the regulatory expo-sure values shown in table EU LI2 are:

- Effects resulting from the calculation of exposure values for transactions subject to counterparty credit risk (derivative and securities financing transactions). pbb Group applies the regulatory provisions on off-balance sheet netting (based on standard market master agreements and collateral agreements) for both derivative financial instruments and securities lending/repo transactions (line 6) where the contractual agreements meet the requirements for risk-mitigating recognition in accordance with Article 296 of the CRR and Article 206 of the CRR.

  pbb Group applies the standardised approach (SA-CCR) in accordance with Articles 274 et seqq. CRR to derivative transactions. For accounting purposes, however, derivatives – with the exception of the balance sheet netting of derivatives concluded with Eurex Clearing – cannot be netted because they have different conditions (e.g. different maturities or underlying currencies). The collateral agreements (collateral received or furnished) cannot be offset against the derivatives in the balance sheet either.

  As far as securities financing transactions are concerned, pbb Group applies the provisions for credit risk mitigation in accordance with Chapter 4 of the CRR, namely the Financial Collateral Comprehensive Method in accordance with Articles 223 et seqq. of the CRR. For regulatory purposes, the counterparty credit risk is taken into account, in addition to the credit risk, for securities subject to repurchase transactions, which remain part of the balance sheet assets. As at the disclosure date, pbb Group had not agreed any securities lending/repo transactions, but had agreed reverse repo transactions in the amount of approximately € 1.0 billion.

- The inclusion of impairments on financial assets (stage 1 to 3) and provisions in off-balance sheet lending business for exposures to which the advanced Internal Ratings-Based Approach (IRBA) is applied (line 7). In contrast to the Credit Risk Standardised Approach (CRSA), credit risk adjustments are not deducted from the balance sheet carrying amount in the IRB approach, but are taken into account in the comparison of value adjustments. In the comparison of value adjustments, the difference between the impairments recognised (stage 1 to stage 3) and provisions in off-balance sheet lending business in relation to the expected loss (EL) is calculated and a value adjustment deficit/excess is calculated.

- The regulatory inclusion of credit conversion factors (CCF) on off-balance sheet items (line 9). These include contingent liabilities on guarantees and indemnity agreements, as well as other obligations from irrevocable loan commitments (largely loans that have not yet been disbursed in full).

- Items that are deducted from equity, such as parts of intangible assets (purchased and internally developed software) are not included in the exposure values. They are included in the "Other differences" item (line 11).

Similarly, both additional valuation adjustments (AVA) pursuant to Article 34 of the CRR in conjunction with Article 105 of the CRR with regard to the prudent valuation of assets measured at fair value and "prudential filters" pursuant to Articles 32, 33 and 35 of the CRR do not have any impact on the carrying amounts (IFRS) or the regulatory exposure values, which is why they are not shown in EU LI2, line 5. These prudential filters adjust the reported equity as calculated in accordance with the IFRS; they are deducted from CET1 in full (see EU CC1, line 7).

> The differences between the carrying amounts in the financial statements (line 1) and the regulatory exposure values (line 12) for market risk result from the calculation of the net foreign currency position using the market risk standardised approach pursuant to Articles 325 et seqq. of the CRR. The regulatory foreign currency risk is calculated on the basis of the present values of the assets/liabilities concerned, applying various offsets between asset and liability items in one and the same currency, while the carrying amounts in the financial statements show the respective assets and liabilities in foreign currency.

Prudent asset valuation

When calculating its own funds, pbb Group takes into account the requirements for the prudent valuation of the assets recognised at fair value in accordance with Article 34 of the CRR "Additional valuation adjustments" in conjunction with Article 105 of the CRR "Requirements for prudent valuation".

In order to calculate these additional valuation adjustments (AVA), pbb Group applies the Simplified Approach in accordance with Chapter II "Simplified Approach for the Determination of AVAs" of Delegated Regulation (EU) 2016/101. According to Article 4(1) of the Delegated Regulation, institutions may apply this approach if the sum of the absolute value of fair-valued assets and liabilities, as stated in the institution's financial statements, less the offsetting options set out in Article 4(2), is less than the threshold value of €15 billion. For pbb Group, this figure amounts to €4.7 billion as at the disclosure date (31 December 2020: € 5.4 billion) in accordance with pbb's consolidated financial statements (IFRS).

Disclosure of table EU PV1 in accordance with Article 436 (e) of the CRR is not relevant for pbb Group in this respect. pbb Group does not apply the core approach for the determination of additional valuation adjustments (AVAs) according to Chapter III of the Delegated Regulation.

Neither the additional valuation adjustments (AVAs) pursuant to Article 34 of the CRR in conjunction with Article 105 of the CRR with regard to the prudent valuation of assets measured at fair value nor the further "prudential filters" pursuant to Articles 32 (Securitised assets), 33 (Cash flow hedges and changes in the value of own liabilities) and 35 (Unrealised gains and losses measured at fair value) of the CRR have any impact on the carrying amounts in the financial statements (IFRS) or the regulatory exposure values. These prudential filters adjust the reported equity as calculated in accordance with the IFRS; they increase or reduce the regulatory own funds.

As at the disclosure date, the additional valuation adjustments for pbb Group amount to €5 million (0.1 % of the above-mentioned total of the absolute value of the assets and liabilities recognised at fair value). These are deducted in full from Common Equity Tier 1 (CET1) capital, as shown in the EU CC1 table (line 7).

Own funds and assets

Own funds

This chapter presents the information pursuant to Article 437 of the CRR on pbb Group's own funds. It also contains general information on own funds and eligible liabilities (MREL). Disclosure pursuant to Article 437a of the CRR (Total Loss Absorbing Capacity, TLAC) is not relevant for pbb Group. pbb is not classed as a Global Systemically Important Institution (G-SII) and is not subject to Article 92a or Article 92b of the CRR. The full qualitative and quantitative MREL information is to be disclosed for the first time as at 1 January 2024 pursuant to section 51 (3) of the German Act on the Recovery and Resolution of Credit Institutions (SAG) and pursuant to no. 10 of Implementing Regulation (EU) 2021/763 (regulatory reporting and disclosure of MREL).

The main features of the Common Equity Tier 1, Additional Tier 1 and Tier 2 capital instruments issued by pbb in accordance with Article 437 (b) and (c) of the CRR are shown in the separate appendix “Disclosure Report (31 December 2021) - Main Features of Capital Instruments”. The Appendix is published together with this Disclosure Report on pbb's website under Investors / Mandatory Publications/ Disclosure Report in accordance with part 8 of the CRR.

Regulatory own funds

The regulatory own funds decisive for meeting the regulatory capital requirements and, as a result, for the capital backing of the various risk types, default risk (credit risk, counterparty credit risk), market risk, operational risk, settlement risk and CVA risk, are determined based on the regulations set out in Part 2 of the CRR. They comprise:

> Common Equity Tier 1 (CET1 capital)
> Additional Tier 1 (AT1 capital) und
> Tier 2 (T2 capital).

They are based on pbb's consolidated financial statements (IFRS), taking regulatory adjustments into account.

The following table EU CC1 pursuant to Article 437 (a), (d), (e) and (f) of the CRR and Article 444 (e) of the CRR shows the composition of regulatory own funds, as well as the capital ratios and capital buffers for pbb Group as at the disclosure date. The own funds shown in the table are based on the COREP reporting of own funds and own funds requirements submitted by pbb Group as at 31 December 2021 (including the consolidated profit for 2021 less the AT1 coupon of €17 million and less the dividend of €1.18 per share carrying dividend entitlements proposed by the Management Board and the Supervisory Board, subject to approval by the Annual General Meeting). The Management Board and Supervisory Board will propose to the Annual General Meeting on 19 May 2022 to distribute a dividend of €1.18 per share entitled to dividends (around €159 million).

Table EU CC1 contains cross-references (column b) to the relevant item in table EU CC2 for the reconciliation of regulatory own funds with pbb's published consolidated statement of financial position or reported equity (IFRS).

EU CC1: Composition of regulatory own funds

All figures in € million, unless otherwise stated		a	b
		31.12.2021	**Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation**
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	2,017	Reference EU CC2, line 31
1a	thereof: subscribed capital	380	Reference EU CC2, line 32
1b	thereof: additional paid-in capital	1,637	Reference EU CC2, line 33
2	Retained earnings	991	Reference EU CC2, line 34
3	Accumulated other comprehensive income (and other reserves)	-95	Reference EU CC2, line 35
EU-3a	Funds for general banking risk	-	
4	Amount of qualifying items referred to in Article 484 (3) CRR and the related share premium accounts subject to phase out from CET1	-	
5	Minority interests (amount allowed in consolidated CET1)	-	
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	53	Reference EU CC2, line 34
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**2,965**	Reference EU CC2, line 37
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	-5	Reference EU CC2, line 38
8	Intangible assets (net of related tax liability) (negative amount)	-23	Reference EU CC2, line 39
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-18	Reference EU CC2, line 40
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	29	Reference EU CC2, line 41
12	Negative amounts resulting from the calculation of expected loss amounts	-	Reference EU CC2, line 42
13	Any increase in equity that results from securitised assets (negative amount)	-	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-	Reference EU CC2, line 43
15	Defined-benefit pension fund assets (negative amount)	-	
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	-	
17	Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	
EU-20b	thereof: qualifying holdings outside the financial sector (negative amount)	-	
EU-20c	thereof: securitisation positions (negative amount)	-	
EU-20d	thereof: free deliveries (negative amount)	-	

All figures in € million, unless otherwise stated		(a) **31.12.2021**	(b) **Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation**
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-	
22	Amount exceeding the 17,65% threshold (negative amount)	-	
23	thereof: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	-	
25	thereof: deferred tax assets arising from temporary differences	-	
EU-25a	Losses for the current financial year (negative amount)	-	
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	-	
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
27a	Other regulatory adjustments to CET1 capital (including IFRS 9 transitional adjustments when relevant)	-73	Reference EU CC2, line 44
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	**-90**	Reference EU CC2, line 45
29	**Common Equity Tier 1 (CET1) capital**	**2,875**	Reference EU CC2, line 46
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	298	Reference EU CC2, line 47
31	thereof: classified as equity under applicable accounting standards	298	Reference EU CC2, line 48
32	thereof: classified as liabilities under applicable accounting standards	-	Reference EU CC2, line 49
33	Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1 as described in Article 486(3) CRR	-	
EU-33a	Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1	-	
EU-33b	Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1	-	
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	-	
35	thereof: instruments issued by subsidiaries subject to phase out	-	
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	298	Reference EU CC2, line 50
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	-	
38	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
39	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
41	Empty set in the EU	-	

All figures in € million, unless otherwise stated		(a) 31.12.2021	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
42a	Other regulatory adjustments to AT1 capital	-	
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**0**	Reference EU CC2, line 52
44	**Additional Tier 1 (AT1) capital**	**298**	Reference EU CC2, line 53
45	**Tier 1 capital (T1 = CET1 + AT1)**	**3,173**	Reference EU CC2, line 54
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	587	Reference EU CC2, line 55
47	Amount of qualifying items referred to in Article 484 (5) CRR and the related share premium accounts subject to phase out from T2 as described in Article 486(4) CRR	-	
EU-47a	Amount of qualifying items referred to in Article 494a (2) CRR subject to phase out from T2	-	
EU-47b	Amount of qualifying items referred to in Article 494b (2) CRR subject to phase out from T2	-	
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	-	
49	thereof: instruments issued by subsidiaries subject to phase out	-	
50	Credit risk adjustments	5	Reference EU CC2, line 56
51	**Tier 2 (T2) capital before regulatory adjustments**	**593**	Reference EU CC2, line 57
Tier 2 (T2) capital: regulatory adjustments			
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	
53	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
54	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
55	Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
EU-56b	Other regulatory adjustments to T2 capital	-	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**0**	Reference EU CC2, line 59
58	**Tier 2 (T2) capital**	**593**	Reference EU CC2, line 60
59	**Total capital (TC = T1 + T2)**	**3,766**	Reference EU CC2, line 61
60	**Total Risk exposure amount**	**16,792**	

All figures in € million, unless otherwise stated		(a) 31.12.2021	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
61	**Common Equity Tier 1 (as a percentage of total risk exposure amount)**	**17.12%**	
62	**Tier 1 (as a percentage of total risk exposure amount)**	**18.90%**	
63	**Total capital (as a percentage of total risk exposure amount)**	**22.43%**	
64	Institution CET1 overall capital requirement (CET1 requirement in accordance with Article 92 (1) CRR, plus additional CET1 requirement which the institution is required to hold in accordance with point (a) of Article 104(1) CRD, plus combined buffer requirement in accordance with Article 128(6) CRD) expressed as a percentage of risk exposure amount)	8.43%	
65	thereof: capital conservation buffer requirement	2.50%	
66	thereof: countercyclical buffer requirement	0.02%	
67	thereof: systemic risk buffer requirement	-	
EU-67a	thereof: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	-	
EU-67b	thereof: additional own funds requirements to address the risks other than the risk of excessive leverage	5.86%	
68	**Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)**	**11.02%**	
Amounts below the thresholds for deduction (before risk weighting)			
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	-	
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	-	
75	Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)	111	
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	29	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	5	
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	80	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to phase out arrangements	-	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
82	Current cap on AT1 instruments subject to phase out arrangements	-	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
84	Current cap on T2 instruments subject to phase out arrangements	-	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

Tier 1 capital

Regulatory tier 1 capital pursuant to Article 25 of the CRR consists of Common Equity Tier 1 (CET1) capital and Additional Tier 1 (AT1) capital. It is based on the reported equity according to IFRS in the amount of € 3,425 million, with regulatory adjustments.

Common Equity Tier 1 capital

The conditions for Common Equity Tier 1 capital pursuant to Articles 26 to 50 of the CRR apply as at the disclosure date.

As in the previous year, pbb's subscribed capital (share capital) amounted to around €380 million (EU CC1, line 1a) as at 31 December 2021, and is composed of 134,475,308 registered ordinary bearer shares in the form of no-par value shares with a notional interest in the subscribed capital (share capital) of around € 2.83 per share. As in the previous year, pbb did not hold any treasury shares in the 2021 financial year.

In addition to the subscribed capital (share capital), the Common Equity Tier 1 capital consists of the capital reserve of € 1,637 million (line 1b), the retained earnings of € 1,044 million (lines 2 and EU-5a, after deduction of the AT1 coupon of € 17 million and the dividend of € 1.18 per share carrying dividend entitlements proposed by the Management Board and the Supervisory Board, subject to approval by the Annual General Meeting) and the accumulated other comprehensive income of € -95 million (line 3). The Common Equity Tier 1 capital before regulatory adjustments amounts to € 2,965 million (line 6).

The Common Equity Tier 1 capital before regulatory adjustments of € 2,965 million is subject to various regulatory adjustments defined in the CRR, with a total of € 90 million being deducted (line 28):

> The value adjustments based on the requirements for the prudent valuation of assets recognised at fair value in the amount of €5 million are deducted from CET1 in full (line 7).

  When calculating its own funds, pbb Group takes into account the requirements for the prudent valuation of assets recognised at fair value in accordance with Article 34 CRR in conjunction with Article 105 of the CRR. pbb Group uses the simplified approach to determine these additional valuation adjustments. Institutions may apply this approach if the sum of the absolute value of fair-valued assets and liabilities, as stated in the institution's financial statements, less the offsetting options, is less than the threshold value of € 15 billion. For pbb Group, this figure amounts to € 4.7 billion as at the disclosure date in accordance with pbb's consolidated financial statements (IFRS).

> Intangible assets (mainly purchased and internally developed software) totalling € 42 million are deducted from CET1 in accordance with Article 37 of the CRR in conjunction with Article 36 (1) (b) of the CRR in the amount of € 23 million (line 8).

  An exception to the deduction of intangible assets under Article 36 (1) (b) of the CRR applies to prudently valued software assets that are calculated over a regulatory amortisation period of 3 years (but no longer than the amortisation period for accounting purposes). pbb Group applies this provision to prudently valued software assets in the amount of € 19 million.

  The European Banking Authority (EBA) is using this provision in an attempt to strike a balance between two conflicting interests: on the one hand, in the context of digitalisation, it is necessary and desirable for banks invest in their IT without having to fear a negative impact on their regulatory own funds, while on the other hand, the software used only has a very limited period of use in the event that a bank is liquidated or taken over.

  In addition to the amortisation period for accounting purposes, which is not changed, a shorter regulatory amortisation period of a maximum of three years applies. This must not exceed the amortisation period for accounting purposes. The start of the amortisation period is the time at which the institution starts using the software, as in the balance sheet. Software that is not yet used by the institution (because it is still being developed still has to be deducted from CET1 in full. Once the institution starts using the software, only the

difference between the amortisation recognised in the balance sheet and the higher regulatory amortisation is to be deducted from CET1. Each software item and each addition must be considered separately.

The software that is not deducted from CET1 is to be allocated to risk-weighted assets and assigned a risk weight of 100 %. pbb Group reports these software assets in the IRB approach in the exposure class "Other non-credit obligation assets".

> Deferred tax assets that do not result from temporary differences (after offsetting against deferred tax liabilities in the balance sheet) are deducted from CET1 in accordance with Article 38 (3) of the CRR in the amount of € 18 million (line 10). The deferred tax assets of € 111 million resulting from temporary differences are risk-weighted in the credit risk standardised approach in the "Other items" exposure class.

> The hedging reserve for cash flow hedges of € -29 million still included in the accumulated other comprehensive income is fully eliminated again in accordance with Article 33 of the CRR (line 11, € +29 million).

> For banks using the advanced Internal Ratings-Based Approach (IRBA), if a value adjustment deficit arises from the impairments recognised (stage 1 to stage 3) and provisions in the lending business compared to the expected loss, this must be deducted from CET1 in accordance with Article 159 of the CRR (line 12). At the end of 2021, there is a value adjustment excess of € 5 million (line 50), which explains why there is no deduction item.

> The item "Other regulatory adjustments" in the amount of € -73 million (EU CC1, line 27a) primarily includes the following deduction items from CET1:

- Expenses for collateral payments in the amount of € 36 million. This includes, in particular, the European bank levy paid to BaFin as the national resolution authority, as well as the payments made to the compensation scheme of German banks (statutory deposit protection scheme) and the deposit protection fund of private banks in the Federal Association of German Banks (BdB). The deduction obligation is derived from the ECB's SREP notice.

- Gains and losses from derivative liabilities recognised at fair value resulting from the institution's own credit risk (debt value adjustment, DVA) amounting to € 3 million. The deduction obligation for the DVA is based on Article 33 (1) (c) of the CRR.

- An amount of € 34 million for the minimum loss coverage for non-performing exposures (NPL backstop).

  In this context, pbb Group has credit losses of € 30 million resulting in an NPL backstop in accordance with the minimum loss coverage for non-performing exposures under Regulation (EU) 2019/630. Articles 47a et seqq. of the CRR introduced by this Regulation shall apply to defaulted loans and advances extended or increased after 26 April 2019.

  There is only a small volume (< € 0.1 million) of credit losses that lead to an NPL backstop according to the addendum of the European Central Bank (ECB). The ECB Addendum ("Addendum to the ECB Guidance to banks on non-performing loans: supervisory expectations for prudential provisioning of non-performing exposures") extended the rules to cover non-performing exposures classified as such from 1 April 2018 onwards, meaning that they are not covered by Articles 47a et seqq. of the CRR mentioned above.

  In addition to the aforementioned regulations, institutions receive SREP (Supervisory Review and Evaluation Process) notices from the ECB for their exposures classified as non-performing before 1 April 2018 (legacy portfolio). These contain NPL backstop recommendations in a slightly modified form. The legacy portfolio results in an NPL backstop of around € 4 million for pbb Group.

All in all, pbb Group's Common Equity Tier 1 capital (CET1) amounted to € 2,875 million as at the disclosure date.

Additional Tier 1 capital

In addition to its Common Equity Tier 1 (CET1) capital, pbb Group's Tier 1 capital consists of Additional Tier 1 (AT1) capital, to which the provisions set out in Articles 51 to 61 of the CRR apply.

The Additional Tier 1 capital comprises subordinated bearer bonds with a total nominal amount of € 300 million and an initial interest rate of 5.750 % p.a. which were issued by pbb in April 2018 and are available for an indefinite period without any incentive to redeem. From an accounting perspective, the AT1 capital is also classed as own funds in accordance with IFRS, as, subject to certain conditions, there is neither an obligation to repay the bond nor is there an obligation for ongoing debt service (discretionary coupon in principle). It is reported under the liabilities item "Additional equity instruments (AT1)". In the first half of 2021, a coupon payment of € 17 million was made in relation to the AT1 capital.

While the bonds have a perpetual maturity, pbb has an ordinary right to call them for the first time as at 28 April 2023 and every five years thereafter, and also for regulatory and tax reasons, in each case subject to the prior approval of the relevant supervisory authority. The creditors have no ordinary right to call the bonds.

The bond terms also provide for a temporary write-down of the nominal amount if the CET1 ratio falls below a 7.0 % threshold. The threshold of 7.0 % relates primarily to pbb Group in accordance with IFRS. This threshold also applies at the level of the individual institution in accordance with the German Commercial Code (HGB) if pbb is no longer exempted from the requirement to determine the regulatory ratios on a single-entity basis. In addition to the above-mentioned contractual write-down right, the responsible resolution authority has the (statutory) option of converting the bonds into shares of pbb, or to write the bonds down (bail-in) in the event of a crisis involving pbb subject to conditions that are more closely defined by law.

The bonds constitute direct, unsecured and subordinated liabilities of the issuer that rank pari passu with each other, but enjoy priority over liabilities of the issuer resulting from Common Equity Tier 1 capital instruments. In the event of resolution measures in relation to the issuer, and in the event of the dissolution, liquidation or insolvency of the issuer, the liabilities arising from the bonds are only serviced once the Tier 2 capital has been repaid.

No regulatory adjustments are made in relation to the Additional Tier 1 capital.

With this issue, pbb Group's Additional Tier 1 (AT1) capital amounts to € 298 million (nominal amount of € 300 million less € 2 million in issue costs.

Tier 2 capital

pbb Group's Tier 2 (T2) capital comprises longer-term subordinated liabilities to which the provisions set out in Articles 62 to 65 apply.

All subordinated liabilities are subject to interest at standard market rates. The issuer is not subject to any premature repayment obligations. They are subordinated to the claims of all other creditors which are not themselves subordinated (in the event of liquidation, insolvency or in the event of any other insolvency or other proceedings), but rank senior to both the liquidation claims of the shareholders and the claims associated with the AT1 capital instruments (Additional Tier 1 capital). No subsequent restrictions can be imposed on subordination, term or period of notice Debtor termination rights are possible subject to certain contractual requirements. The original terms are at least 5 years and are usually between 10 and 20 years. The responsible resolution authority has the (statutory) option of converting the Tier 2 capital into shares of pbb, or to write the Tier 2 capital down (bail-in) in the event of a crisis involving pbb subject to conditions that are more closely defined by law.

Taking discounts and amortisation into account in accordance with Article 64 CRR, and after adding the value adjustment excess of € 5 million (EU CC1, line 50), the Tier 2 (T2) capital comes to a total of € 593 million as at the disclosure date.

In accordance with Article 62 (d) of the CRR, any value adjustment excess – resulting from the comparison of impairments recognised and provisions set up in the lending business against the expected loss – to be added to the Tier 2 (T2) capital in an amount corresponding to a maximum of 0.6 % of the risk-weighted assets (RWA). By contrast, no regulatory adjustments are made in relation to the Tier 2 capital.

Own funds

The pbb Group's own funds total € 3,766 million and consist of Common Equity Tier 1 (CET1) capital of € 2,875 million, Additional Tier 1 (AT1) capital of € 298 million and Tier 2 (T2) capital of € 593 million.

One major factor behind the slight increase (€ +73 million) in own funds compared with the end of the first half of 2021 is the inclusion of the retained portion of the 2020 and 2021 annual results, and in this respect the increase in retained earnings as at 31 December 2021 (after deduction of the AT1 coupon and the dividend proposed by the Management Board and Supervisory Board, subject to approval by the Annual General Meeting). The regulatory own funds for both the first half of 2021 and the end of 2020 were calculated without allocating the 2020 annual result to retained earnings, and for the first half of 2021 also without taking into account the consolidated profit for the period from 1 January to 30 June 2021. Other factors influencing the change in own funds in the 2021 financial year included repayments of subordinated liabilities that fell due and decreases in the recognition of subordinated bonds (T2 capital) due to daily amortisation in accordance with Article 64 of the CRR.

Reconciliation of regulatory own funds and reported equity

Pursuant to Article 437 (a) of the CRR, the following table EU CC2 shows the reconciliation of regulatory own funds to pbb's consolidated statement of financial position as at 31 December 2021, in particular to the reported equity. The table contains cross-references (column c) to the relevant regulatory own funds item in the EU CC1 table.

pbb Group's reported equity (IFRS) amounts to € 3,425 million at the end of 2021. Further information on the composition of reported equity under IFRS and its development is set out in pbb Group's 2021 Annual Report (published on pbb's website), in the notes "Statement of changes in equity" (page 98), 24 "Equity" (pages 121 et seq.) and 63 "Equity" (pages 151 et seq.).

EU CC2: Reconciliation of regulatory own funds to balance sheet in the audited financial statements

		a	c
		Balance sheet as in published financial statements under regulatory scope of consolidation [1]	Reference
All figures in € million		31.12.2021	
Assets - Breakdown by asset clases according to the balance sheet in the published financial statements			
1	Cash reserve	6,607	
2	Financial assets at fair value through profit or loss	1,180	
3	Financial assets at fair value through other comprehensive income	1,258	
4	Financial assets at amortised cost after credit loss allowances	48,087	
5	Positive fair values of hedge accounting derivatives	1,009	
6	Valuation adjustment from portfolio hedge accounting (assets)	5	
7	Tangible assets	32	
8	Intangible assets	42	
9	Other assets	50	
10	Current income tax assets	3	
11	Deferred income tax assets	129	
12	**Total assets**	**58,402**	
Liabilities - Breakdown by liability classes according to the balance sheet in the published financial statements			
13	Financial liabilities at fair value through profit or loss	559	
14	Financial liabilities measured at amortised cost	52,656	
15	Subordinated liabilities [2]	655	
16	Negative fair values of hedge accounting derivatives	1,372	
17	Valuation adjustment from portfolio hedge accounting (liabilities)	70	
18	Provisions	231	
19	Other liabilities	55	
20	Current income tax liabilities	34	
21	**Liabilities**	**54,977**	
22	Equity attributable to the shareholders of pbb	3,124	
23	Subscribed capital	380	
24	Additional paid-in capital	1,637	
25	Retained earnings	1,202	
26	Accumulated other comprehensive income	-95	
27	Additional equity instruments (AT1) [2]	298	
28	Non-controlling interests [3]	3	
29	**Equity**	**3,425**	
30	**Total equity and liabilities**	**58,402**	
Shareholders' Equity			
	Common Equity Tier 1 (CET1): Instruments and reserves		
31	Capital instruments and the related share premium accounts	2,017	Reference EU CC1, line 1
32	thereof: subscribed capital	380	Reference EU CC1, line1a
33	thereof: additional paid-in capital	1,637	Reference EU CC1, line 1b
34	Retained earnings	1,044	Reference EU CC1, lines 2 and EU-5a
35	Accumulated other comprehensive income	-95	Reference EU CC1, line 3
36	Distribution of a dividend [4]	-	
37	**Common Equity Tier 1 (CET1) before regulatory adjustments**	**2,965**	Reference EU CC1, line 6
	Common Equity Tier 1 (CET1): regulatory adjustments		
38	Additional value adjustments (negative amount)	-5	Reference EU CC1, line 7
39	Intangible assets (net of related tax liability) (negative amount)	-23	Reference EU CC1, line 8
40	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-18	Reference EU CC1, line 10

		a	c
		Balance sheet as in published financial statements under regulatory scope of consolidation 1)	Reference
All figures in € million		31.12.2021	
41	Fair value reserves related to gains or losses on cash flow hedges	29	Reference EU CC1, line 11
42	Negative amounts resulting from the calculation of expected loss amounts	-	Reference EU CC1, line 12
43	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-	Reference EU CC1, line 14
44	Other regulatory adjustments	-73	Reference EU CC1, line 27a
45	**Total regulatory adjustments to Common equity Tier 1 (CET1)**	**-90**	Reference EU CC1, line 28
46	**Common Equity Tier 1 (CET1) capital**	**2,875**	Reference EU CC1, line 29
	Additional Tier 1 (AT1) capital: Instruments and reserves		
47	Capital instruments and the related share premium accounts	298	Reference EU CC1, line 30
48	thereof: classified as equity under applicable accounting standards	298	Reference EU CC1, line 31
49	thereof: classified as liabilities under applicable accounting standards	-	Reference EU CC1, line 32
50	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**298**	Reference EU CC1, line 36
	Additional Tier 1 (AT1) capital: regulatory adjustments		
51	Not applicable at pbb	-	
52	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**0**	Reference EU CC1, line 43
53	**Additional Tier 1 (AT1) capital**	**298**	Reference EU CC1, line 44
54	**Tier 1 capital (T1 = CET1 + AT1)**	**3,173**	Reference EU CC1, line 45
	Tier 2 (T2) capital: Instruments and reserves		
55	Capital instruments and the related share premium accounts	587	Reference EU CC1, line 46
56	Credit risk adjustments	5	Reference EU CC1, line 50
57	**Tier 2 (T2) capital before regulatory adjustments**	**593**	Reference EU CC1, line 51
	Tier 2 (T2) capital: regulatory adjustments		
58	Not applicable at pbb	**-**	
59	**Total regulatory adjustments to Tier 2 (T2) capital**	**0**	Reference EU CC1, line 57
60	**Tier 2 (T2) capital**	**593**	Reference EU CC1, line 58
61	**Total capital (TC = T1 + T2)**	**3,766**	Reference EU CC1, line 59

[1] There are no differences between the scope of prudential consolidation pursuant to the CRR and the accounting scope of consolidation for the IFRS consolidated financial statements as at the disclosure date. As a result, columns a and b of the EU CC2 template were combined into one column a in accordance with the Pillar 3 framework, Annex 8, no. 9.

[2] Additional Tier 1 (AT1) capital qualifies as equity for accounting purposes pursuant to the IFRS because there is no obligation to repay, or to make debt servicing payments on an ongoing basis. Tier 2 (T2) capital instruments are included in the IFRS balance sheet under liabilities.

[3] The non-controlling interests (line 28) in the amount of € 3 million result from the participating interest held by Caisse des Dépôts et Consignation (CDC) in CAPVERIANT GmbH. These are not included in regulatory own funds.

[4] The Management Board and Supervisory Board will propose to the Annual General Meeting on 19 May 2022 to distribute a dividend of € 1.18 per share entitled to dividends. Regulatory own funds are calculated excluding this proposed dividend, subject to approval by the Annual General Meeting.

Own funds and eligible liabilities (Minimum Requirements for Own Funds and Eligible Liabilities Instruments, MREL)

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 the Recovery and Resolution of Credit Institutions, 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-in able and thus excluded from conversion.

The exact level of the MREL ratio is determined by regulators individually for each institution concerned. pbb Group aims to maintain an MREL ratio of at least 8 % in relation to total liabilities and own funds (TLOF) in line with the regulatory target set by the resolution authority. This requirement was exceeded by far in the 2021 financial year, as in the previous year.

Disclosure of MREL requirements in accordance with Article 437a of the CRR in conjunction with section 51 (3) sentence 2 of the SAG is required for pbb Group from 1 January 2024 onwards.

Relief in connection with the COVID-19 pandemic

In view of the COVID-19 crisis, the banking regulator provided institutions with various options for relief with regard to the calculation of own funds and own funds requirements in “CRR Quick Fix” regulations. This temporary relief related both to amendments to the CRR and to regulations from the CRR II, which has been applicable since 28 June 2021, that were brought forward.

Articles 468 and 473a of the CRR

By contrast, pbb Group does not apply the relief pursuant to Article 468 of the CRR (temporary treatment of unrealised gains and losses measured at fair value through other comprehensive income, period of temporary treatment: 1 January 2020 to 31 December 2022) or the optional transitional arrangements pursuant to Article 473a of the CRR (transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds, period of temporary treatment: 1 January 2020 to 31 December 2024) in conjunction with Amending Regulation (EU) 2020/873 (“CRR Quick Fix”).

In previous years, pbb Group also did not make use of the original optional transitional arrangements under Article 473a of the CRR in conjunction with Guidelines EBA/GL/2018/01 for mitigating the impact of the introduction of IFRS 9 as of 1 January 2018.

As a result, the own funds, capital ratios and leverage ratio presented in this Disclosure Report represent the full impact of the introduction of IFRS 9 and the expected credit loss impairment model, as well as the full impact of unrealised gains/losses from financial instruments measured at fair value (equity item “Accumulated other comprehensive income”).

Consequently, table IFRS 9/Article 468-FL “Comparison of institutions’ own funds and capital and leverage ratios with and without the application of transitional arrangements for IFRS 9 or analogous ECLs, and with and without the application of the temporary treatment in accordance with Article 468 of the CRR” in accordance with the Guidelines EBA/GL/2020/12 is not relevant for pbb Group.

Article 500b of the CRR

Starting at the end of 2020, the pbb Group applied the COVID-19-related relief in accordance with Article 500b of the CRR (temporary exclusion of certain exposures to central banks from the total exposure measure, period of temporary treatment: 1 January 2020 to 27 June 2021) in conjunction with Amending Regulation (EU) 2020/873 ("CRR Quick Fix") and Guidelines EBA/GL/2020/11. In its decision of 16 September 2020, the ECB stated that there were exceptional circumstances justifying a temporary exclusion of these exposures.

This decision was reaffirmed by the ECB's decision of 18 June 2021 and was extended until 31 March 2022. As a result, pbb Group has continued to apply the relief under Article 429a (1) (n) of the CRR since 28 June 2021, which allows institutions to exclude exposures to Eurosystem central banks from the leverage ratio calculation subject to certain conditions. The impact on pbb Group's leverage ratio is shown in the chapter "Leverage ratio".

According to the press release dated 10 February 2022, the ECB no longer sees any need to allow banks to continue to exclude these exposures from the leverage ratio beyond March 2022. From 1 April 2022 onwards, exposures vis-à-vis Eurosystem central banks are to be included in the leverage ratio again.

Articles 501 and 501a of the CRR

The provisions on more favourable treatment of exposures to small and medium-sized enterprises (SME supporting factor) pursuant to Article 501 of the CRR, which had formerly been brought forward in accordance with the "CRR Quick Fix" and were applicable as of 28 June 2021, have been applied by pbb Group since November 2021.

By contrast, pbb Group does not apply the provisions on more favourable treatment of exposures to infrastructure projects (infra-structure supporting factor) in accordance with Articles 501a of the CRR.

Other relief

pbb Group also does not apply any other CRR relief, such as under Article 500a of the CRR (Temporary treatment of public debt issued in the currency of another Member State, period of temporary treatment: 1 January 2020 to 31 December 2024) or Article 500c of the CRR (Internal models for market risk: Exclusion of overshootings from the calculation of the backtesting addendum between 1 January 2020 and 31 December 2021) in conjunction with Amending Regulation (EU) 2020/873 ("CRR Quick Fix").

Countercyclical capital buffer

This chapter sets out the information on the countercyclical capital buffer for pbb Group in accordance with Article 440 of the CRR.

Countercyclical capital buffer

The countercyclical capital buffer (CCB) pursuant to section 10d of the KWG is considered to be a macroprudential instrument of banking supervision. It is designed, in particular, to counter the risk of excessive credit growth in the banking sector, i.e. in times of excessive credit growth, the banks are to create an additional capital buffer (using Common Equity Tier 1 (CET1) capital), increasing banks' loss-absorbing capacity in the event of a crisis.

Domestic countercyclical capital buffer

Pursuant to section 10d (3) of the KWG, the domestic countercyclical capital buffer (CCB) can generally amount to between 0 % and 2.5 % of the total risk exposure amount (risk-weighted assets, RWA) and is subject, for Germany, to quarterly checks by the Federal Financial Supervisory Authority (BaFin) to ensure it is appropriate, with adjustments being made if need be. This involves BaFin assessing the intensity of the cyclical systemic risk and evaluating which value is appropriate for the domestic countercyclical capital buffer.

As at the disclosure date of 31 December 2021, the value for Germany remains unchanged at 0 %.

In its general administrative act of 31 January 2022, BaFin increased the domestic countercyclical capital buffer from 0 % to 0.75 % of risk-weighted assets as at 1 February 2022. This is designed as a preventative measure to strengthen the resilience of the German banking system. The implementation period for institutions is twelve months, and the aforementioned value has to be applied to the calculation of the institution-specific countercyclical capital buffer from 1 February 2023 onwards.

Individual institution-specific countercyclical capital buffer

pbb Group has to determine its own institution-specific CCB (ICCB) itself. The value of the countercyclical capital buffer relevant for Germany has to be taken into account and applied to the sum of the relevant credit exposures in Germany. In addition to the domestic countercyclical capital buffer, foreign countercyclical capital buffers from countries in which pbb Group has receivables also have to be included. The countercyclical capital buffers valid in these countries (EU CCyB1, column m) also have to be recognised on a pro rata basis. This means that the institution-specific countercyclical capital buffer for pbb Group is derived from the weighted average of the domestic and foreign capital buffers for those countries in which pbb Group has significant credit exposures to the private sector (EU CCyB1: as the sum of the weighted own funds requirement per country in accordance with column l multiplied by the country-specific CCB in % according to column m)..

Capital buffer for systemic risks

In addition to the increase in the domestic countercyclical capital buffer described above (to 0.75 % effective 1 February 2023), BaFin also introduced a sector-specific systemic risk buffer of 2.00 % with its "General Administrative Act ordering a capital buffer for systemic risks under section 10e of the KWG" dated 30 March 2022. This systemic risk buffer applies to exposures concerning loans secured by residential real estate and is also intended to counteract the specific risks in the residential real estate market that cannot be fully covered by the CCB. The own funds requirement for the systemic risk buffer, like the CCB, must be maintained in Common Equity Tier 1 (CET1) capital. Banks have until 1 February 2023 to comply with the requirement.

Quantitative information on the countercyclical capital buffer

The following tables pursuant to Article 440 (a) and (b) of the CRR show the amount of the pbb Group-specific countercyclical capital buffer (EU CCyB2), as well as the geographical distribution of credit exposures relevant for the calculation of the counter-cyclical capital buffer (EU CCyB1).

The institution-specific countercyclical capital buffer for pbb Group as at 31 December 2021 is almost unchanged as against both the end of the first half of 2021 and the end of 2020 at 0.02 %, meaning that it remains well below the applicable maximum ratio of 2.5 %.

The calculation of the ICCB took into account the country-specific countercyclical capital buffers of the Czech Republic (0.5 %), Slovakia (1.0 %) and Luxembourg (0.5 %). The domestic countercyclical capital buffers of the other countries in which pbb Group has significant exposures either amount to 0 %, or have not been set by the competent supervisory authority.

The own funds requirement of € 3 million (0.02 % of the risk-weighted exposure amounts) is to be held in Common Equity Tier 1 (CET1) capital in accordance with section 10d (1) of the KWG. To cover this, and to cover the own funds requirement for the capital conservation buffer (CCoB) of 2.5 %, pbb Group has € 2,119 million in Common Equity Tier 1 capital available after complying with the Common Equity Tier 1 capital ratio of 4.5 % of total risk exposure.

EU CCyB2: Amount of institution-specific countercyclical capital buffer

All figures in € million, unless otherwise stated		a
1	Total risk exposure amount [1]	16,792
2	Institution specific countercyclical capital buffer rate	0.02%
3	Institution specific countercyclical capital buffer requirement [2]	3

[1] Total risk-weighted exposure amounts (risk-weighted assets, RWA) according to EU OV1, column (a).
[2] Own funds requirement for ICCyB, calculated by multiplying line 1 and line 2.

EU CCyB1: Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer

			a	b	c	d	e	f	g	h	i	j	k	l	m
			General credit exposures		**Relevant credit exposures – Market risk**		**Securitisation exposures Exposure value for non-trading book**	**Total exposure value 1)**	**Own fund requirements**				**Risk-weighted exposure amounts 2)**	**Own fund requirements weights 3) (%)**	**Countercyclical buffer rate 4) (%)**
All figures in € million, unless otherwise stated			**Exposure value under the standardised approach**	**Exposure value under the IRB approach**	**Sum of long and short positions of trading book exposures for SA**	**Value of trading book exposures for internal models**			**Relevant credit risk exposures - Credit risk**	**Relevant credit exposures – Market risk**	**Relevant credit exposures – Securitisation positions in the non-trading book**	**Total**			
10	**Breakdown by country 5)**														
1	(AT)	Austria	554	272	-	-	-	826	9	-	-	9	113	0.01	0.00
2	(AW)	Aruba	47	-	-	-	-	47	-	-	-	-	-	-	-
3	(BD)	Bangladesh	23	-	-	-	-	23	-	-	-	-	-	-	-
4	(BE)	Belgium	138	150	-	-	-	288	2	-	-	2	25	0.00	0.00
5	(BM)	Bermuda	26	2	-	-	-	28	-	-	-	-	-	-	-
6	(CH)	Switzerland	34	189	-	-	-	223	11	-	-	11	138	0.01	0.00
7	(CZ)	Czech Republic	-	356	-	-	-	356	23	-	-	23	288	0.02	0.50
8	(DE)	Germany	671	13,249	-	-	-	13,920	197	-	-	197	2,463	0.18	0.00
9	(EG)	Egypt	30	-	-	-	-	30	-	-	-	-	-	-	-
10	(ES)	Spain	927	281	-	-	-	1,208	33	-	-	33	413	0.03	0.00
11	(FI)	Finland	-	280	-	-	-	280	13	-	-	13	163	0.01	0.00
12	(FR)	France	596	3,627	-	-	-	4,223	234	-	-	234	2,925	0.20	0.00
13	(GB)	United Kingdom	-	2,576	-	-	-	2,576	165	-	-	165	2,063	0.14	0.00
14	(GG)	Guernsey	-	2	-	-	-	2	-	-	-	-	-	-	-
15	(GH)	Ghana	38	-	-	-	-	38	-	-	-	-	-	-	-
16	(HU)	Hungary	-	150	-	-	-	150	7	-	-	7	88	0.01	0.00
17	(IE)	Ireland	116	-	-	-	-	116	-	-	-	-	-	-	0.00
18	(IT)	Italy	-	104	-	-	-	104	4	-	-	4	50	0.00	0.00
19	(JE)	Jersey	28	3	-	-	-	31	2	-	-	2	25	0.00	-
20	(KY)	Cayman Islands	92	-	-	-	-	92	-	-	-	-	-	-	-

All figures in € million, unless otherwise stated			a	b	c	d	e	f	g	h	i	j	k	l	m
			General credit exposures		Relevant credit exposures – Market risk		Securitisation exposures Exposure value for non-trading book	Total exposure value [1]	Own fund requirements				Risk-weighted exposure amounts [2]	Own fund requirements weights [3] (%)	Countercyclical buffer rate [4] (%)
			Exposure value under the standardised approach	Exposure value under the IRB approach	Sum of long and short positions of trading book exposures for SA	Value of trading book exposures for internal models			Relevant credit risk exposures – Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total			
10	**Breakdown by country [5]**														
21	(LI)	Liechtenstein	-	5	-	-	-	5	-	-	-	-	-	-	0.00
22	(LU)	Luxemburg	130	133	-	-	-	263	16	-	-	16	200	0.01	0.50
23	(MU)	Mauritius	-	1	-	-	-	1	-	-	-	-	-	-	-
24	(NL)	Netherlands	-	1,111	-	-	-	1,111	57	-	-	57	713	0.05	0.00
25	(OM)	Oman	52	-	-	-	-	52	-	-	-	-	-	-	-
26	(PL)	Poland	-	1,364	-	-	-	1,364	71	-	-	71	888	0.06	0.00
27	(PT)	Portugal	352	-	-	-	-	352	6	-	-	6	75	0.01	0.00
28	(RO)	Romania	-	186	-	-	-	186	10	-	-	10	125	0.01	0.00
29	(SA)	Saudi Arabia	22	-	-	-	-	22	-	-	-	-	-	-	0.00
30	(SE)	Sweden	-	903	-	-	-	903	63	-	-	63	788	0.05	0.00
31	(SI)	Slovenia	-	69	-	-	-	69	4	-	-	4	50	0.00	0.00
32	(SK)	Slovakia	-	106	-	-	-	106	4	-	-	4	50	0.00	1.00
33	(US)	United States of America	115	3,589	-	-	-	3,704	210	-	-	210	2,625	0.18	0.00
34	(VG)	Virgin Islands	-	1	-	-	-	1	-	-	-	-	-	-	-
20	**Total**		**3,991**	**28,709**	**0**	**0**	**0**	**32,700**	**1,141**	**0**	**0**	**1,141**	**14,325**	**1.00**	—

[1] Exposure value (exposure at default, EAD) calculated as the sum of the EAD amounts in columns a to e.
[2] Risk-weighted exposure amounts (risk-weighted assets, RWA).
[3] The weighting applied to the countercyclical capital buffer ratio in each country, calculated as the sum of the own funds requirements in that country (column j) divided by the sum of all own funds requirements (column j, line 020).
[4] Country-specific countercyclical capital buffer (CCB) rates pursuant to European Systemic Risk Board (ESRB)/Bank for International Settlements (BIS).
[5] Country: Location of the debtor, i.e. the debtor's place of habitual residence or the location of the assets (real estate) in cases involving specialised lending.

Own funds requirements and RWA

This chapter shows information on own funds requirements and risk-weighted exposure amounts (risk-weighted assets, RWA) for pbb Group in accordance with Article 438 (d) to (g) of the CRR. As the parent company of the group of institutions within the meaning of section 10a of the KWG in conjunction with Articles 11 et seqq. Of the CRR, pbb is responsible for complying with the capital requirements on a combined basis (regulatory scope of consolidation). The information for assessing internal capital adequacy in accordance with Article 438 (a) to (c) of the CRR is described in the chapter “Economic capital and risk-bearing capacity”.

Methods for determining the own funds requirement

pbb Group applies the provisions set out in the CRR, meaning that it is subject to the disclosure requirements of Part 8 of the CRR. The CRR/CRD regulations form the basis for the minimum amount of own funds, as well as the calculation of own funds requirements. In order to comply with the own funds requirements, default risk (credit risk, counterparty credit risk, including CVA risk), market risk, operational risk and settlement risk must be backed with capital. The regulatory ratios are calculated based on the IFRS accounting standards.

Credit risk (excluding counterparty credit risk)

When calculating the own funds requirements for credit risk, pbb Group uses the advanced IRB approach based on internal ratings in accordance with Articles 142 et seqq. Of the CRR, as well as the standardised approach in accordance with Articles 111 et seqq. Of the CRR.

As far as its participating interests are concerned, it applies the simple IRBA risk weight for equity exposures in accordance with Article 155 (2) of the CRR. By contrast, pbb Group does not apply the simple IRBA risk weight for specialised lending pursuant to Article 153 (5) of the CRR.

As at the end of 2020, pbb Group did not have any exposures from securitisation in its portfolio as at the disclosure date. There are currently no plans for any new securitisation of pbb’s own receivables. Pbb Group’s business strategy does not currently de-fine new securitisation transactions as a corporate objective.

Counterparty credit risk

pbb Group has applied the standardised approach (SA-CCR) to the calculation of own funds requirements for counterparty credit risk pursuant to Part 3, Title II, Chapter 6 of the CRR (i.e. for derivative transactions) since 28 June 2021 in accordance with Articles 274 et seqq. Of the CRR. Until the CRR II came into force, pbb Group used the mark-to-market method.

Pbb Group uses the standardised approach pursuant to Article 384 of the CRR to calculate the additional own funds requirement for OTC derivatives for credit valuation adjustment risk (CVA risk) according to Part 3, Title VI of the CRR.

As far as securities financing transactions (securities lending/repo transactions) are concerned, pbb Group applies the provisions for credit risk mitigation in accordance with Chapter 4 of the CRR, namely the Financial Collateral Comprehensive Method in accordance with Articles 223 et seqq. Of the CRR.

When it comes to calculating the own funds requirements for contributions to the default fund of a qualifying central counterparty, pbb Group applies the risk-sensitive approach in accordance with Article 308 of the CRR.

Market risk

Capital backing for market risk pursuant to Part 3, Title IV of the CRR is calculated using the standardised approach in accordance with Articles 325 et seqq. Of the CRR at pbb Group. Pbb does not currently use its own internal models.

Operational risk

Capital backing for operational risk pursuant to Part 3, Title III of the CRR is calculated using the standardised approach in accordance with Articles 317 et seqq. Of the CRR at pbb Group. Pbb does not currently use its own internal models.

Settlement risk

The own funds requirements for settlement risk and risks associated with outstanding delivery pursuant to Part 3, Title V of the CRR are calculated based on the rules set out in Articles 378 and 379 of the CRR.

Quantitative information on own funds requirements and RWA

Table EU OV1 pursuant to Article 438 (d) of the CRR shows the risk-weighted assets RWA) and the corresponding regulatory mini-mum own funds requirements broken down by risk type pursuant to Part 3 of the CRR.

Table EU CR10.5 pursuant to Article 438 (e) of the CRR also shows the risk-weighted assets, the minimum own funds requirement and other information for equity exposures for which the simple IRBA risk weight is used. As far as its participating interests are concerned, pbb Group applies the simple IRBA risk weight for equity exposures in accordance with Article 155 (2) of the CRR.

By contrast, pbb Group does not apply the simple IRBA risk weight for specialised lending pursuant to Article 153 (5) of the CRR. Tables EU CR10.1 to EU CR10.4 in accordance with Article 438 (e) of the CRR are therefore not relevant for pbb Group.

Disclosure of the tables EU INS1 pursuant to Article 438 (f) of the CRR and EU INS2 (Financial conglomerates) pursuant to Article 438 (g) of the CRR is also still not relevant for pbb Group as at the disclosure date. pbb does not hold any material interest in an insurance undertaking, a reinsurance undertaking or an insurance holding company, nor is there any authorisation granted by the competent supervisory authority pursuant to Article 49 (1) of the CRR not to deduct such holdings of own funds instruments

EU OV1: Overview of total risk exposure amounts

		a	b	c
		Risk weighted exposure amounts (RWA) [1]	**Risk weighted exposure amounts (RWA)** [1]	**Total own funds requirements**
All figures in € million		**31.12.2021**	**30.09.2021**	**31.12.2021**
1	**Credit risk (excluding CCR)**	**15,385**	**16,657**	**1,231**
2	thereof: the standardised approach	2,228	2,197	178
3	thereof: the foundation IRB (FIRB) approach	-	-	-
4	thereof: slotting approach	-	-	-
EU 4a	thereof: equities under the simple risk-weighted approach	0.1	0.1	0.01
5	thereof: the advanced IRB (AIRB) approach	13,157	14,460	1,053
6	**Counterparty credit risk**	**426**	**520**	**34**
7	thereof: the standardised approach	217	295	17
8	thereof: internal model method (IMM)	-	-	-
EU 8a	thereof: exposures to a CCP [2]	3	6	0.2
EU 8b	thereof: credit valuation adjustment - CVA	206	218	16
9	thereof: other CCR	-	-	-
15	**Settlement risk**	**0**	**0**	**0**
16	**Securitisation exposures in the non-trading book (after the cap)**	**0**	**0**	**0**
17	thereof: SEC-IRBA approach	-	-	-
18	thereof: SEC-ERBA (including IAA)	-	-	-
19	thereof: SEC-SA approach	-	-	-
EU 19a	thereof: 1,250% / deduction	-	-	-
20	**Position, foreign exchange and commodities risks (Market risk)**	**59**	**58**	**5**
21	thereof: the standardised approach	59	58	5
22	thereof: IMA	-		-
EU 22a	**Large exposures** [3]	**0**	**0**	**0**
23	**Operational risk**	**922**	**881**	**74**
EU 23a	thereof: basic indicator approach	-		-
EU 23b	thereof: standardised approach	922	881	74
EU 23c	thereof: advanced measurement approach	-	-	-
24	Amounts below the thresholds for deduction (subject to 250% risk weight) (For information) [4]	277	225	22
29	**Total**	**16,792**	**18,116**	**1,343**

[1] Risk-weighted exposure amounts (risk-weighted assets, RWA).
[2] Exposures for contributions to the default fund of a central counterparty (Eurex Clearing).
[3] pbb Group does not maintain a trading book for securities or derivatives portfolios held to realise short-term gains.
[4] Deferred tax assets dependant on future profitability (not) resulting from temporary differences.
The disclosure in this line is for information purposes only; the amount is already included in line 1 (credit risk).

EU CR10.5: Equity exposures under the simple risk-weighted approach

	a	b	c	d	e	f
Categories **All figures in € million, unless otherwise stated**	**On-balance-sheet exposure** [1]	**Off-balance-sheet exposure** [1]	**Risk weight** [2]	**Exposure value** [3]	**Risk weighted exposure amount** [4]	**Expected loss amount** [5]
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	-	-	290%	-	-	-
Other equity exposures	0.02	-	370%	0.02	0.1	-
Total	**0.02**	**0**		**0.02**	**0.1**	**0**

[1] Carrying values in financial statements (nominal value for off-balance sheet items).
[2] Simple risk weight for equity exposures.
[3] Exposure value (exposure at default, EAD).
[4] Risk-weighted exposure amount (risk-weighted assets, RWA).
[5] Expected loss (EL).

Risk-weighted assets (RWA)

The risk-weighted assets (RWA) of pbb Group across all risk types amounted to €16,792 million as at 31 December 2021 (30 September 2021: € 18,116 million). The main factors behind the significant reduction at the end of the year (€ -1,324 million as against 30 September 2021) include methodological changes in the calculation of RWA, in particular the application of the SME supporting factor since November 2021, as well as maturities/repayments, which were only partly offset by new business in Commercial Real Estate Finance and the increase in the real estate financing portfolio. Counterparty credit risk was also affected by the lower volume of derivatives and the increase in reverse repo transactions (loans and advances to banks). Market risk is almost unchanged at the level of the end of the third quarter.

Own funds requirements

The minimum own funds requirement for the abovementioned risk types as at 31 December 2021 remains unchanged as against the disclosure date of 30 September 2021 at 8 % of RWA. As at the disclosure date, it amounts to a total of € 1,343 million (30 September 2021: € 1,449 million). In line with pbb Group's business model, which focuses on commercial real estate finance and also on public investment finance, 95 % of the own funds requirement is attributable to default risks (including counterparty credit and CVA risks), with less than 1 % attributable to market risks and around 5 % to operational risks.

The total own funds requirement – including the capital conservation buffer (CCoB) of 2.5 %, the institution-specific countercyclical capital buffer (ICCB) of 0.02 % and the Pillar 2 capital requirement (P2R) of 2.5 % – remains unchanged as against the disclosure date of 30 September 2021 at 13.02 %. As at the disclosure date, it amounts to a total of € 2,186 million (30 September 2021: € 2,359 million).

Surplus own funds

The surplus own funds (own funds available less the own funds requirements pursuant to EU OV1) amount to € 2,423 million as at the disclosure date (30 September 2021: € 2,145 million).

Capital ratios

The information in this chapter on regulatory minimum capital ratios and regulatory minimum SREP capital requirements complements the information in the chapters entitled "Own funds" (Article 437 of the CRR) and "Economic capital and risk-bearing capacity" (Article 438 of the CRR).

Regulatory minimum capital ratios

The Capital Requirements Regulation (CRR), together with the Capital Requirements Directive (CRD), form the basis for calculating regulatory capital and minimum capital ratios. According to the regulations set out therein, the Common Equity Tier 1 (CET1) ratio (Common Equity Tier 1 divided by risk-weighted assets) must not fall below 4.5 % in 2021 , the Tier 1 (T1) capital ratio (Tier 1 divided by risk-weighted assets) must not fall below 6.0 % and the own funds ratio (own funds divided by risk-weighted assets) must not fall below 8.0 %.

As the parent company of the group of institutions within the meaning of section 10a of the KWG in conjunction with Articles 11 et seqq. CRR, pbb is responsible for complying with the capital ratios on a combined basis. The requirements for the regulatory capital ratios were met at all times in 2021. As at 31 December 2021, the capital ratios are (EU CC1, lines 61 to 63):

- CET1 ratio: 17,1 % (30 June 2021: 15,4 %)
- Tier 1 ratio: 18,9 % (30 June 2021: 17,1 %)
- Own funds ratio: 22,4 %. (30 June 2021: 20,5 %).

The significant improvement in the capital ratios compared to the first half of 2021 can be traced back, in particular, to the inclusion of the retained portion of the 2020 and 2021 annual results, resulting in a slight increase in own funds. By contrast, risk-weighted assets (RWA) fell considerably (€ -1.2 billion as against 30 June 2021), mainly due to methodological changes in the calculation of RWA (application of the SME supporting factor since November 2021), as well as maturities/repayments, which were only partly offset by new business in Commercial Real Estate Finance and the increase in the real estate financing portfolio.

Disclosure in accordance with Article 437 (f) of the CRR is not relevant for pbb Group, as pbb applies the provisions of the CRR.

SREP

pbb Group also complied with the minimum capital requirements of the ECB's Supervisory Review and Evaluation Process (SREP), which extend beyond the existing regulatory requirements, at all times during the 2021 financial year.

The aim of the Supervisory Review and Evaluation Process is to conduct a comprehensive analysis of the institutions supervised by the ECB. This includes an assessment of the business model, risk and corporate governance, the risk situation, as well as capital and liquidity resources. Based on the results of the analysis and benchmark comparisons, the ECB can opt to impose requirements on the institution's minimum capital or liquidity resources that extend beyond the existing supervisory requirements.

Minimum CET1 ratio and total own funds requirements

As a material result of the SREP, since 2020 pbb Group has been required to maintain a minimum CET1 ratio of 9.5 % (excluding the countercyclical capital buffer, which varies according to country, and hence, for specific portfolios – as at 31 December 2020, it stood at 0.019 %). This capital requirement is based on the final Basel III requirements (excluding transitional rules) and comprises a Pillar 1 minimum capital requirement (4.5 %), a Pillar 2 capital requirement (P2R: 2.5 %) and the capital conservation buffer (CCB: 2,5 %).

Furthermore, pbb Group had to fulfil a total capital requirement of 13.0 % from 2020 onwards (excluding the countercyclical capital buffer, which varies according to country, and hence, for specific portfolios). It is based on the final Basel III requirements (excluding transitional rules) and comprises a Pillar 1 minimum requirement (8.0 %), a Pillar 2 capital requirement (2.5 %) and the capital conservation buffer (2.5 %).

As of 12 March 2020, the ECB adjusted SREP requirements for banks under its supervision: since then, they have been required to hold approximately 1.4 % (56.25 %) of the Pillar 2 capital requirement of 2.5 % in the form of CET1 capital, and 1.9 % (75 %) as T1 capital. As a result, pbb's SREP requirement was reduced to approximately 8.4 % CET1 (excluding the countercyclical capital buffer, which varies according to country, and hence, for specific portfolios). the total capital requirement has remained un-changed, at 13.0 %.

The applicable CET1 minimum capital requirement 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 (AT1) capital.

SREP requirement since 1 March 2022

The Pillar 2 capital requirement, as notified to pbb Group in ECB's SREP letter dated 2 February 2022 and effective since 1 March 2022, remains unchanged at 2.5 %. Hence, the minimum SREP and total capital ratios as stated above remain valid for pbb Group.

Leverage ratio

This chapter sets out the information on the leverage ratio for pbb Group in accordance with Article 451 of the CRR, as well as on monitoring and managing the risk of excessive leverage.

According to Article 429 (2) of the CRR, the leverage ratio, a capital requirement that is not risk-based, is calculated as an institution's capital measure (the Tier 1 capital) divided by that institution's total exposure measure and is expressed as a percentage. This figure is not risk-sensitive and complements the risk-based perspective of the own funds requirements and capital ratios. It aims to limit the increase in leverage in the banking sector, to mitigate the risk of debt accumulating with a destabilising impact on the financial system and the economy as a whole, and to complement the risk-based requirements to include a simple safety mechanism that is not risk-based.

Since 28 June 2021, institutions have been required to maintain a leverage ratio of at least 3 % at all times in accordance with Article 92 (1) of the CRR. pbb Group met this requirement at all times in 2021.

Total exposure measure

The CRR forms the basis for calculating the total exposure measure of the leverage ratio. Based on the CRR, its calculation is generally based on the carrying value in the financial statements as the relevant measure of assets. Specific regulatory metrics apply to derivatives and securities financing transactions (securities lending/repo transactions). The total exposure measure also takes off-balance sheet exposures into account.

Derivatives

The exposure values of the leverage ratio for derivatives have been calculated on the basis of the new regulatory standardised approach (SA-CCR) since the application of the CRR II rules. This is more risk-sensitive than the mark-to-market method used up until then. The exposure values according to the standardised approach take into account a number of factors including margin agreements, collateral and maturities of the derivative transactions, the minimum transfer amount, the current replacement cost, netting and a general factor of 1.4.

Securities financing transactions

The exposure values of the leverage ratio for securities financing transactions (securities lending/repo transactions) include the gross receivables from securities financing transactions that are offset against liabilities from securities financing transactions, provided that certain conditions are met. In addition to the gross receivables from securities financing transactions, a premium for the counterparty credit risk from securities financing transactions is included. As at the reporting date of 31 December 2021, pbb Group had not agreed any securities lending/repo transactions, but had agreed reverse repo transactions in the amount of € 1,034 million.

On-balance sheet exposures

The exposure values of the leverage ratio for other balance sheet items (excluding derivatives and securities financing transactions) include the carrying value of the items in question in the financial statements, as well as regulatory adjustments for items that are deducted when calculating regulatory Tier 1 capital.

Off-balance sheet exposures

The exposure values of the leverage ratio for off-balance sheet exposures take into account the credit conversion factors (CCF) from the standardised approach for credit risk of 0 %, 20 %, 50 % or 100 % depending on the risk category, with a lower limit of 10 %.

Quantitative information on the leverage ratio

The following tables EU LR1-LRSum, EU LR2-LRCom and EU LR3-LRSpl pursuant to Article 451 (1) (a) to (c) of the CRR and Article 451 (3) of the CRR show a breakdown of the total exposure measure, a reconciliation of this measure with the assets in pbb's published consolidated statement of financial position and the leverage ratio for pbb Group.

The leverage ratio for pbb Group as at 31 December 2021 is 6.0 % (EU LR2-LRCom, line 25a), meaning that it remains significantly ahead of the minimum requirement. Within this context, pbb Group applies the temporary relief (which applies for a fixed term until 31 March 2022) under Article 429a (1) (n) of the CRR, which allows institutions to exclude exposures to Eurosystem central banks from the leverage ratio calculation subject to certain conditions. Without this partial exclusion of exposures to Eurosystem central banks, the leverage ratio would be 5.5 % (EU LR2-LRCom, line 25).

In September 2020, the European Central Bank (ECB) had permitted those euro area banks it supervises directly not to include certain exposures to central banks in the denominator when calculating their leverage ratio in light of the exceptional macroeconomic circumstances created by the COVID-19 pandemic. This leverage ratio relief was renewed by the ECB in June 2021 and extended until the end of March 2022. According to the press release dated 10 February 2022, however, the ECB sees no need to allow banks to continue to exclude these exposures from the leverage ratio beyond March 2022. This means that, from 1 April 2022 onwards, exposures vis-à-vis Eurosystem central banks are to be included in the leverage ratio again.

EU LR1-LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

All figures in € million		a Applicable amount
1	**Total assets as per published financial statements [1)]**	**58,402**
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation [2)]	-3
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	-
4	(Adjustment for temporary exemption of exposures to central bank (if applicable)) [3)]	-5,466
5	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with point (i) of point (i) of Article 429a(1) CRR)	-
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	-
7	Adjustment for eligible cash pooling transactions	-
8	Adjustments for derivative financial instruments [4)]	-1,115
9	Adjustment for securities financing transactions (SFTs) [5)]	1
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures) [6)]	1,731
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	-
EU-11a	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-
EU-11b	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (j) of Article 429a(1) CRR)	-
12	Other adjustments [7)]	-1,001
13	**Leverage ratio total exposure measure**	**52,549**

[1)] Total assets reported in the pbb consolidated financial statements (IFRS).
[2)] There are no differences between the scope of prudential consolidation and the accounting scope of consolidation for pbb's consolidated financial statements (IFRS) as at the disclosure date.
[3)] Exposures to Eurosystem central banks temporarily excluded from the calculation of the leverage ratio (since 28 June 2021, for a fixed term until 31 March 2022).
[4)] Difference between the carrying value (IFRS) of the derivatives in the financial statements and the exposure value (EaD).
[5)] Difference between the carrying value (IFRS) of the securities financing transactions (securities lending/repo transactions) in the financial statements and the regulatory exposure value (EaD).
[6)] Addition of off-balance sheet exposures after taking into account the credit conversion factor (CCF) based on the credit risk standardised approach.
[7)] Other adjustments mainly include cash collateral furnished by pbb in the derivatives business.

EU LR2-LRCom: Leverage ratio common disclosure

		a	b
All figures in € million, unless otherwise stated		31.12.2021	30.06.2021
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	56,452	56,956
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-1,561	-1,557
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-	-
5	(General credit risk adjustments to on-balance sheet items)	-	
6	(Asset amounts deducted in determining Tier 1 capital)	-75	-
7	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	**54,816**	**55,345**
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	158	229
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-	-
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	276	284
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	-	-
EU-9b	Exposure determined under Original Exposure Method	-	-
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	-	-
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-	-
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (Original exposure method)	-	-
11	Adjusted effective notional amount of written credit derivatives	-	-
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-	-
13	**Total derivatives exposures**	**434**	**513**
Securities financing transaction (SFT) exposures			
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	1,034	800
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-	-
16	Counterparty credit risk exposure for SFT assets	1	-
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR	-	-
17	Agent transaction exposures	-	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-	-
18	**Total securities financing transaction exposures**	**1,035**	**800**
Other off-balance sheet exposures			
19	Off-balance sheet exposures at gross notional amount	3,301	3,155
20	(Adjustments for conversion to credit equivalent amounts)	-1,570	-1,450
21	(General provisions associated with off-balance sheet exposures deducted in determining Tier 1 capital)	-	-
22	**Off-balance sheet exposures**	**1,731**	**1,705**
Excluded exposures			
EU-22a	(Exposures excluded from the leverage ratio total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-	-
EU-22b	(Exposures exempted in accordance with point (j) of Article 429a (1) CRR (on and off balance sheet))	-5,466	-5,977
EU-22c	(Excluded exposures of public development banks (or units) - Public sector investments)	-	-
EU-22d	(Excluded exposures of public development banks (or units) - Promotional loans)	-	-
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units))	-	-
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	-	-

	All figures in € million, unless otherwise stated	a 31.12.2021	b 30.06.2021
EU-22g	(Excluded excess collateral deposited at triparty agents)	-	-
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)	-	-
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)	-	-
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)	-	-
EU-22k	**(Total exempted exposures)**	**-5,466**	**-5,977**
Capital and total exposure measure			
23	**Tier 1 capital**	**3,174**	**3,074**
24	**Leverage ratio total exposure measure**	**52,549**	**52,386**
Leverage ratio			
25	**Leverage ratio**	**6.0**	**5.9**
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	6.0	5.9
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) [1]	5.5	5.3
26	Regulatory minimum leverage ratio requirement (%) [2]	3.1	3.1
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%) [3]	-	-
EU-26b	thereof: to be made up of CET1 capital	-	-
27	Leverage ratio buffer requirement (%)	-	-
EU-27a	Overall leverage ratio requirement (%) [4]	3.1	3.1
Choice on transitional arrangements and relevant exposures			
EU-27b	Choice on transitional arrangements for the definition of the capital measure	fully implemented	fully implemented
Disclosure of mean values			
28	Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable 6)	1,288	451
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables 6)	1,034	800
30	Total exposures (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	52,804	52,037
30a	Total exposures (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	58,270	58,014
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	6.0	5.9
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	5.4	5.3

[1] Line 25a: Leverage ratio calculated including temporarily excluded exposures to Eurosystem central banks pursuant to table EU LR1-LRSum, line 4 (for a limited period from 28 June 2021 to 31 March 2022).

[2] Line 26: Adjusted leverage ratio pursuant to Article 429a (7) of the CRR for the duration of the exclusion of the temporarily excluded exposures to Eurosystem central banks.

[3] Line EU-26a: Additional own funds requirement imposed by the competent authority (ECB) to contain the risk of excessive leverage.

[4] Line EU-27a: Sum of lines 26 and EU-26a. Line 27 only applies to G-SIIs, meaning that it is not relevant for pbb.

EU LR3-LRSpl: Split-up of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

All figures in € million		a CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**49,409**
EU-2	Trading book exposures [1]	-
EU-3	Banking book exposures, thereof:	49,409
EU-4	Covered bonds	1,102
EU-5	Exposures treated as sovereigns	15,034
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	2,710
EU-7	Institutions	1,146
EU-8	Secured by mortgages of immovable properties	26,390
EU-9	Retail exposures	-
EU-10	Corporate	2,396
EU-11	Exposures in default	407
EU-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	224

[1] pbb Group does not maintain a trading book for securities or derivatives portfolios held to realise short-term gains.

Procedures to monitor the risk of excessive leverage

In line with its business structure and model, as well as its business and risk strategy, pbb Group has implemented formal procedures and regulations to assess the risk of excessive leverage. In particular, as part of the recovery plan (pursuant to the German Act on the Recovery and Resolution of Credit Institutions (SAG)), pbb Group has defined a set of selected indicators tailored to reflect its business and risk situation, allowing it to identify and implement suitable courses of action in a timely manner. In addition to the leverage ratio and capital ratios, these indicators include liquidity indicators (including asset encumbrance and medium and longer-term refinancing requirements (NSFR)), profitability and portfolio quality indicators, as well as market-based and macroeconomic indicators.

The leverage ratio is calculated on a monthly basis and, like the other indicators, forms a key component of pbb Group's risk management system. Both the leverage ratio and the other indicators are assigned an early warning threshold and a recovery threshold so that any shortfall can be pinpointed at an early stage. Scenarios in which the early warning threshold is undercut are designed to allow pbb Group to take appropriate countermeasures in a timely manner. The status of all indicators is monitored on a regular basis and reported to the Management Board, the Supervisory Board and the banking supervisor. Ongoing monitoring of the leverage ratio includes both its numerator (Tier 1 capital) and denominator (the total exposure measure). The Management Board of pbb is provided with information on the leverage ratio on a monthly basis in the Flash Report and on a quarterly basis in the Management Report and the Recovery Plan Report. In addition, the leverage ratio is covered by pbb Group's capital and multi-year planning.

Encumbered and unencumbered assets

In accordance with Article 443 of the CRR, this chapter contains information concerning encumbered and unencumbered assets of pbb Group and the main sources of encumbrance. The amounts shown in tables EU AE1 to EU AE3 are calculated as median values based on the quarterly data (quarter-end values) for the 2021 financial year as part of the regulatory report on asset encumbrance.

Asset encumbrance

An asset is considered to be encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit enhance any transaction from which it cannot be freely withdrawn. Asset encumbrance results from the requirement to provide collateral, usually caused by a transaction on the liabilities side of the balance sheet (refinancing side).

Asset encumbrance within the pbb Group results primarily from its business model, with Pfandbriefe as the primary funding instrument. pbb Group specialises in commercial real estate and public investment finance. Most of the loans extended are refinanced on the Pfandbrief market. pbb issues Mortgage Pfandbriefe, collateralised by real property liens, for the funding of real estate financing which is eligible for inclusion in Pfandbrief cover and Public Sector Pfandbriefe, collateralised by claims against the public sector, for the funding of public investment financing. With an outstanding Pfandbrief volume of more than € 26.2 billion (nominal) as at 31 December 2021, pbb is a major issuer of Pfandbriefe, which also makes it an important player in the European Pfandbrief markets.

As at 31 December 2021, the assets of the pbb Group (median) amounted to € 58.9 billion (31 December 2020: € 59.1 billion); of this figure, € 36.7 billion (62.3 %) are encumbered (31 December 2020: € 38.2 billion or 64.7 %). Encumbrance within pbb Group is largely unchanged over the course of 2021 and is on a par with the level seen at the end of 2020.

The other assets listed in the EU AE1 table (line 120) mainly comprise loans and advances (around 96 %) and derivatives (around 4 %), most of which are encumbered. They also include unencumbered assets such as tax assets and other tangible (property, plant and equipment such as operating equipment and right-of-use assets relating to leased buildings) and intangible (such as acquired and internally developed software) assets, which account for less than 1 % and are generally not available for encumbrance.

Structure of encumbrance within pbb Group

Within pbb Group, this encumbrance is based solely on pbb, in which all of pbb Group’s strategic business activities are bundled.

Prudential and accounting scope of consolidation

There are no differences between the scope of prudential consolidation of pbb Group, which is taken as a basis for the disclosure on asset encumbrance, and the accounting scope of consolidation (IFRS) as at the disclosure date

Mismatches regarding the accounting framework (IFRS)

There are no mismatches between the accounting framework applied by pbb Group, the International Financial Reporting Standards (IFRS), assets which are deposited as collateral and transferred on the one hand and the assets which are considered to be encumbered for regulatory purposes on the other. The depositing or transfer of assets in accordance with the IFRS automatically involves the encumbrance of such assets.

Significant exposures in foreign currencies

A distinction between the encumbered assets or collateral according to currencies other than the euro (the reporting currency) is not material for pbb Group. Based on the definition of the Basel Committee on Banking Supervision (BCBS), pbb Group's currency exposures are not considered material.

Source of encumbrance

As shown in table EU AE3, Pfandbriefe remained the main source (73 %) of asset encumbrance for pbb Group. The issuance of Mortgage Pfandbriefe and Public Sector Pfandbriefe for the funding of real estate financing which is eligible for inclusion in Pfandbrief cover and public investment financing involves the encumbrance of loans and securities in the mortgage cover assets pool and in the public-sector cover pool.

In addition to the issue of Pfandbriefe, pbb's participation in the TLTRO III programme of the European Central Bank (ECB) (22 % share), as well as derivative financial instruments (5 % share) are further sources of asset encumbrance.

In June 2020, pbb had participated in the ECB's TLTRO III (Targeted Longer-Term Refinancing Operations) programme, which made loans with a maximum term of three years available to euro area banks, and drew down a loan tranche of € 7.5 billion for three years as at 30 June 2020. At its meeting on 10 December 2020, the ECB's Governing Council made the decision to make three more tranches available to euro area banks. As part of the rollover of its existing TLTRO III transactions, pbb Group participated in this programme with a total amount of € 8.4 billion in June 2021, involving an increase in the nominal volume. The carrying value (median) of the TLTRO III liabilities reported under central bank liabilities amounts to € 8.3 billion as at the disclosure date (EU AE3, line 030, column 010).

Another source of asset encumbrance relates to securities financing transactions, although pbb Group has not agreed any securities lending/repo transactions as at the reporting date of 31 December 2021. The assets encumbered within this context, based on the median of the quarterly data for the 2021 financial year, amount to € 0.

Pfandbriefe

As a specialist lender for commercial real estate finance and public investment finance, pbb issues Mortgage Pfandbriefe, collateralised by real property liens, as well as Public Sector Pfandbriefe, collateralised by claims against the public sector. These Pfandbriefe are issued on the international capital market on a regular basis in benchmark format or as private placements. In line with the lending business on the assets side, pbb offers investors Pfandbriefe with various maturities and in various currencies, with a focus on EUR, GBP, USD and SEK.

The issue of Pfandbriefe is subject to the stringent provisions set out in the German Pfandbrief Act (PfandBG), which places very high requirements on investor protection. These stringent statutory standards have meant that, in the past, Pfandbriefe have proved to be of above-average reliability. The security mechanisms of the German Pfandbrief Act take effect through 'ring-fencing': in the case of a Pfandbrief issuer's insolvency, the cover assets pools – which serve as collateral for Pfandbriefe – are available only to Pfandbrief creditors to cover their claims. It is only when all of the claims of the Pfandbrief holders have been satisfied in full that any remainder of the cover assets pools is available to settle the claims of the insolvency creditors.

Pfandbrief banks have to publish quarterly reports on the composition and structure of their cover assets pools (cover pools). Publications in accordance with the Pfandbrief Act can be found on pbb's website under Investors / Mandatory Publications / Publications according to § 28 Pfandbrief Act. Further information on the Mortgage and Public Sector Pfandbriefe issued by pbb, as well as the cover pools, is available on pbb's website under Investors / Debt Investors / The Pfandbrief.

Over-collateralisation of Pfandbriefe

The German Pfandbrief Act (PfandBG) provides for present value over-collateralisation of 2.0 % for Pfandbriefe; i.e. the present value of the cover pool should always be at least 2.0 % higher than the present value of all Pfandbriefe issued for this cover pool. Nominal cover also has to be assured. This means that the total nominal values of all cover assets must, at the very least, cover the total nominal values of the Pfandbriefe issued for this cover pool.

The rating agencies also require additional surplus cover depending on the quality of the cover pool and the desired Pfandbrief rating. pbb's Mortgage Pfandbriefe and Public Sector Pfandbriefe were assigned an Aa1 rating by Moody's as at 31 December 2021. In order to maintain this rating, pbb must provide minimum net present value surplus cover of 5.5 % for Mortgage Pfandbriefe and 8.0 % for Public Sector Pfandbriefe.

The actual surplus cover of the Mortgage Pfandbriefe as at 31 December 2021 was 17.1 % (nominal) and 17.5 % (present value). For the Public Sector Pfandbriefe, pbb provided surplus cover of 20.5 % (nominal) and 19.8 % (present value) as at 31 December 2021. This means that the surplus cover exceeded the requirements of both the rating agencies and the legislator.

The current surplus cover and the voluntary surplus cover required by Moody's is published on pbb's website at regular intervals under Investors / Mandatory Publications / Publications according to § 28 Pfandbrief Act or Investors / Ratings / Moody's Reports.

In order to manage the liquidity position and to optimise the quality, as well as the cash flows, of the cover pools, pbb can also, if need be, maintain more surplus cover than required by law or desired by the rating agencies.

Derivatives and securities financing transactions

pbb Group uses derivatives mainly to hedge market risks resulting, for example, from changes in interest rates or exchange rates. These hedging transactions are countered by underlying asset or liability items. The hedging of interest and exchange rate risks is intended to reduce and/or avoid market risks. The counterparties in derivative transactions are mainly OECD credit institutions or Eurex Clearing. pbb Group also provides derivatives for real estate customers and public-law entities, for example to enable them to hedge market risks associated with commercial real estate financing on their side.

Securities lending/repo transactions are used for short-term liquidity management and are also an important source of collateralised funding for pbb. The counterparties are primarily OECD credit institutions or Eurex Repo.

The business with both derivatives and securities lending/repo transactions is usually concluded based on standardised bilateral netting contracts which serve to minimise the legal risk, as well as the economic and regulatory default risk and which enable mutual risks to be netted (netting). As a result of the netting process, the default risk is reduced to one single net receivable from the counterparty. In line with the netting contracts, pbb Group also enters into standard market collateral agreements with certain counterparties in addition to the netting contracts in order to hedge the net receivable/liability that remains after netting. Detailed information in this regard can be found in the chapters "Credit risk mitigation techniques" and "Counterparty credit risk".

Quantitative information on asset encumbrance

In accordance with Article 443 CRR, the following tables EU AE1 to EU AE3 show a breakdown of encumbered and unencumbered assets for pbb Group, as well as the related sources of encumbrance. The amounts are calculated as median values based on the quarterly data (quarter-end values) for the 2021 financial year. In this context, pbb Group has expanded both Table EU AE1 and Table EU AE3 to include additional “thereof” items (such as loans and advances, derivatives and Pfandbriefe issued). These are of material importance for pbb Group’s business and funding model and, as a result, for the encumbrance of its assets.

EU AE1: Encumbered and unencumbered assets

		010	030	040	050	060	080	090	100
		Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
All figures in € million			thereof notion-ally eligible EHQLA and HQLA [1]		thereof notion-ally eligible EHQLA and HQLA [1]		thereof EHQLA and HQLA [1]		thereof EHQLA and HQLA [1]
010	**Assets of the disclosing institution**	**36,687**	**4,811**	———	———	**22,205**	**554**	———	———
030	Equity instruments	-	-	-	-	-	-	-	-
040	Debt securities	7,450	4,811	7,450	4,811	767	554	767	554
050	thereof: covered bonds	1,106	553	1,106	553	-	-	-	-
060	thereof: securitisations	-	-	-	-	-	-	-	-
070	thereof: issued by general governments	5,243	3,924	5,243	3,924	348	237	351	237
080	thereof: issued by financial corporations	2,208	887	2,208	887	421	306	419	306
090	thereof: issued by non-financial corporations	-	-	-	-	-	-	-	-
120	Other assets	29,237	-	———	———	21,448	-	———	———
130	thereof: loans and advances	27,673	-	———	———	21,088	-	———	———
140	thereof: derivatives	1,564	-	———	———	156	-	———	———

[1] EHQLA: Extremely high quality liquid assets, "Level 1 assets"
HQLA: High quality liquid assets, "Level 2 A/B assets".
[2] Including loans on demand, although their carrying amount (median) is € 0.

EU AE2: Collateral received and own debt securities issued

		010	030	040	060
		Fair value of encumbered collateral received or own debt securities issued		Unencumbered Fair value of collateral received or own debt securities issued available for encumbrance	
All figures in € million			thereof notionally eligible EHQLA and HQLA [1]		thereof EHQLA and HQLA [1]
130	**Collateral received by the disclosing institution**	**0**	**0**	**0**	**0**
140	Loans on demand	-	-	-	-
150	Equity instruments	-	-	-	-
160	Debt securities	-	-	-	-
170	thereof: covered bonds	-	-	-	-
180	thereof: securitisations	-	-	-	-
190	thereof: issued by general governments	-	-	-	-
200	thereof: issued by financial corporations	-	-	-	-
210	thereof: issued by non-financial corporations	-	-	-	-
220	Loans and advances other than loans on demand	-	-	-	-
230	Other collateral received	-	-	-	-
240	**Own debt securities issued other than own covered bonds or securitisations**	**0**	**0**	**0**	**0**
241	**Own covered bonds and securitisation issued and not yet pledged**	———	———	**0**	**0**
250	**Total collateral received and own debt securities issued**	**36,687**	**4,811**	———	———

[1] EHQLA: Extremely high quality liquid assets, "Level 1 assets"
HQLA: High quality liquid assets, "Level 2 A/B assets".

EU AE3: Sources of encumbrance

All figures in € million		010 Matching liabilities, contingent liabilities or securities lent	030 Assets, collateral received and own debt securities issued other than covered bonds and securitisations encumbered
010	**Carrying amount of selected financial liabilities**	**37,453**	**36,687**
020	thereof: derivatives [1]	1,966	1,564
030	thereof: deposits [2]	8,290	5,787
040	thereof: debt securities issued [3]	27,348	29,374
050	thereof: other sources of encumbrance [4]	-	-

[1] Derivatives including financial collateral.
[2] Repurchase agreements (ECB TLTRO programme and repo transactions)
[3] Covered bonds (Pfandbriefe) issued.
[4] For example, securities lending transactions.
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Risk management and risk-oriented overall bank management

Declarations of the Management Board

In line with the requirements pursuant to section 91 (2) of the AktG and section 25a of the KWG, pbb Group has implemented a Group-wide risk management and risk control system which, among other things, allows for risks to be identified, measured and controlled by limits in a uniform manner. At a single-entity level, pbb applies an exemption from the requirements concerning the risk control function pursuant to section 25a (1) sentence 3 nos. 1, 2, 3 (b), (c) of the KWG.

Approval of the following declarations pursuant to Article 435 (1) (e), (f) of the CRR by pbb's Management Board was granted in the framework of the approval of this Disclosure Report.

Risk Management Procedure Adequacy Statement

The information according to Article 435 (1) (a) to (f) of the CRR regarding the risk management targets and policy as well as the risk management strategy and procedures of pbb Group for the individual risk categories is set out in this Regulatory Disclosure Report and additionally in the Risk and Opportunity Report within the Group's Annual Report 2021. The Annual Report 2021 is published on pbb's website under Investors > Financial Reports and Additional Publications.

pbb's Management Board considers the existing Group-wide risk management and risk control system to be appropriate and effective for pbb Group's business and risk profile and strategy. pbb assumes that the methods, models and processes implemented at pbb Group are suitable at any time for ensuring a risk management and risk control geared towards the Bank's business and risk strategies and its risk profile.

Risk Statement

The Risk Statement describes pbb Group's overall risk profile associated with the business strategy. pbb's Management Board confirms to the best of its knowledge that the internal risk management procedures are appropriate to always provide a comprehensive picture of pbb Group's risk profile and to sustainably safeguard its risk-bearing capacity and liquidity at all times.

The strategic business segments of pbb are Real Estate Finance (REF) and Public Investment Finance (PIF); the focus is on business eligible for inclusion in Pfandbrief cover. The geographic focus is on Europe and the USA.

In real estate financing, pbb Group's range of services is targeted primarily 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 more complex transactions with medium-sized to larger financing volumes. Financed objects mainly involve office buildings, properties for residential use, retail and logistics properties. Other proper-ty types are financed as portfolio additions. The regional focus is on the core markets eligible for inclusion in Pfandbrief cover in Europe and in certain US metropolitan areas. In this area, pbb offers both local and cross-border financing expertise. A majority of the loans granted are investment financings, i.e. loans for the acquisition or follow-up financing of existing properties generating cash flows. Development financings (including residential real estate developers in Germany) are of complementary significance.

In Public Investment Finance, pbb finances projects for the provision and improvement of public infrastructure. Clients in this segment include regional or provincial governments, municipalities, urban development companies, and publicly-owned hospitals – as well as investment or real estate holding companies. Public/private partnerships and other structured transactions are being pursued in addition. The regional focus in primary new business is on France. This segment is supplemented by bond purchases, including (in particular) for cover assets pool and liquidity management. In view of increasingly apparent public-sector reticence regarding (privately financed) infrastructure investments, pbb has decided to refrain from its previous assumption of further growth in this sector.

pbb Group's strategy focuses on sustainable business success. Crucial success factors are the assessment and appropriate pricing of credit risk in the lending business on the one hand, and the access to funding markets at adequate terms on the other. Managing the existing portfolio – so as to identify changing risks at an early stage and mitigate them by taking appropriate measures – is another important factor. The Management Board of pbb as has committed itself to further strengthen pbb Group's profitability in the financial years 2022 to 2024. Strategically, the focus concerning income lies particularly on the aforementioned business activities in the REF core segment. The expansion of the product range is expected to further increase profitability, whilst strictly adhering to cost targets.

In line with the business strategy, pbb Group's risk strategy governs the risk-strategic orientation. Whilst accepting inherent existential threats resulting from the business objectives, the overall risk strategy considers external factors, e.g. risks associated with the macro-economic environment and new regulatory requirements, as well as internal influencing factors, especially the results of the annual risk inventory. All risks that are deemed material from an economic perspective arising from business activities are deter-mined within the scope of the risk inventory. Based on the results of the 2021 risk inventory, the counterparty credit risk, market risk, liquidity and funding risk, operational risk, business and strategic risk, ESG risk, real estate risk, pension risk as well as the central counterparty risk, including the associated sub-risk categories, are considered material.

In order to ensure that environmental, social and governance (ESG) risks are given adequate consideration in the Bank's risk management processes, an identification and assessment process for ESG risk drivers is being established as a firm component of the annual risk inventory. As far as the physical environmental risk is concerned, the risk drivers of flooding, heavy rain, storm surge, hail, storm and tornado were classified as material for the Bank. External location-specific risk data was also used to a large extent when assessing the physical risk factors. The transitional environmental risk factors identified as relevant include pollution, contamination, property energy efficiency, carbon footprint (Scope 1, 2, 3 emissions), new regulations for the real estate sec-tor/carbon pricing and fundamental market sentiment. Key governance risk factors include insufficient integrity (money laundering, terrorist financing, etc.), insufficient compliance with disclosure of information rules and practices, insufficient internal corporate governance regarding own ESG/compliance risks, external ESG risks of counterparties, and insufficient incorporation of external ESG risks into business strategy/processes, internal governance and the risk management framework. Social risk factors were not identified as material. These ESG risk factors have an impact on counterparty credit risk, operational risk, including potential reputational and liability risks, as well as business and strategic risk. No significant impact on market, liquidity or funding risk was identified. The Bank is working on the full inclusion of ESG risk factors in the risk management tools for all affected risk categories, including monitoring, reporting and quantification, as well as in the stress tests and scenario analyses.

The risk appetite determined in the risk strategy describes the scope and structure of the risk that the Bank is willing to take when pursuing its business objectives and that it can take without allowing for existential threats (beyond the inherent risks). The guiding principle behind the risk appetite is ensuring sustainable and appropriate economic and regulatory capital, and adequate liquidity for pbb Group. From a quantitative point of view, this guiding principle is implemented through risk limits for the capital and liquidity management with defined escalation mechanisms and quantitative as well as qualitative early warning indicators. The risks identified as material are included in the risk strategy, in addition to the risk inventory. Policies, manuals and workflow instructions/guidelines serve to specify and implement further limits and framework conditions for the business segments, anchoring these limits and framework conditions in ongoing management and monitoring. In terms of risk concentration, additional portfolio-specific stress tests are conducted on a regular basis. Annual updates to the risk-bearing capacity concept ensure that material risk categories in the risk-bearing capacity calculations are appropriately accounted for.

A bank's core function is to transform liquidity and risk. It is inevitable that from this core function threats should arise that could jeopardise the institution's continued existence in extreme cases. For pbb, due to its business model, these inherent existential threats include a default of Germany, other European countries, the UK or the US.

A key component of liquidity risk management is the daily calculation of the cumulative liquidity position based on three scenarios – base, risk and stress scenario. The cumulative liquidity position serves to inform about expected cash inflows and outflows as at the reporting date. Based on this information, the liquidity requirement or liquidity surplus is calculated, and management mechanisms such as limits and early warning indicators (triggers) are defined and monitored. The term of these limits/trigger set for a given scenario can run up to two years. To comply with the minimum requirements for the regulatory Liquidity Coverage Ratio (LCR), the Bank has established corresponding limits and early warning indicators. During the past financial year 2021, the mini-mum ratio of 100 % was significantly exceeded at each reporting date. The LCR average of the figures collected at the end of each month over the twelve months preceding the end of 2021 was 308 %; the LCR as at the disclosure date was 227 %. The Basel Committee's Net Stable Funding Ratio (NSFR) was transposed into European legislation with the Capital Requirements Regulation (CRR II). With effect from 28 June 2021, regulatory provisions require a minimum NSFR of 100 %. As at year-end 2021, the NSFR was 118 %. LCR and NSFR calculation is part of pbb's regulatory reporting processes. The ratios are communicated in internal reporting and to the supervisory authorities.

To ensure adequate capitalisation, there is an early warning system in place that checks adherence to the economic risk-bearing capacity and compliance with regulatory capital ratios in a forecast scenario as well as in an adverse stress scenario. The economic risk-bearing capacity, as measured by the capital adequacy ratio, was 174 % as at 31 December 2021, and thus significantly above target. pbb's CET1 ratio is based largely on the capital requirements set forth in the Supervisory Review and Evaluation Process (SREP) carried out by the European Central Bank (ECB) as the competent supervisor, but it also includes a buffer defined by pbb's management to cover potential stress situations. The ECB's pillar 2 requirement defined for the 2021 financial year re-mains valid for 2022. pbb Group's CET1 ratio was 17.1 % as at the disclosure date, with € 16.8 billion in risk-weighted exposure amounts (RWA) and € 2.9 billion in CET1 capital. This means that pbb's capital buffer for putting planned business activities into practice can be considered sufficiently comfortable. What this capitalisation also shows is a high risk-bearing capacity should the environment continue to remain challenging for a prolonged period. Yet there are numerous risk factors that could have a negative impact on the results projected for 2022, should conditions develop unfavourably. In particular, these risk factors include extraordinary global risks to the global economy resulting from the coronavirus pandemic, whose duration and scope remain uncertain. Their negative impact could be significant, but cannot be reliably quantified at this point in time.

Own funds requirements and regulatory capital ratios provide a risk-based view that is complemented by a capital requirement not related to risk – the leverage ratio. Since 28 June 2021, institutions have been required to maintain a leverage ratio of at least 3 % at all times in accordance with Article 92 (1) of the CRR. pbb Group met this requirement at all times in the 2021 financial year. As at the disclosure date the leverage ratio was 6.0 %, taking temporary CRR relief measures into account. Had these relief measures – such as the exclusion of risk exposures to Eurosystem central banks – not been adopted, the leverage ratio would have been 5.5 %.

Net income from risk provisioning was € -81 million in the 2021 financial year, including management overlays of € -54 million. The latter mean an increase in risk provisioning for specific sub-portfolios in response to the current situation, which pbb's Management Board consider to be particularly uncertain.

pbb Group's loan book continues to be high quality as at year-end 2021, with the non-performing loan (NPL) ratio remaining low at 1.4 %. This NPL ratio includes exclusively loans and advances; it does not include debt securities and off-balance sheet exposures such as loan commitments, balances held with central banks or other current accounts.

A holistic approach to prompt and transparent risk measurement, using an appropriate methodology, is paramount to ensure that pbb Group's liquidity is ascertained at all times. State-of-the-art banking sector methods and models are used for this purpose, which are regularly reviewed by pbb's risk control and internal audit departments, external auditors as well as German and European supervisors. The risk measurement procedures employed make pbb's business and risk strategies quantifiable, transparent and verifiable.

There were no material intra-Group transactions or material transactions with related parties during the 2021 financial year that could have a significant impact on pbb Group's risk profile.

General organisation and risk management principles

This chapter illustrates the general organisation and key risk management principles pursuant to Article 435 (1) of the CRR as applicable to pbb Group. Additional details pertaining to managing default risk (credit risk, counterparty credit risk), market risk, liquidity and funding risk, operational risk and ESG (environmental, social and governance) risks can be found later on in this Disclosure Report.

Organisation and committees

Management Board

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 Group's risk management system are specified centrally by pbb's 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 within pbb Group
- Defining and improving organisational structures within pbb Group, and in particular for risk management, which ensures that all major risks of pbb Group are managed and monitored
- Adopting lending authorities as a decision-making framework along the credit processes within pbb Group
- 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 pbb Group's risk profile. 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 managing and ascertaining pbb Group's liquidity; resolves on necessary 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 below have been established at pbb Group level with the involvement of the respective decision-makers.

Risk Committee

The Risk Committee (RC) consists of the CRO (Chairperson), the CEO/CFO (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 control 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 compliance

with limits. The Risk Committee discusses pbb Group's portfolio developments. Additional sub-committees have been established beside the Risk Committee, as outlined below.

Credit Committee

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, extensions 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 Risk Management and Liquidity Strategy Committee. It is the responsibility of the relevant decision-makers to ensure that the credit decisions are consistent with the prevailing business and risk strategy.

Watchlist Committee

The Watchlist Committee is chaired by the CCO and meets every month. All exposures identified by the early warning system are discussed and, if appropriate, individual measures are decided by the committee; these measures have to be subsequently 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 steps for restructuring or workout on the basis of an individual exposure strategy. 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.

Risk Provisioning Committee

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). It is responsible for decisions, recommendations and the management of all risk provisioning matters.

New Product Process Committee

The New Product Process Committee (NPPC) comprises representatives from the most important units responsible 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.

Stress Test Committee

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.

Asset and Liability Committee / Legal and Regulatory Risk Committee / Outsourcing-Committee

Besides the Risk Committee, there are the Asset and Liability Committee (ALCO) as well as the Legal and Regulatory Risk Committee (LRRC). 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 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.

ESG Committee

The ESG Committee, which deals with ESG aspects and ESG risks throughout pbb Group, was established in July 2021. The ESG Committee comprises the entire Management Board and the Heads of Communications, Compliance, Human Resources, Information Technology, Proper-ty 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 ESG Committee is primarily responsible for developing an ESG business and risk strategy, and for monitoring the corresponding implementation measures throughout the pbb Group. The Committee develops the ESG targets and the measures required to achieve them.

Risk management organisation

<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 Commit-tee (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>

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 of pbb Group:

Chief Risk Officer organisation

<table>
<tr><td colspan="4">Chief Risk Officer (CRO)</td></tr>
<tr><td>Risk Management & Control (RMC)</td><td>Credit Risk Management (CRM)</td><td>Operations</td><td>Compliance</td></tr>
</table>

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

- The Risk Management & Control unit, whose responsibilities include monitoring market, credit, operational and liquidity risks as well as the risk-bearing capacity of pbb Group, and which is also responsible for Group-wide uniform risk measuring methods and risk reports.
- The unit of the Chief Credit Officer of pbb Group, which is 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 Credit Processes unit, which is responsible in particular for the organisation of the Credit Committee, the improvement of data quality within CRM and implementation of regulatory requirements in the credit processes.

- The Operations unit, which 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 Group's securities and derivatives portfolios, as well for handling domestic and international payments.

- The Compliance unit, which has established checking and reporting processes with regard to money laundering, sanctions, embargos and other criminal acts, capital markets compliance, as well as for other Compliance topics. In addition, the Compliance function is responsible for counteracting any risks arising from non-compliance with legal rules and requirements. Compliance is responsible for the central coordination of key controls within the framework of the Internal Control System. Compliance is also represented on various committees.

In addition to the CRO function, the independent Property Analysis & Valuation (PAV) department and Group Internal Audit units complement pbb Group's 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 development projects. 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.

Risk strategy and policies

In conjunction with the business strategy, the risk strategy provides the basis for pbb Group's planning and business policy action. The risk strategy has been defined on the basis of the Group-wide risk appetite; it reflects pbb Group's strategic direction as a specialist for real estate finance and public investment finance with a focus on Pfandbrief funding. Moreover, the risk strategy defines the guidelines which form the basis of the risk culture for pbb Group. 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.

As part of the annual strategy development process, the risk strategy for 2021 was drawn up, adopted by the Management Board and approved by the Supervisory Board. The risk strategy was updated at the beginning of the second half of 2021, reflecting the extension of the product range to incorporate the (single-borrower) loan-on-loan and (US) senior mezzanine lending initiatives.

The risk strategy is enshrined in the operative business via risk policies for the individual operating segments, as well as frameworks, guidelines or instructions for all major risk types set out in the valid risk inventory. The individual policies are reviewed and updated regularly if necessary. 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 of pbb 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, risk control and management

For the purposes of systematically identifying and analysing potential risks arising from the business model or pbb Group's external environment, the Group 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 of pbb Group, 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.

pbb Group's 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 Group 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 developed further. Within the framework of these strategic management approaches, pbb Group defines its risk appetite, which sets out the scope within which pbb Group is prepared to assume risks. pbb Group uses this information to derive input for operative management, through limit systems, commit-tee 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.

Effects of the COVID-19 pandemic on risk and portfolio management

At an early stage of the COVID-19 pandemic, the Management Board of Deutsche Pfandbriefbank AG (pbb) took numerous measures in order to be able to immediately identify, assess and adequately respond to developments and potential risks in connection with the pandemic. The analysis of the implications of the COVID-19 pandemic on pbb Group's business model and its capital adequacy was also part of the regular process of revising the business and risk strategy. In order to address the impact of the pandemic on its risk profile, the Bank especially expanded capacities and sharpened the professional focus. For example, pbb's Management Board has established a Task Force with various workstreams across departments and divisions, which deals more intensively with certain asset classes such as hotel, retail or office, the handling of government support measures for borrowers and the regulatory aspects in the context of COVID-19, as well as preparing sector and market analyses. By means of portfolio screening measures and taking targeted and pre-defined filters into account, subsets of the existing portfolios were identified and then examined for increased susceptibility to the effects of the pandemic, with greater involvement of divisional and departmental management levels. Subsequently, pbb Group intensified its monitoring activities and reporting for certain portfolio clusters. The monitoring was particularly focused on cash flow and collateral developments. With respect to the latter, whenever there were indications of a material value loss, corresponding extraordinary valuations were carried out. In terms of reporting, the Bank increasingly focused on the requested deferrals of repayments or the desired adjustments to other contractual obligations in the loan agreements, as well as on portfolio clusters and asset classes that had an increased susceptibility to the negative effects of the COVID-19 pandemic. In addition, certain process flows – especially in Credit Risk Management – were adjusted to the conditions brought about by the COVID-19 pandemic, and new work instructions were introduced after they had been discussed and approved in the Risk Committee. Credit standards were tightened substantially in new business.

The Management Board and the Supervisory Board frequently discussed current developments during the period under review, and the regular weekly Management Board meeting for loans was significantly expanded with view to content and meeting time. Moreover, the Supervisory Board was involved at an earlier stage in the discussion and decision-making process for certain new business applications.

As part of an integrated approach, the impact of macroeconomic stress scenarios on the material metrics of the normative and economic perspectives was calculated within the ICAAP for a horizon of several years during the period under review. Stress scenarios were developed in the wake of the COVID-19 pandemic, and analyses carried out as to how these scenarios affect the Group. Given the highly dynamic development, these scenarios are subject to a considerable uncertainty.

Regular portfolio screening was shifted to a quarterly process in 2021 – with the objective of recognising potential risks emanating from possibly susceptible portfolio clusters at an early stage, dealing with them accordingly in the critical facility process.

The Coronavirus Task Force continued its reporting to the Management Board regarding support measures applied for by clients (such as repayment deferrals or covenant waivers); as in 2020, these reports were submitted on a weekly basis until the third quarter of 2021. From the fourth quarter of 2021, this reporting was moved to a monthly frequency, since the situation was visibly stabilising and there were hardly any further client requests for such support measures directly related to the corona-virus pandemic. Whilst the very close monitoring of property values, introduced during the pandemic, has largely been returned to the ordinary process, certain clusters continue to be closely monitored. Likewise, regular reports are submitted to the regulatory authorities.

Internal Audit

The need for Group Internal Audit arises from specific legal provisions such as section 25a (1) sentence 2 no. 3 of the German Banking Act (Kreditwesengesetz, KWG) in conjunction with the Minimum Requirements for Risk Management (Mindestanforderungen an das Risikomanagement, MaRisk), in particular AT 4.4.3 in conjunction with BTO 2, and section 91 (2) of the German Public Limited Companies Act (Aktiengesetz, AktG).

Internal Audit is an integral part of the Bank's Internal Control System (ICS). The ICS comprises all monitoring activities that are integrated directly or indirectly into workflows (process-dependent monitoring), while Internal Audit is a Management Board tool that monitors operational and business workflows, risk management and risk control as well as the ICS itself to account for risk (=process-independent monitoring).

The Management Board confers the right of initiative to Internal Audit and has authorised Internal Audit to communicate directly with every employee so as to investigate every activity and corporate entity, and to gain access to all of pbb’s records, documents or data, including management information and transcripts of all advisory and executive boards, whenever it seems relevant for Internal Audit to fulfil its duties. This includes physical access to all premises and technical access to IT systems.

In line with the German Ordinance on Remuneration in Financial Institutions (Institutsvergütungsverordnung, InstVergV), Internal Audit is involved in monitoring the remuneration systems as an independent party (section 2 (9) in conjunction with section 3 (3) of the InstVergV).

Internal Audit reports directly to pbb's Management Board. The Chairman of the Supervisory Board as well as of the Audit and Digitalisation Committee and all other members of said committee may, with the involvement of the Management Board, request information directly from the Head of Internal Audit. The Head of Internal Audit also reports regularly on audit results and audit planning to the Audit and Digitalisation Committee.

Audit activities have to span all of the Group's operational and business workflows, activities and processes; they must be based on a risk-oriented audit approach and take both the potential damage and probability of occurrence into account.

In line with MaRisk, the following have to be audited and assessed in particular:

- Internal Control System (ICS)
- Risk management and risk control processes
- Reporting and information systems
- Finance and accounting
- Compliance with statutory and regulatory requirements as well as other regulations

> Compliance with internal guidelines, rules and policies
> Asset security.

Outsourced functions are included in any audit. Internal Audit's duties include special audits as ordered by the Management Board. Adhering to its principle of independence, Internal Audit is required to support material projects with audits. It must there-fore be informed in advance about all material projects in order to define the nature and scope of the project audit in due time.

Internal Audit has a full and unrestricted right to information. Internal Audit must be granted immediate access to any and all information requested as well as to activities, processes and IT systems.

Every organisational unit is obliged to provide Internal Audit with information of its own accord if serious deficiencies have been observed or are being suspected, or if noteworthy damage has occurred or is suspected in the unit's area of responsibility.

In particular, information that is material from a risk-related point of view must be passed on to the Head of Internal Audit as well as to management and the person responsible, without delay.

Risk types

pbb Group distinguishes the following major risk types for its business activities:

- Credit risk (counterparty credit 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.

Details pertaining to separate risk categories as per Article 435 (1) of the CRR can be found subsequently in this Disclosure Re-port, which includes additional information about managing default risk (credit risk, counterparty credit risk), market risk, liquidity and funding risk, operational risk and ESG (environmental, social and governance) risks. The risk categories of business and strategic risk, real estate risk, pension risk and central counterparty risk are defined as follows

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 "Economic capital and risk-bearing capacity" (ICAAP) for further details on the quantification as well as the calculation results of the economic capital of business and strategic risk.

Property risk

Property risk is defined as potential negative changes in the value of the Company's own property portfolio, due to a deterioration of the general real estate situation or a negative change of the specific characteristics of the individual property – caused by the property being vacant, changed usage options, building damages, investment requirements, changes to the legal framework or economic environment as well as other factors. As at 31 December 2021 as well as at 31 December 2020, 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 "Economic capital and risk-bearing capacity" (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.

Economic capital and risk-bearing capacity

This chapter illustrates pbb's approach to assessing the adequacy of its internal capital, in accordance with Article 438 (a) to (c) of the CRR.

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 V.

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 sustainability 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 safe-guard 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 higher-level risks 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 in the ICAAP as other risks during the period under review. Extension risk, settlement risk and realisation risk for defaulted loans are combined for this purpose. 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 thresh-olds 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 chapters "Quantification of economic capital for individual risk types" and "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 2021 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, as well as concentration risk. Certain elements of counterparty credit risk, such as the realisation risk for defaulted clients, settlement risk, extension risk, and model risk are not reported directly as part of counter-party credit risk, but are regularly updated, constituting a component of overall risk as 'other risks' or as 'model risk', and disclosed separately.

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, ex-change 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 deter-mined, which allows to determine economic capital at the set confidence level.

Since the beginning of August 2021, the ICAAP has reflected pension risk directly in economic capital for market risk; previously, this was mapped as 'other risk', as a component of overall risk.

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. Since the beginning of August 2021, the ICAAP has reflected pension risk directly in economic capital for market risk; previously, this was mapped as ‘other risk’, as a component of overall risk. 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

The quantification of business and strategic risk in the ICAAP is based on a mixed approach, consisting of a Monte Carlo simulation of net interest income and a scenario analysis for other items in 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 mapped 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 the economic perspective, aggregate risk after diversification effects declined in the period under review, driven especially by lower model and counterparty credit risks. The decline in model risk was driven in particular by further developments of the factor model, as well as by regular modifications to parameters. These adjustments were also the main drivers for the changes in counterparty credit risk; they led to a risk reduction in REF, with an increase in VP, PIF, and C&A. Economic capital for operational risk is determined at least annually and has seen a minor decline, resulting from the up-date of data used in the model. Since pbb continued to hold no properties during the period under review, business and strategic risk is reported at nil, as the calculated value of the business and strategic risk is covered by the initial buffer, which is at least equal to the planned profits, and is reviewed regularly. Compared to the previous year, diversification effects declined due to a more conservative approach, and to an update of parameters.

This is offset by available financial resources, which increased during the period under review, de-spite the dividend payments in May and December 2021. Compared to year-end 2020, excess capital rose, whilst the internal capital adequacy ratio (defined as the ratio of available financial resources to diversified economic capital) also increased. Overall, the Bank's risk-bearing capacity at the reporting date was demonstrated for the economic perspective as well.

EU OVC: ICAAP – Risk-bearing capacity economic perspective

		a	b	c
			Economic perspective	
All figures in € million, unless otherwise stated		31.12.2021	31.12.2020	Change
1	Credit risk	1,108	1,149	-41
2	Market risk	665	652	13
3	Operational risk	97	98	-1
4	Business and strategic risk	-	-	-
5	Property risk	-	-	-
6	Model risk	19	73	-54
7	Other risks	47	62	-15
8	**Total before diversification effects**	**1,937**	**2,034**	**-97**
9	**Total after diversification effects**	**1,812**	**1,850**	**-38**
10	Available financial resources before net hidden losses	3,150	3,065	85
11	Net hidden losses	-	-	-
12	**Available financial resources**	**3,150**	**3,065**	**85**
13	Excess capital	1,338	1,215	123
14	Capital adequacy ratio in %	174	166	8

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.

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 in the wake of the COVID-19 pandemic, and analyses carried out how these scenarios affect the Bank. Given the highly dynamic development, these scenarios are subject to a considerable uncertainty. In addition, a climate-specific scenario was developed and calculated in 2021, based on the reference scenario “disorderly transition“ developed by the Network for Greening the Financial System (“NGFS”).

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.

Credit risk

Management of credit risk (including counterparty credit risk)

This chapter illustrates the risk management objectives and policies in accordance with Article 435 (1) of the CRR for default risk (credit risk, counterparty credit risk) at pbb Group.

Definition

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 positions, 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

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

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

Realisation risk related to defaulted clients 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

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

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.

Fulfilment risk

Fulfilment 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

Extension risk is the risk of an unexpected extension of the holding period of a credit risk related asset.

Concentration risk

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.

Risk strategy and principles

pbb Group has broken down the overall credit portfolio into the segments Real Estate Finance (REF), Public Investment Finance (PIF), Value Portfolio (VP) and "Consolidation & Adjustments" (C&A). The strategic business is attributable to commercial Real Estate Finance (REF) and Public Investment Finance (PIF). The risk strategy of pbb Group also reflects this structure.

Please refer to the information in the chapter "Organisational and legal structure" for a description of the business focus with regard to strategic portfolios, and for statements outlining the strategy adopted for the run-down portfolio.

Risk reporting

The credit risk reports of pbb Group provide information about the following main components:

Group Risk Report

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.

New business

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.

Active business

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

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”.

Risk quantification via economic capital and risk-weighted assets according to 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 chapter “Economic capital and risk-bearing capacity” (ICAAP).

Stress testing

The stress tests for economic capital in credit risk are described in greater detail in the chapter “Economic capital and risk-bearing capacity” (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.

Risk quantification according to CRR

The Basel III Framework Agreement of the Basel Committee was implemented in the European con-text by means of the CRR. pbb Group applies the so-called Advanced IRBA and the Standardised Approach (CRSA).

Risk management and monitoring

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 pbb Group 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.

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 the watchlist or workout.

Core processes of credit risk management and monitoring as well as the relevant areas of the CRO function 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. This includes irregularities in connection to the COVID-19 pandemic. Such cases are also included in a monthly, at least quarterly monitoring cycle and presented in the Watchlist Committee.

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.

Where an individual decision is taken as to whether a potential problem exposure (or stage 3 impairment (IFRS) or a specific allowance (HGB)) – is to be restructured or liquidated, probability-weighted scenario analyses outlining the potential development of the borrower, of collateral and/or the relevant market, are taken into account. 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.

Risk hedging and risk mitigation

Real Estate Finance

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 proper-ty (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 this is applicable for cash collateral, furthermore under certain circumstances bank guarantees, other credit protections 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 which reports to the Management Board member responsible for Treasury: 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 a new loan is granted) or regular revaluations, as well as in the valuation reviews which are carried out at least once a year. Depending on the type and location of the property involved, market developments and other risk indicators, valuation reviews may also be carried out, in some cases, by credit department staff (CRM), based on defined parameters and processes.

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) as early as possible.

Public Sector Finance

In the PIF segment, guarantees are often accepted as collateral (including contractual guarantees from public-sector authorities, export credit guarantees). Moreover, Public Investment Finance exposures often involve a specific legal framework, such as the maintenance obligation (the so-called Anstaltslast) of public-sector entities in Germany, or other (direct and indirect) cover mechanisms which allow for recourse to a public-sector institution in the case of borrowers organised under public law. For some exposures in PIF, guarantees and indemnities or the legal framework are supplemented by additional loan collateral, as well as borrowers' information and reporting obligations. However, such additional loan collateral is generally not considered as valuable in assessing the exposure, or for the purposes of calculating LGD.

Treasury

In Treasury, mainly cash deposits 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.

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. For instance, this may occur if borrowers redeem or repay their loans faster than anticipated, given contractual agreements or historical data. 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.

Credit risk

This chapter provides the information required by Article 442 of the CRR pertaining to credit risk, in particular for loans and advances, securities/debt securities and off-balance sheet exposures, their credit quality and credit risk adjustments. It takes risk exposures for which the risk-weighted exposure amounts were calculated according to the advanced IRB approach (IRBA), based on internal rating procedures, as well as those whose risk-weighted exposure amounts were calculated according to the standardised approach (CRSA) into account.

Counterparty credit risk exposures (derivatives and securities financing transactions) are excluded, as are securitisations that will be presented separately in the following chapters "Counterparty credit risk" and "Securitisations".

Credit portfolio

Tables EU CR1, EU CR1-A and EU CR2 pursuant to Article 442 (c), (f), (g) of the CRR show the information about performing as well as non-performing/defaulted credit exposures, impairments recognised and provisions set up in the lending business as well as collateral and financial guarantees received, by financial asset and by counterparty.

On-balance sheet and off-balance sheet credit exposures

The gross carrying amount of on-balance sheet and off-balance sheet credit exposures was € 52,604 million as at 31 December 2021, excluding cash balances with central banks and other demand deposits pursuant to EU CR1, line 005. At the end of the 2021 financial year they were thus slightly down by € 669 million compared to 31 December 2020, but up by € 386 million compared to 30 June 2021. € 41,295 million out of this € 52.6 billion was attributable to loans and advances; debt securities contributed € 7,971 million, and € 3,337 million relate to off-balance sheet exposures such as loan commitments and financial guarantees. More information about financial assets and their performance can be found in the Notes to pbb Group's Annual Report 2021.

Non-performing exposures

Non-performing loans and advances stood at € 579 million as at the disclosure date, based on gross carrying amounts, posting an increase of € 99 million during the 2021 financial year.

In the Real Estate Finance segment, financings totalling € 178 million were transferred to recovery management for non-performing loans. In contrast, a € 47 million exposure was returned to normal handling. Further reductions were due to partial redemptions, as well as to exchange rate fluctuations concerning loans denominated in pound sterling. In the Public Investment Finance (PIF) segment, repayments of loans and advances covered by an export credit guarantee extended by the Federal Republic of Germany, including currency effects for financings extended in US dollars, led to a decline of € 20 million. pbb Group did not have non-performing debt securities on its books as at the disclosure date.

Stage 3 impairments recognised for non-performing loans and advances amounted to € 172 million, with collateral and financial guarantees received for this exposure standing at € 379 million.

NPL ratio

pbb Group's non-performing exposure (NPE) ratio was 1.1 % as at 31 December 2021, up 0.2 percentage points compared to 31 December 2020. Its non-performing loan (NPL) ratio, which includes exclusively receivables (loans and advances), but no debt securities or off-balance sheet exposures, also rose by 0.2 percentage points compared to 31 December 2020, reaching 1.4 %. These ratios are calculated pursuant to Article 8 no. 4 of the Pillar 3 Framework, excluding loans and advances held for sale, cash balances with central banks and other demand deposits.

EU CR1: Performing and non-performing exposures and related provisions

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount [1]						**Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**						**Accumulated partial write-off**	**Collateral and financial guarantees received [2]**	
		Performing exposures			**Non-performing exposures**			**Performing exposures – accumulated impairment and provisions**			**Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**				**On performing exposures**	**On non-performing exposures**
All figures in € million			**thereof: stage 1**	**thereof: stage 2**		**thereof: stage 2**	**thereof: stage 3**		**thereof: stage 1**	**thereof: stage 2**		**thereof: stage 2**	**thereof: stage 3**			
005	Cash balances at central banks and other demand deposits	7,668	7,668	-	-	-	-	-	-	-	-	-	-	-	-	-
010	**Loans and advances**	**40,716**	**31,210**	**9,001**	**579**	**0**	**579**	**167**	**25**	**142**	**172**	**0**	**172**	**-**	**28,307**	**379**
020	Central banks [3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
030	General governments	9,950	9,668	123	-	-	-	24	-	24	-	-	-	-	165	-
040	Credit institutions	1,585	1,585	-	-	-	-	-	-	-	-	-	-	-	551	-
050	Other financial corporations	1,166	774	392	32	-	32	1	1	-	-	-	-	-	1,098	32
060	Non-financial corporations	28,001	19,173	8,481	546	-	546	141	24	118	172	-	172	-	26,478	345
070	thereof: SMEs	9,051	6,449	2,498	93	-	93	53	7	46	27	-	27	-	8,821	46
080	Households	14	9	5	1	-	1	-	-	-	-	-	-	-	14	1
090	**Debt securities**	**7,971**	**7,406**	**430**	**0**	**0**	**0**	**4**	**3**	**1**	**0**	**0**	**0**	**0**	**1,393**	**0**
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	5,494	5,226	180	-	-	-	3	3	1	-	-	-	-	618	-
120	Credit institutions	2,446	2,152	250	-	-	-	-	-	-	-	-	-	-	775	-
130	Other financial corporations	31	28	-	-	-	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	**Off-balance-sheet exposures**	**3,337**	**2,362**	**939**	**0**	**0**	**0**	**15**	**3**	**12**	**0**	**0**	**0**	—	**2,715**	**0**
160	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	—	-	-
170	General governments	207	171	-	-	-	-	-	-	-	-	-	-	—	-	-
180	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	—	-	-
190	Other financial corporations	140	140	-	-	-	-	-	-	-	-	-	-	—	128	-
200	Non-financial corporations	2,989	2,050	939	-	-	-	15	3	12	-	-	-	—	2,586	-
210	Households	-	-	-	-	-	-	-	-	-	-	-	-	—	-	-
220	**Total [4]**	**52,024**	**40,978**	**10,370**	**579**	**0**	**579**	**186**	**30**	**155**	**172**	**0**	**172**	**0**	**32,415**	**379**

[1] Gross carrying amount (nominal value for off-balance sheet exposures) before impairments on financial assets and provisions in the lending business, but after amortisation, before application of credit risk mitigation techniques and before credit conversion factors (CCF).
[2] The value of stated collateral and guarantees is limited to the carrying amount (nominal value for off-balance sheet exposures) of the secured/guaranteed exposures.
[3] Classification of a counterparty in line with the FINREP breakdown into sectors is based on the direct counterparty (e.g. direct borrower, counterparty or securities issuer). In the case of exposures that several debtors entered into jointly, classification is based on the relevant or decisive borrower.
[4] Excluding the "Cash balances with central banks and other demand deposits" reported in line 005.

EU CR1-A: Maturity of exposures

		a	b	c	d	e	f
		Net exposure value [1]					
All figures in € million		On demand [2]	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity [3]	Total
010	Loans and advances [4]	1,084	7,512	16,831	15,530	-	40,957
020	Debt securities	-	1,022	2,179	4,764	3	7,968
030	**Total**	**1,084**	**8,534**	**19,010**	**20,293**	**3**	**48,924**

[1] Net exposure value: gross carrying value after impairments on financial assets and amortisation, but before application of credit risk mitigation techniques. EU CR1-A does not include off-balance sheet items.
[2] The counterparty can choose when the exposure will be redeemed (e.g. short-term receivables).
[3] The risk position, for reasons other than the counterparty being able to choose the redemption date, has no fixed residual maturity.
[4] The Pillar 3 Framework, Annex XVI, excludes loans and advances held for sale, cash balances with central banks and other demand deposits.

EU CR2: Changes in the stock of non-performing loans and advances

		a
All figures in € million		Gross carrying amount [1]
010	**Initial stock of non-performing loans and advances [2]**	**480**
020	Inflows to non-performing portfolios [3]	178
030	Outflows from non-performing portfolios [4]	-73
040	Outflows due to write-offs	-
050	Outflow due to other situations [5]	-5
060	**Final stock of non-performing loans and advances [6]**	**579**

[1] Gross carrying amount (nominal value for off-balance sheet exposures) of defaulted on-balance and off-balance sheet exposures before impairments on financial assets and provisions in the lending business, but after amortisation, before application of credit risk mitigation techniques and before credit con-version factors (CCF).
[2] Stock of defaulted loans and advances as at the end of the last financial year.
[3] Loans and advances that defaulted in the course of the disclosure period.
[4] Loans and advances classified as "not defaulted" as at the disclosure date, i.e. that are no longer considered defaulted/non-performing.
[5] Adjustment item from transfers to recovery management during the disclosure period, reduced by liquidations/restructurings as well as repayments/redemptions.
[6] Stock of non-performing loans and advances as at the disclosure date.

Credit quality

The following tables EU CQ1, EU CQ3, EU CQ4, and EU CQ5 pursuant to Article 442 (c), (d) and (e) of the CRR provide information on the credit quality of on-balance sheet and off-balance sheet credit exposures. This includes information on forborne (restructured) exposures and the related non-performing or defaulted exposures and credit risk adjustments. In addition, the tables provide information on collateral and financial guarantees received as well as breakdowns by counterparty, geography (country) and industry (NACE code)

As at the disclosure date, pbb Group reported an unchanged NPL ratio (gross carrying amount of non-performing loans and advances divided by the gross carrying amount of performing and non-performing loans and advances) of clearly below 5 %. In line with the Pillar 3 framework, disclosure of tables EU CR2a, EU CQ2, EU CQ6 and EU CQ8 pursuant to Article 442 (c) of the CRR is therefore not relevant. pbb Group regularly checks if further disclosure requirements apply when the 5 % threshold for the NPL ratio is exceeded.

Disclosure of table EU CQ7 “Collateral obtained by taking possession and execution processes” pursuant to Article 442 (c) of the CRR is not relevant for pbb Group, either. EU CQ7 provides an overview of the foreclosures performed by the institution by taking possession of non-performing exposures. pbb Group did not hold any foreclosures or other seized collateral as at 31 December 2021.

Defaulted and non-defaulted exposures

The gross carrying amounts of on-balance sheet (loans and advances, debt securities) and off-balance sheet credit exposures (loan commitments) totalled € 52,604 million as at 31 December 2021.

Performing exposures accounted for € 52,024 million or 99 %, the defaulted exposures for € 579 million. Level 3 impairments of € 172 million have already been recognised for the defaulted exposures, whilst the collateral and financial guarantees received amount to € 379 million.

According to the IRB approach, credit exposures are considered “defaulted” if a borrower has defaulted pursuant to Article 178 of the CRR or if another contractual or regulatory trigger applies. For instance, pbb Group considers it a default if a borrower is in material payment arrears or has material overdrafts for more than 90 days, or if it is unlikely that the borrower will meet their payment obligations in full. The credit exposures of a borrower which meet one or more default criteria are assigned a probability of default (PD) class with a probability of default of 100 %.

From a regulatory perspective, a new definition of default by the European Banking Authority (EBA) was applicable in the 2021 financial year, which also includes provisions on the materiality threshold for past-due exposures. The new definition, which – among other things – clarifies that default has occurred in case of a payment arrears of more than 90 days and of at least 1 % of the risk exposures recognised in the balance sheet, did not result in any transfers to the level 3 impairments mentioned above.

Under IFRS 9, the same definition of default is used as for regulatory purposes.

“Non-defaulted” exposures are receivables not considered defaulted pursuant to Article 178 of the CRR, meaning that none of the default events mentioned therein have occurred..

Non-performing exposure

All exposures that are considered defaulted according to Article 178 of the CRR are also viewed as “non-performing” by pbb Group. Therefore, the aforementioned defaulted exposures in the amount of € 579 million are also deemed “non-performing” exposures.

An exposure is considered “non-performing” if one of the following criteria is met: it is a material exposure that is past due for more than 90 days, or it is an exposure for which it is considered unlikely that the borrower will meet their payment obligations in full without realising collateral, regardless of whether payments are already overdue and regardless of the number of days of default, if any.

This classification as “non-performing” is carried out regardless of whether the exposure is classified as “defaulted” for regulatory purposes within the meaning of Article 178 of the CRR, or as impaired for accounting purposes within the meaning of the applicable IFRS accounting standards.

Impaired exposures

An exposure is considered “impaired” if stage 3 impairments were recognised in line with the accounting framework applied by pbb Group, the International Financial Reporting Standards (IFRS). As at 31 December 2021, the recognised stage 3 impairments amount to € 172 million, and the gross carrying amount of impaired exposures to € 579 million.

All exposures for which a (stage 3) impairment was identified in accordance with the IFRS accounting standards are also viewed as “non-performing” by pbb Group.

The rules and methods for impairments as per IFRS 9 are described in the section “Credit risk adjustments”.

Past-due exposures

A classification of an exposure as “past due” – both for accounting and regulatory purposes – is carried out for past-due exposures if the debtor fails to make contractually-agreed interest and principal payments when due.

The exposures that are partially or fully past due as at the disclosure date amount to a total of € 672 million (gross carrying amount), whereas the exposures past due (and non-performing) for more than 90 days amount to € 225 million. The exposures past due for more than 90 days are also deemed to be impaired.

Forborne (restructured) exposures

On-balance sheet and off-balance sheet exposures with forbearance measures amount to a total of € 2,273 million (gross carrying amount) as at the disclosure date, of which € 1,817 million qualifies as performing and € 456 million as non-performing (or defaulted) loans. Impairments of € 154 million have been recognised for the non-performing, forborne exposures.

Collateral and financial guarantees for exposures with forbearance measures amount to € 2,327 million, of which € 273 million accounts for non-performing, forborne exposures.

Exposures associated with a high risk of default are restructured by pbb Group should the borrower face financial difficulties – if a positive going-concern forecast has been made for the respective credit exposure. This restructuring process is based on an amendment to the underlying contractual relationship via unilateral or mutual declaration(s) of intent. Restructuring agreements aim to increase pbb Group’s opportunities to realise outstanding exposures, or at least reduce the exposure’s default risk, and usually comprise standstill agreements, extended loan terms, changed interest payment/repayment dates, or the suspension of contractual agreements, such as financial covenants, thus enabling borrowers to meet their contractual payment obligations again. pbb Group’s Credit Risk Management unit is responsible for managing the default risk of restructured 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)). The system – in part on an IT-supported, automated basis – constantly monitors 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 re-structuring and workout loans is appropriate. In this context, 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 regular coverage, 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.
- Workout Loans: there are no indications that the loan can be restructured. Enforcement measures have been/will be introduced. Stage 3 impairments (in accordance with IFRS) or specific allowances (in accordance with the HGB) were recognised if necessary.

CRM REF Workout is responsible for carrying out an impairment test in line with the relevant accounting regulations (HGB and IFRS).

EU CQ1: Credit quality of forborne exposures

		a	b	c	d	e	f	g	h
		Gross carrying amount/nominal amount of exposures with forbearance measures [1]				**Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions**		**Collateral received and financial guarantees received on forborne exposures [2]**	
		Performing forborne [3]	**Non-performing forborne [3]**			**On performing forborne exposures**	**On non-performing forborne exposures**		**thereof: collateral and financial guarantees received on non-performing exposures with forbearance measures**
All figures in € million				**thereof: defaulted**	**thereof: impaired**				
005	Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
010	**Loans and advances**	**1,815**	**456**	**456**	**456**	**36**	**154**	**2,053**	**273**
020	Central banks	-	-	-	-	-	-	-	-
030	General governments	-	-	-	-	-	-	-	-
040	Credit institutions	-	-	-	-	-	-	-	-
050	Other financial corporations	109	32	32	32	-	-	141	32
060	Non-financial corporations	1,707	423	423	423	36	154	1,912	241
070	Households	-	-	-	-	-	-	-	-
080	**Debt Securities**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
090	**Loan commitments given**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
100	**Total**	**1,817**	**456**	**456**	**456**	**36**	**154**	**2,054**	**273**

[1] Gross carrying amount (nominal value for credit commitments given) before impairments on financial assets and provisions in the lending business, but after amortisation, before application of credit risk mitigation techniques and before credit conversion factors (CCF).
[2] The value of stated collateral and guarantees is limited to the carrying amount (nominal value for credit commitments given) of the secured/guaranteed forborne exposures.
[3] Exposures with forbearance measures under Article 47b of the CRR can be defined as performing or non-performing, depending on whether they fulfil the conditions laid down in Article 47a of the CRR “Non-performing exposures”.

EU CQ3: Credit quality of performing and non-performing exposures by past due days

		a	b	c	d	e	f	g	h	i	j	k	l
		Gross carrying amount/nominal amount [1]											
		Performing exposures			**Non-performing exposures [2]**								
All figures in € million			**Not past due or past due ≤ 30 days**	**Past due > 30 days ≤ 90 days**		**Unlikely to pay that are not past due or are past due ≤ 90 days**	**Past due > 90 days ≤ 180 days**	**Past due > 180 days ≤ 1 year**	**Past due > 1 year ≤ 2 years**	**Past due > 2 years ≤ 5 years**	**Past due > 5 years ≤ 7 years**	**Past due > 7 years**	**thereof: defaulted 2)**
005	Cash balances at central banks and other demand deposits	7,668	7,668	-	-	-	-	-	-	-	-	-	-
010	**Loans and advances**	**40,716**	**40,623**	**93**	**579**	**355**	**156**	**0**	**54**	**0**	**14**	**1**	**579**
020	Central banks [3]	-	-	-	-	-	-	-	-	-	-	-	-
030	General governments	9,950	9,950	-	-	-	-	-	-	-	-	-	-
040	Credit institutions	1,585	1,585	-	-	-	-	-	-	-	-	-	-
050	Other financial corporations	1,166	1,166	-	32	32	-	-	-	-	-	-	32
060	Non-financial corporations	28,001	27,907	93	546	322	156	-	54	-	14	-	546
070	thereof: SMEs	9,051	9,051	-	93	93	-	-	-	-	-	-	93
080	Households	14	14	-	1	-	-	-	-	-	-	1	1
090	**Debt securities**	**7,971**	**7,971**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	5,494	5,494	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	2,446	2,446	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	31	31	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
150	**Off-balance-sheet exposures**	**3,337**	—	—	**0**	—	—	—	—	—	—	—	**0**
160	Central banks	-	—	—	-	—	—	—	—	—	—	—	-
170	General governments	207	—	—	-	—	—	—	—	—	—	—	-
180	Credit institutions	-	—	—	-	—	—	—	—	—	—	—	-
190	Other financial corporations	140	—	—	-	—	—	—	—	—	—	—	-
200	Non-financial corporations	2,989	—	—	-	—	—	—	—	—	—	—	-
210	Households	-	—	—	-	—	—	—	—	—	—	—	-
220	**Total [4]**	**52,024**	**48,594**	**93**	**579**	**355**	**156**	**0**	**54**	**0**	**14**	**1**	**579**

[1] Gross carrying amount (nominal value for off-balance sheet exposures) before impairments on financial assets and provisions in the lending business, but after amortisation, before application of credit risk mitigation techniques and before credit conversion factors (CCF).
[2] Non-performing exposures as per Article 47a of the CRR or defaulted exposures as per Article 178 of the CRR.
[3] Classification of a counterparty in line with the FINREP breakdown into sectors is based on the direct counterparty (e.g. direct borrower, counterparty or securities issuer). In the case of exposures that several debtors entered into jointly, classification is based on the relevant or decisive borrower.
[4] Excluding the "Cash balances with central banks and other demand deposits" reported in line 005.

EU CQ4: Credit quality of non-performing exposures by geography

All figures in € million			a	b	c	d	e	f	g
			Gross carrying/nominal amount [1]				**Accumulated impairment**	**Provisions on off-balance-sheet commitments and financial guarantees given**	**Accumulated negative changes in fair value due to credit risk on non-performing exposures [3]**
				thereof: non-performing		**thereof: subject to impairment [2]**			
					thereof: defaulted				
010	**On-balance-sheet exposures [4]**		**49,267**	**579**	**579**	**48,672**	**342**	**——**	**0**
1	(AT)	Austria	6,104	-	-	6,102	-	——	-
2	(DE)	Germany	14,834	38	38	14,595	24	——	-
3	(ES)	Spain	2,099	-	-	2,099	3	——	-
4	(FR)	France	7,470	-	-	7,430	10	——	-
5	(GB)	United Kingdom	1,317	163	163	1,267	87	——	-
6	(IT)	Italy	1,686	14	14	1,601	13	——	-
7	(LU)	Luxemburg	3,526	99	99	3,498	70	——	-
8	(NL)	Netherlands	1,328	40	40	1,278	1	——	-
9	(PL)	Poland	1,604	47	47	1,604	11	——	-
10	(SE)	Sweden	888	-	-	888	3	——	-
11	(US)	United States of America	3,625	94	94	3,524	42	——	-
12		Other countries [5]	4,786	84	84	4,786	78	——	-

All figures in € million			a	b	c	d	e	f	g
			Gross carrying/nominal amount [1]				Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures [3]
				thereof: non-performing		thereof: subject to impairment [2]			
					thereof: defaulted				
020	**Off-balance-sheet exposures [4]**		**3,337**	**0**	**0**	**——**	**——**	**15**	**——**
1	(DE)	Germany	1,713	-	-	——	——	12	——
2	(FR)	France	615	-	-	——	——	1	——
3	(LU)	Luxemburg	515	-	-	——	——	1	——
4	(NL)	Netherlands	57	-	-	——	——	-	——
5	(SE)	Sweden	101	-	-	——	——	-	——
6	(US)	United States of America	202			——	——	1	——
7		Other countries [6]	134	-	-	——	——	-	——
030	**Total**		**52,604**	**579**	**579**	**48,672**	**342**	**15**	**0**

[1] Gross carrying amount (nominal value for off-balance sheet exposures) before impairments on financial assets and provisions in the lending business, but after amortisation, before application of credit risk mitigation techniques and before credit conversion factors (CCF).

[2] Impairment in line with the three impairment stages as defined in IFRS 9.

[3] Accumulated negative changes to the fair value due to credit risk, an impairment of the fair value is implied for financial assets at fair value through profit or loss.

[4] Regional allocation of exposures to a country is based on the direct counterparty's (e.g. direct borrower, counterparty or securities issuer) country of domicile.

[5] On-balance sheet credit exposures: for reasons of materiality and pursuant to the Pillar 3 framework, Annex XVI, pbb refrains from reporting all countries individually.
The line "Other countries" summarises countries which account for an on-balance sheet credit exposure of less than 1 % each: Aruba, Bangladesh, Belgium, Bermuda, Canada, Switzerland, Cook Islands, Cameroon, Cyprus, Czech Republic, Denmark, Egypt, Finland, Guernsey, Ghana, Gibraltar, Ireland, Isle of Man, Jersey, Japan, Cayman Islands, Liechtenstein, Latvia, Mauritius, Norway, Oman, Portugal, Romania, Saudi Arabia, Slovenia, Slovakia and the British Virgin Islands.
The "Other countries" line also comprises exposures to supranational organisations which are not allocated to the institution's country of domicile, but to this category, in line with the Pillar 3 framework, Annex XVI.

[6] Off-balance sheet exposures: for reasons of materiality and pursuant to the Pillar 3 framework, Annex XVI, pbb refrains from reporting all countries individually.
The "Other countries" line summarises countries which account for an off-balance sheet credit exposure of less than 1 % each: Switzerland, Spain, Finland, Italy, Jersey, and Poland.

EU CQ5: Credit quality of loans and advances to non-financial corporations by industry

		a	b	c	d	e	f
		Gross carrying amount [1]				Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			thereof: non-performing		thereof: loans and advances subject to impairment		
All figures in € million				thereof: defaulted			
010	Agriculture, forestry and fishing [2] [3]	-	-	-	-	-	-
020	Mining and quarrying	-	-	-	-	-	-
030	Manufacturing	52	-	-	52	-	-
040	Electricity, gas, steam and air conditioning supply	52	-	-	52	-	-
050	Water supply	170	-	-	170	-	-
060	Construction	263	-	-	263	1	-
070	Wholesale and retail trade	103	-	-	103	-	-
080	Transport and storage	98	-	-	98	-	-
090	Accommodation and food service activities	170	-	-	120	2	-
100	Information and communication	16	-	-	16	-	-
110	Financial and insurance actvities	-	-	-	-	-	-
120	Real estate activities	26,643	546	546	26,346	310	-
130	Professional, scientific and technical activities	167	-	-	167	-	-
140	Administrative and support service activities	124	-	-	124	1	-
150	Public administration and defense, compulsory social security	-	-	-	-	-	-
160	Education	72	-	-	72	-	-
170	Human health services and social work activities	576	-	-	576	-	-
180	Arts, entertainment and recreation	38	-	-	38	-	-
190	Other services	3	-	-	3	-	-
200	**Total**	**28,546**	**546**	**546**	**28,200**	**314**	**0**

[1] Gross carrying amount (nominal value for off-balance sheet exposures) before impairments on financial assets and provisions in the lending business, but after amortisation, before application of credit risk mitigation techniques and before credit conversion factors (CCF).
[2] Classification according to the counterparty's NACE code is based on the main business activity of the direct counterparty (e.g. the direct borrower, counterparty or securities issuer) or that of the most relevant or significant borrower. The NACE codes are in line with the NACE Regulation: statistical classification of economic sectors in the European Community.
[3] A counterparty classification considers only those counterparties within sectors in connection with non-financial corporations. As per Implementing Regulation (EU) No. 2021/451, Annex V, the FINREP sector "Non-financial corporations" comprises all "corporations and quasi-corporations not engaged in financial intermediation but principally in the production of market goods and the provision of non-financial services.

Credit risk adjustments

This section provides information pursuant to Article 442 (b) of the CRR on rules and methods for credit risk adjustments.

Impairments

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 this is an unbiased and probability-weighted amount that is determined by evaluation of a range of possible outcomes and scenarios. IFRS 9 clarifies that this is a probability-weighted average, not the most probable amount.

Impairments and provisions in the lending business

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.

In the 2021 financial year, a new regulatory definition of default introduced by the European Banking Authority had to be applied. The new definition, which – among other things – clarifies that default has occurred in case of a payment arrears of more than 90 days and in case of at least 1 % of the risk exposures recognised in the balance sheet, did not result in any transfers to level 3 within pbb Group.

pbb 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 are 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. Also the forbearance criterion may be rebutted in justified individual cases.

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.

pbb Group made the change from Stage 1 to Stage 2 also when the change resulted from the current COVID-19-driven economic recession. If the credit risk of a financial assets with a significantly in-creased credit risk has not significantly in-creased any further at balance sheet date compared to the date of initial recognition the financial asset will move back to stage 1.

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 loss allowance at the 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 2021 and as of 31 December 2020.

Expected credit loss

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 deter-mined 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, material input factors are, in particular, 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. These PD rating methods and LGD models are also methods which pbb Group uses 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 macro-economic 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. In particular 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).

pbb Group has established a limited adjustment of expected credit losses in form of a management overlay as at 31 December 2021 in order to properly reflect the prevailing risk situation of clients during the COVID-19 pandemic. 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.

Write-offs

A financial asset might need to be written off under use of already recognised impairments, should a recovery not be feasible according to reasonable expectations. This applies in particular if it is probable that a residual claim will remain within the course of realisation of collateral and no further contributions are expected from the debtor (for example due to bankruptcy or lack of assets). In justified exceptions, pbb Group does attempt to collect (at least part of) the residual claim for the written-down exposures by means of enforcement measures. pbb Group did not write down (impair) financial assets in the 2021 financial year.

Disclosure in the statement of financial position and the income statement

Financial assets measured at amortised cost: impairments of all three stages pursuant to IFRS 9 are stated under the line item “Impairments of financial assets measured at amortised cost” in the statement of financial position, and the amount of these financial assets is disclosed before and after consideration of loss allowance. In the income statement, impairments recognised for these financial assets are shown in net income from risk provisioning.

Financial assets measured at fair value through other comprehensive income: impairments of all three stages pursuant to IFRS 9 are stated under the line item “Accumulated other comprehensive income” (under equity) in the statement of financial position. In the income statement, impairments recognised for these financial assets are shown in net income from risk provisioning.

Provisions for the off-balance sheet lending business, such as irrevocable loan commitments and financial guarantees, are recognised in line with the impairment rules as per IFRS 9 and disclosed under the “Provisions” line item under liabilities.

Credit risk mitigation techniques

This chapter provides information pursuant to Article 453 of the CRR on credit risk mitigation techniques used at pbb Group to offset credit risk (resulting from loans and advances, debt securities and off-balance sheet exposures) and counterparty credit risk (resulting from derivatives and securities financing transactions), including information both on the types of collateral used and concerning the main aspects of the provisions and procedures applicable to the assessment and management of this eligible collateral.

Main collateral used within credit risk mitigation

The strategic business segments of pbb Group are Real Estate Finance (REF) and Public Investment Finance (PIF); the focus is on business eligible for inclusion in Pfandbrief cover. To minimise default risk (credit risk, counterparty credit risk), pbb Group takes into account the following main types of collateral:

- Real estate (property liens)
- Guarantees and indemnities
- Financial collateral.

Property liens (real estate) for real estate financings are especially important. pbb Group further accepts guarantees and financial collateral (mainly cash collateral, partly securities) for hedging purposes. Financial collateral is used in netting agreements for derivatives and securities financing transactions (securities lending/repo transactions).

pbb Group did not execute hedging transactions with credit derivatives (purchased or sold credit collateral) during the 2021 financial year, either as protection buyer or protection seller.

pbb's guarantors are mainly financial institutions and public-sector clients with very good creditworthiness. Within the scope of risk reporting, Risk Management & Control (RMC) informs pbb's Management Board about the largest guarantors on a regular basis.

Using collateral to reduce capital requirements

Physical collateral (real estate) is taken into account as credit risk mitigating in the LGD calculation when assessing the loss given default in the event of default. Financial collateral is taken into account to reduce credit risk when determining exposure values (exposure at default (EaD)). Guarantees are taken into account as credit risk mitigation by way of a regular PD substitution, meaning that the lower risk weight of the guarantor is allocated to the hedged part of a receivable.

Besides property liens, collateral provided for financings in the REF segment also includes assignments of rental payments as well as insurance benefits which, however, are not taken into account for credit risk mitigation purposes pursuant to the CRR.

Internal pbb Group processing guidelines for each type of collateral set out the procedures for accepting collateral. The Bank usually employs standardised contractual stipulations to ensure legal enforceability, which are reviewed on an ongoing basis due to the ever-changing legal environment. A Group-wide process has been established, aiming to ensure that all CRR-relevant collateral is continuously subject to legal monitoring. Calculation and determination of collateral values is documented in a transparent manner. Expert opinions used to assess a liquidation value include statements concerning marketability of the collateral.

Risk concentrations within credit risk mitigation

Within the eligible hedging instruments used there may be material risk concentrations in terms of the real estate property liens, due to the natural correlation between such physical collateral and the general real estate market development of a particular country. The Risk and Opportunity Report in the 2021 annual report outlines the breakdown of the credit portfolio into regions as well as loan and real estate types. Risk concentrations of this type are limited by pbb Group within the scope of country limit management.

Each country or country group – depending on the results of the internal rating procedure – is allocated maximum limits in certain rating corridors that restrict pbb Group's business activities. Corporate Development/Economic Analysis reviews all country ratings and country limits at least annually.

Quantitative information on credit risk mitigation

Table EU CR3 below provides information on credit exposures secured by eligible collateral (broken down into loans and advances as well as debt securities), for which pbb Group calculates risk-weighted exposure amounts in line with the advanced IRB approach (IRBA) based on the Bank-internal rating procedure or the standardised approach (CRSA).

Pursuant to Article 453 (g), (h) and (i) of the CRR, table EU CR4 shows the impact of eligible collateral for exposures under the standardised approach (CRSA; see "Credit risk – Standardised approach"), whilst table EU CR7-A outlines the impact for exposures under the IRB approach (see "Credit risk – IRB approach") pursuant to Article 453 (g) of the CRR.

Table EU CR7 pursuant to Article 453 (j) of the CRR regarding the impact of credit derivatives used as a credit risk mitigation technique bears no relevance for pbb Group since its portfolio does not comprise credit derivatives as at the reporting date.

EU CR3: Credit risk mitigation techniques – overview

		a	b	c	d	e
		Unsecured carrying amount [3]	**Secured carrying amount [1] [2]**			
				thereof: secured by collateral [4]	**thereof: secured by financial guarantees**	
All figures in € million						**thereof: secured by credit derivatives**
1	Loans and advances	19,939	28,686	26,809	1,877	-
2	Debt securities	6,575	1,393	-	1,393	———
3	**Total**	**26,513**	**30,079**	**26,809**	**3,270**	**-**
4	thereof: non-performing exposures	28	379	346	32	-
5	thereof: defaulted	28	379	———	———	———

[1] EU CR3 shows the net value of exposures: gross carrying value after impairments on financial assets and amortisation, but before application of credit risk mitigation techniques. Off-balance sheet exposures are not taken into account.

[2] Exposures to which at least one credit risk mitigation mechanism is allocated pursuant to Part 3, Title II, Chapter 4 of the CRR. This relates to guarantees which may be considered as having risk-mitigating effects when calculating own funds requirements for the lending business. The value of reported guarantees is limited to the net value of secured/guaranteed exposures.

[3] Exposures to which no credit risk mitigation technique has been applied, for which collateral has not been pledged and guarantees have not been received. "Loans and advances" also comprises central bank deposits and receivables vis-à-vis banks due on demand.

[4] Exposures secured by collateral (predominantly real estate/property liens).

Valuation and management of eligible collateral

Depending on the type of collateral, pbb Group applies different valuation, control and review procedures. These procedures are an essential part of the previously mentioned event-driven and annual credit exposure review and new loan approval.

pbb Group has established processing principles for the valuation of different types of collateral. The value of furnished collateral is reviewed within the scope of the loan approval process, the regular assessment of the borrowers or the collateral, or in the event of material changes. Monitoring of collateral subject to special risks is performed even more closely in line with regulatory requirements and to account for the additional risks.

The valuation of property liens is generally based on a written expert valuation and documented in writing. pbb Group monitors value fluctuations based on defined parameters.

Real estate

An independent real estate surveyor prepares a written market valuation and loan-to-value opinion for all properties serving as collateral. The loan-to-value ratio is mainly required for real estate collateral intended for the Pfandbrief cover assets pool (for funding via Pfandbrief issues). Third-party opinions are also subject to a plausibility check carried out by an internal employee (real estate analyst).

The regular monitoring and review of real estate collateral (monitoring and revaluation) is initially focused on the property's market value:

- Level 1 monitoring aims to identify properties and/or markets (or a combination of real estate types and markets) with a potential loss in value based on documentary and general information. A rough analysis of the individual properties is sufficient.
- Level 2 monitoring comprises a more detailed review of the properties identified in level 1, or a more detailed annual review of properties subject to a higher risk, by the real estate analysts.
- Revaluation, or level 3 monitoring, is performed for properties with a market value decline of over 10 % or other substantial deteriorations in the underlying valuation assumptions, and for properties requiring revaluation at least every three years pursuant to Article 208 (3) (b) of the CRR. In such cases, an independent real estate surveyor determines the current market value.
- If there are any indications that the loan-to-value ratio has been impaired, level 4 monitoring comes into play: the value determination is reviewed and, if applicable, a revaluation performed.

For further information on quality aspects according to which pbb Group evaluates real estate, please refer to the "Risk hedging and risk mitigation" section within "Management of default risk (including counterparty credit risk)".

Assessment of real estate collateral in light of the COVID-19 pandemic

The World Health Organization (WHO) declared COVID-19 as a pandemic on 11 March 2020. The virus – and the containment measures undertaken – have a considerable impact on society as a whole as well as on national and international economic activity. Neither national nor international real estate markets can escape this situation. The impact on market values, demand from ten-ants and investors, and investment activities is perceivable in various sub-markets. Further consequences will make themselves felt with a time lag, depending on additional measures and the length of the crisis.

To account for these uncertainties regarding the market value development, the following monitoring procedure has been applicable at pbb Group since April 2020 (and will remain valid until further notice) in accordance with Article 208 (3) (a) of the CRR:

> Monthly level 2 monitoring: the monitoring interval (L2) has been shortened to a period of one month for all commercial real estate. Given the currently stable situation on the German residential real estate market, rental and pricing developments for existing properties (market monitoring) will henceforth be performed once a month on the regional residential real estate markets. In the event that rental and pricing levels indicate decreasing market values, a representative residential sample will be monitored.

> A revaluation (or “level 3 monitoring”) (internal/external) within the scope of monitoring is carried out in the event that a market value decline of over 10 % or other substantial deteriorations in the underlying valuation assumptions are identified within level 2 monitoring. (As such, this process is triggered by the same factors as regular real estate monitoring described above.) Revaluations are still being carried out in accordance with prevailing legal standards and common market practice – taking the current market environment into account.

For further information on pbb Group’s COVID-19-related measures, please refer to the chapter “Information on COVID-19 measures”.

Guarantees/indemnities

pbb Group considers guarantees as collateral for risk management and risk mitigation purposes in accordance with Articles 213 to 215 of the CRR. For credit risk mitigation recognition, guarantees and guarantors must meet regulatory requirements. Guarantees are taken into account as credit risk mitigation by way of a regular PD substitution.

Financial collateral

pbb Group uses financial collateral (mainly cash collateral) in netting agreements for derivatives and securities financing transactions (securities lending/repo transactions). For further information on the use of netting within credit risk mitigation, and the netting provisions and financial collateral used by pbb Group, please refer to the following section “On-balance sheet and off-balance sheet netting” and the chapter “Counterparty credit risk”.

On-balance sheet and off-balance sheet netting

Regulatory netting

Within the scope of credit risk mitigation, pbb Group applies the regulatory provisions on off-balance sheet netting for both derivative financial instruments and securities lending/repo transactions where the contractual agreements meet the requirements for risk-mitigating recognition in accordance with Article 296 of the CRR and Article 206 of the CRR. As at 31 December 2021, pbb Group concluded derivative contractual netting agreements amounting to € 0.8 billion and executed around € 1.0 billion in securities lending/repo transactions.

On-balance sheet netting

Derivatives cannot be offset for balance sheet purposes as they are subject to different terms, such as varying maturities or under-lying currencies. Collateral agreements cannot be offset against the derivatives in the balance sheet either.

Derivatives settled via Eurex Clearing are an exception. The European Market Infrastructure Regulation (EMIR) imposes a clearing obligation for standardised over-the-counter (OTC) derivatives. pbb uses Eurex Clearing as a central counterparty (CCP) to clear its OTC derivatives, using on-balance sheet netting for derivatives entered into with Eurex Clearing. On-balance sheet netting is applied for each currency, and comprises the carrying amounts of the derivatives as well as the collateral calculated and provided (or received) by Eurex Clearing in this context. As at 31 December 2021, total assets decreased to € 2.7 billion for the derivatives settled via Eurex Clearing as a result of on-balance sheet netting.

Securities lending/repo transactions are not offset for accounting purposes.

Master agreements

pbb Group applies standard market master agreements (such as the German Master Agreement on Financial Derivatives Transactions (Deutscher Rahmenvertrag für Finanztermingeschäfte – DRV), the ISDA Master Agreement or the Global Master Repurchase Agreement (GMRA)), including relevant collateral agreements (such as the German Collateral Annex to the DRV or the ISDA Credit Support Annex) to document its derivatives and securities lending/repo transactions. The master agreements used for both derivatives and securities lending/repo transactions contain netting agreements according to which, in the event of insolvency for example, one single claim is established by netting all transactions concluded under a master agreement, meaning that in the event of a counterparty default, pbb is only entitled to, or obliged to pay, the net amount of the positive and negative market values of the individual transactions ("close-out netting"). This reduces the default risk in relation to the respective contractual partner. One pre-requisite for collateral to be recognised as risk-mitigating is a review of the validity and enforceability of the contractual netting agreement in the respective jurisdiction, which pbb Group performs not only on a regular, but also on an event-driven basis in the form of legal opinions.

Collateral agreements

Collateral used for these transactions comprises financial collateral (mainly cash collateral, partly securities) based on standard market collateral agreements, such as the Collateral Annex to the DRV. Collateral is usually provided by full transfer of rights, and in the case of securities, also by way of pledging. pbb usually furnishes and receives cash collateral in euros. Where derivatives are cleared via a central counterparty, collateral is provided by pledging securities and transferring cash collateral. Bilateral repo transactions are usually secured through cash collateral, whilst repo transactions cleared via a central counterparty are secured via the exchange of securities. To be recognised for credit risk mitigation purposes pursuant to the CRR, collateral provided must meet regulatory requirements. pbb Group also verifies the validity and enforceability of collateral by means of legal opinions.

Transactions are evaluated on a daily basis. Whilst collateral agreements stipulate minimum transfer amounts, they usually do not provide for threshold amounts. For further information on this topic, please refer to the "Rating-based collateral agreements" section within the chapter on "Counterparty credit risk".

Credit risk – standardised approach

This chapter provides information pursuant to Articles 444 and 453 (g), (h) and (i) of the CRR concerning on-balance sheet and off-balance sheet credit exposures, for which pbb Group calculates risk-weighted exposure amounts in line with the standardised approach (CRSA). pbb Group makes use of this approach pursuant to Articles 111 et seqq. of the CRR in addition to the advanced IRB approach (IRBA) based on the Bank-internal rating procedure pursuant to Articles 142 et seqq. – for the following portfolios.

Application of permanent partial use within the meaning of Article 150 of the CRR

pbb Group uses the standardised approach mainly for the following sub-portfolios:

- Exposures to central governments or central banks, regional governments and public-sector entities pursuant to Article 150 (1) (a) and (d) of the CRR
- Exposures to institutions as referred to in Article 150 (1) (b) of the CRR (including Eurex Clearing)
- Exposures to companies generating the majority of their revenues outside the real estate sector
- Exposures to private individuals
- Default risk exposures regarding a discontinued business unit within the meaning of Article 150 (1) (c) of the CRR in conj. with Section 14 of the German Solvency Regulation (Solvenzverordnung, SolvV) (e.g. low-volume retail loans; the client's creditworthiness is assessed via retail scoring)
- Other default risk exposures for which no rating procedure pursuant to the IRB approach as approved by the banking supervisor is applied.

Use of rating agencies and export credit agencies

Nominated rating agencies

pbb Group exclusively uses external ratings from Standard & Poor's, Moody's and Fitch to assess the creditworthiness within the scope of the standardised approach. Nominations are unchanged from the previous year. Export credit agencies have not been nominated for credit assessments.

Allocated exposure classes

The above-mentioned rating agencies have been nominated for all CRSA exposure classes.

Transfer of credit assessments

Issue ratings are not transferred to comparable exposures of equal or higher rank.

Mapping external credit assessments

pbb Group uses the allocation method prescribed by the European Banking Authority (EBA) pursuant to the CRR for allocation of the external ratings from rating agencies to the credit quality steps of the standardised approach.

Effects of credit risk mitigation

The standardised approach takes guarantees into account as credit risk mitigation by way of a regular PD substitution, meaning that the lower risk weight of the guarantor is allocated to the hedged part of a receivable. This in turn means that the secured part of an IRBA exposure (e.g. of a company) is reported with the lower risk weight of the guarantor (e.g. of a public-law corporation) in the standardised approach, or that guaranteed CRSA exposures are allocated to the lower risk weight and exposure class of the protection seller. pbb's guarantors are mainly financial institutions and public-sector clients. pbb Group treats credit exposures to public-sector clients and financial institutions using the standardised approach.

Quantitative information on credit exposures under the standardised approach

The following tables EU CR4 and EU CR5 pursuant to Articles 444 (e) and 453 (g), (h) and (i) of the CRR provide information on exposure values (before and after credit risk mitigation) and risk-weighted exposure amounts (RWA), risk weights and RWA density, as well as on the implications of credit conversion factors (CCF) applied, and of eligible collateral for on-balance sheet and off-balance sheet CRSA credit exposures, broken down by exposure classes.

EU CR4: Standardised approach – Credit risk exposure and credit risk mitigation effects

		a	b	c	d	e	f
		Exposures before CCF and before CRM [1]		**Exposures post CCF and post CRM [2]**		**RWAs and RWAs density**	
Exposure classes		**On-balance-sheet exposures**	**Off-balance-sheet exposures**	**On-balance-sheet exposures**	**Off-balance-sheet amount**	**RWAs [3]**	**RWAs density [4] (%)**
All figures in € million, unless otherwise stated							
1	Central governments or central banks	15,279	-	17,237	-	78	0.45%
2	Regional government or local authorities	5,298	171	6,197	86	478	7.61%
3	Public sector entities	1,840	1	1,659	-	141	8.52%
4	Multilateral development banks	557	-	557	-	-	0.00%
5	International organisations	141	-	141	-	-	0.00%
6	Institutions	1,146	-	126	-	28	22.60%
7	Corporates	2,186	145	636	101	701	95.06%
8	Retail	-	-	-	-	-	75.00%
9	Secured by mortgages on immovable property	513	72	513	36	192	34.93%
10	Exposures in default	33	-	1	-	1	122.97%
11	Exposures associated with particularly high risk	93	21	93	11	156	150.00%
12	Covered bonds	1,102	-	1,102	-	135	12.27%
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	0.00%
14	Collective investment undertakings	3	-	3	-	38	1250.00%
15	Equity	-	-	-	-	-	0.00%
16	Other items [5]	111	-	111	-	277	250.00%
17	**Total**	**28,302**	**410**	**28,376**	**234**	**2,228**	**7.78%**

[1] Net value of CRSA exposures: gross carrying amounts after impairments/provisions and amortisation, but before application of credit risk mitigation techniques and credit conversion factors (CCF).

[2] CRSA exposure values (exposure at default, EaD) after impairments/provisions and amortisation, and after application of credit risk mitigation techniques and credit conversion factors (CCF).

[3] Risk-weighted CRSA exposure amounts (risk-weighted assets, RWA).

[4] RWA density (%): calculated by dividing the RWA per CRSA exposure class (column e) by the respective EaD (columns c + d).

[5] Deferred tax assets dependant on future profitability (not) resulting from temporary differences.

EU CR5: Standardised approach

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
Exposure classes		**Risk weight**															**Total**	**Of which unrated** [2]
All figures in € million		**0%**	**2%**	**4%**	**10%**	**20%**	**35%**	**50%**	**70%**	**75%**	**100%**	**150%**	**250%**	**370%**	**1250%**	**Others**		
1	Central governments or central banks	16,856	-	-	-	379	-	-	-	-	2	-	-	-	-	-	17,237	6,935
2	Regional government or local authorities	3,925	-	-	-	2,336	-	22	-	-	-	-	-	-	-	-	6,283	4,793
3	Public sector entities	1,148	-	-	-	451	-	18	-	-	42	-	-	-	-	-	1,659	1,459
4	Multilateral development banks	557	-	-	-	-	-	-	-	-	-	-	-	-	-	-	557	-
5	International organisations	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	141	-
6	Institutions	-	-	-	-	115	-	11	-	-	-	-	-	-	-	-	126	-
7	Corporates	17	-	-	-	1	-	1	-	-	718	-	-	-	-	-	737	690
8	Retail exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Exposures secured by mortgages on immovable property	-	-	-	-	-	451	99	-	-	-	-	-	-	-	-	550	549
10	Exposures in default	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1
11	Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	104	-	-	-	-	104	-
12	Covered bonds	-	-	-	852	250	-	-	-	-	-	-	-	-	-	-	1,102	-
13	Exposures to institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Units or shares in collective investment undertakings	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3	3
15	Equity exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Other items [3]	-	-	-	-	-	-	-	-	-	-	-	111	-	-	-	111	-
17	**Total**	**22,644**	**0**	**0**	**852**	**3,532**	**451**	**151**	**0**	**0**	**763**	**104**	**111**	**0**	**3**	**0**	**28,611**	**14,430**

[1] EU CR5 provides information on the CRSA exposure values (EaD) after impairments/provisions and amortisation, and after application of credit risk mitigation techniques and credit conversion factors (CCF).
[2] A rating by a renowned rating agency (external credit assessment institutions, ECAI) is not available.
[3] Deferred tax assets dependant on future profitability (not) resulting from temporary differences.

Credit risk – IRB approach

This chapter provides information pursuant to Articles 452 and 453 (g) and (j) as well as 438 (h) of the CRR on on-balance sheet and off-balance sheet credit exposures, for which pbb Group calculates risk-weighted exposure amounts in line with the advanced IRB approach based on the Bank-internal rating procedure pursuant to Articles 142 et seqq. of the CRR.

Approved IRB approaches

pbb Group has obtained permission to use the rating systems listed in the following EU CRE table for the advanced IRB approach.

Within the scope of the EBA's current "Regulatory Review of the IRB Approach" programme to review the IRBA models, pbb Group is aiming to extend the IRBA coverage ratio to the sub-portfolios "Property developers who prepare balance sheets" and "Non-trading partnerships" (Gesellschaften bürgerlichen Rechts – GbR) in the "Corporates" exposure class. Further extension of the IRBA coverage ratio to new exposure classes – through a new implementation plan – is currently not scheduled.

Internal rating systems must comply with the minimum requirements for the use of the IRB approach as set out in Articles 143 and 144 of the CRR, fulfil methodical as well as procedural and organisational requirements, and prove their viability for the risk classification of existing and new business. Rating systems within the meaning of Article 142 of the CRR describe "all of the methods, processes, controls, data collection and IT systems that support the assessment of credit risk, the assignment of exposures to rating grades or pools, and the quantification of default and loss estimates that have been developed for a certain type of expo-sure."

All pbb Group's PD, LGD and CCF rating systems broadly follow a through-the-cycle philosophy, whereby the structure of this philosophy can change between the various models, for example due to the risk factors taken into account in the model. Current default rates, loss given default and CCF ratios may thus differ from the through-the-cycle forecasts – depending on the phase of the economic cycle.

Types of exposure

pbb Group ensures that the debtor of an IRBA default risk exposure is allocated to the PD LGD and CCF rating systems by making use of the rating systems' defined scopes of application. Compliance with the scope is either checked during the rating pro-cess or it is technically ensured via the construction of the system itself.

The "Central governments and central banks", "Institutions" and "Retail exposures" IRBA exposure classes do not apply to pbb Group. As far as its participating interests are concerned, pbb Group applies the simple IRBA risk weight for equity exposures in accordance with Article 155 (2) of the CRR.

The "Corporates" exposure class (including "specialised lending") uses rating systems with statistical models at their core, supplemented by expert model components in the risk classification. After the initial rating, a follow-up rating is performed at least annually for all rating systems. Intra-year re-ratings are carried out in the event of the existence of material information affecting creditworthiness. All relevant input data and the results of the ratings performed are stored for the purpose of data processing to ensure a complete rating history for every debtor and every guarantor as well as every transaction subject to default risks. Debtors are allocated to PD classes on the basis of probabilities of default in accordance with a 27-stage PD master scale or by means of tables which map letter ratings to PD classes depending on the segment.

pbb Group defines defaults as per Article 178 of the CRR.

Rating systems in the IRB approach (EU CRE)

No.	Para-meter	Model	Exposure classes	Scope [1]	Modelling approach [2]
PD rating systems					
1	PD	SPV developer	Corporates/ Specialised financing	The obligor is an SPV (special-purpose vehicle), whereby the financed property/property portfolio is the sole business purpose and asset of the SPV and the liability is limited to the SPV (non-recourse financing)	Based on statistical default models
2	PD	SPV investors	Corporates/ Specialised financing		
3	PD	Housing associations	Corporates	Real estate customers whose main business comprises management of their own housing stock and whose credit standing is essentially related to this aspect	
4	PD	Investors who prepare balance sheets	Corporates	Customers who prepare balance sheets and whose main income is derived from real estate assets	
5	PD	Investors who do not prepare balance sheets	Corporates	Customers who do not prepare balance sheets, whose main income is derived from real estate assets	
LGD rating systems					
6	LGD	International real estate financing (defaulted and non-defaulted obligors)	Corporates incl. specialised lending	Secured property financing, with main emphasis outside Germany	Stochastic simulation methods
7	LGD	National real estate financing (defaulted and non-defaulted obligors)	Corporates incl. specialised lending	Secured property financing, with main emphasis within Germany	Structure model
CCF rating system					
8	CCF	Credit conversion factor	Corporates incl. specialised lending	Mortgage loans	Historical mean

[1] Simplified presentation of the rating procedures' scope. The specific scopes are defined in the relevant work instructions.
[2] Methodology on which the rating procedure is based.

PD rating systems

The PD rating systems for commercial real estate financing are based on logistical regression models which have been developed and calibrated using historical internal debtor data (default information and qualitative as well as quantitative risk factors) and expert assessments. Calibration requires data for a period of at least seven years. The risk factors are weighted and aggregated to form a score, which yields an individual probability of default. This in turn is subsequently translated into a PD class by way of a standardised PD master scale. The PD rating systems for commercial real estate financing comprise traditional indicators such as the ratio of loan amount to a property's market value or the debt service cover ratio, and usually also information on the debtor's property or property portfolio (e.g. location quality, vacancy rate, regional information) and information concerning the debtors themselves (e.g. commercial/technical qualifications, information about the client/bank relationship).

pbb Group's PD rating systems consider quantitative and qualitative risk factors in addition to differently weighted warning signals. These warning signals generally identify rare events (for instance, a negative feature affecting creditworthiness) which, if they occur, have a significant influence on the debtor's creditworthiness. In addition, pbb Group's PD rating systems ensure that the PD of a debtor cannot be better than the PD of the debtor's country of domicile. This "sovereign ceiling" takes account of government-related additional risks, e.g. transfer risks, when preparing client ratings.

pbb Group applies a standardised PD master scale comprised of 27 PD classes for debtors not yet subject to default which is identical for all rating systems and across all exposure classes, thus allowing for a comparison of rating classifications across all default risk exposures. Each of the 27 PD classes is allocated unequivocal probabilities of default as PD estimates, as well as upper and lower limits for the probabilities of default.

LGD rating systems

Loss given default estimates in per cent (referring to the Exposure at Default (EaD)) are a direct result of pbb Group's LGD rating systems.

The LGD rating system for international commercial real estate financing is based on a stochastic simulation method which, in addition to future macroeconomic developments, also simulates future real estate market-specific developments and calculates the impact on the cash flows and the property value of the specific financing arrangement. The model is calibrated using historical default events since 2008.

The LGD rating system for German real estate financing is based on a structural approach – with the market value of the real estate collateral at the core of the LGD estimate. Individual model parameters such as recovery rates and settlement periods are calculated for differentiated segments (property types, among other things) based on historical pbb Group data and the data pooling initiative of the Association of German Pfandbrief Banks (VdP) (usually based on data from 2008 onwards, at least).

Downturn analyses and tests of significance ensure – for the individual LGD rating systems – that the models are suitable for forecasting downturn LGDs.

CCF rating systems

pbb Group uses a model to forecast the credit conversion factor (CCF) for mortgage loans, based on the observable drawing pattern of historical internal defaults since 2008 in a period of 12 months prior to default. A CCF of 100 % is applied to all other products (e.g. guarantee credits).

Further use of internal estimates

The internal estimates of the probability of default (PD) and loss given default (LGD) are important parameters for risk management and lending decisions. Within the scope of the lending decision process, and taking these risk parameters into account, risk and equity costs are determined which then form the basis for risk-adjusted pricing and the lending decision.

Expected loss (EL) classes are derived from the PD and LGD risk parameters; approval powers within pbb Group for loan approval and loan processing are based on said EL classes.

The results of the internal rating systems are incorporated into the economic risk-bearing capacity calculation (ICAAP) and considered when determining on-balance sheet risk provisioning.

Functions and control mechanisms for IRBA rating systems

The Group Risk Committee (GRC) is responsible for developing and validating rating systems at pbb Group. The GRC is a Management Board sub-committee with the authority to decide on matters related to risk methodology and risk parameters, as well as risk monitoring and relevant guidelines.

The GRC commissions the creation of new models (or development of existing ones), validation concepts, and the implementation of validations in Risk Management & Control (RMC). RMC does not depend on divisions responsible for initiating and executing transactions. The credit risk monitoring unit within this division is responsible for developing, implementing, maintaining, monitoring, and developing all rating systems throughout the Group. It presents its results to the GRC, which in turn must approve them.

All PD and LGD rating systems are validated once a year; this review comprises statistical and qualitative analyses as well as user feedback to check the procedures' calibration, precision and stability, the data quality and model design.

Regarding the LGD rating system for German real estate financing, pbb Group also participates in the pool validation at the level of the Association of German Pfandbrief Banks (VdP).

pbb Group has various technical control mechanisms at its disposal, such as dual-control approval, to check for completeness and to perform plausibility checks for the data input.

The Internal Audit division, as a process-independent unit, reviews the adequacy of the internal rating systems on a regular basis, including compliance with the minimum requirements for using rating systems and for procedural changes implemented.

IRBA rating systems – reporting

All validation reports are presented to, and approved by, the Group Risk Committee (GRC).

Quantitative information on credit exposures in the IRB approach

The following tables EU CR6 and EU CR6a pursuant to Article 452 (b) and (g) of the CRR provide information concerning on-balance sheet and off-balance sheet credit exposures for the portfolios subject to the IRB approach and rated using a rating procedure approved by the supervisory authorities. The tables further provide information on key IRBA parameters used for the calculation of own funds requirements.

Table EU CR6 only comprises information on pbb Group's significant exposure classes. The "Central governments and central banks", "Institutions" and "Retail exposures" IRBA exposure classes do not apply to pbb Group. As far as pbb Group's participating interests are concerned, it applies the simple IRBA risk weight for equity exposures in accordance with Article 155 (2) of the CRR.

Table EU CR7-A pursuant to Article 453 (g) of the CRR outlines the impact of eligible collateral under the IRB approach.

Table EU CR7 pursuant to Article 453 (j) of the CRR regarding the impact of credit derivatives used as a credit risk mitigation technique on risk-weighted exposure amounts (RWA) bears no relevance for pbb Group since its portfolio continues to contain no credit derivatives.

Table EUR CR8 in accordance with Article 438 (h) of the CRR outlines the changes in RWA in the second half of 2021 and highlights the main reasons for these changes.

EU CR6: IRB approach – Credit risk exposures by exposure class and PD range

All figures in € million, unless otherwise stated

	a	b	c	d	e	f	g	h	i	j	k	l	m
A-IRB	**PD range** [1]	**On-balance sheet exposures** [2]	**Off-balance-sheet exposures pre-CCF** [3]	**Exposure weighted average CCF** [4]	**Exposure post CCF and post CRM** [5]	**Exposure weighted average PD (%)** [6]	**Number of obligors**	**Exposure weighted average LGD (%)** [7]	**Exposure weighted average maturity (years)**	**Risk weighted exposure amount after supporting factors** [8]	**Density of risk weighted exposure amount** [9]	**Expected loss amount**	**Value adjustments and provisions**
Corporates - SMEs	0.00 to <0.15	33	-	-	32	0.08	22	3	4	1	0.02	-	-
	0.00 to <0.10	10	-	-	10	0.05	3	3	4	-	0.01	-	-
	0.10 to <0.15	22	-	-	22	0.10	19	3	4	-	0.02	-	-
	0.15 to <0.25	72	1	0.50	71	0.20	43	4	4	3	0.04	-	-
	0.25 to <0.50	849	-	-	847	0.40	78	7	5	81	0.10	-	1
	0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	-
	0.75 to <2.50	301	114	0.54	362	1.01	28	8	5	60	0.17	-	-
	0.75 to <1.75	301	114	0.54	362	1.01	28	8	5	60	0.17	-	-
	1.75 to <2.5	-	-	-	-	-	-	-	-	-	-	-	-
	2.50 to <10.00	3	8	0.50	7	2.54	3	44	3	7	1.02	-	-
	2.5 to <5	3	8	0.50	7	2.54	3	44	3	7	1.02	-	-
	5 to <10	-	-	-	-	-	-	-	-	-	-	-	-
	10.00 to <100.00	-	-	-	-	17.50	1	9	5	-	0.37	-	-
	10 to <20	-	-	-	-	17.50	1	9	5	-	0.37	-	-
	20 to <30	-	-	-	-	-	-	-	-	-	-	-	-
	30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
	100.00 (Default)	7	-	-	7	100.00	3	22	5	4	0.62	2	1
Subtotal		**1,265**	**123**	**0.54**	**1,326**	**1.10**	**178**	**7**	**5**	**156**	**0.12**	**2**	**2**

All figures in € million, unless otherwise stated

A-IRB	a	b	c	d	e	f	g	h	i	j	k	l	m
	PD range [1]	**On-balance sheet exposures [2]**	**Off-balance-sheet exposures pre-CCF [3]**	**Exposure weighted average CCF [4]**	**Exposure post CCF and post CRM [5]**	**Exposure weighted average PD (%) [6]**	**Number of obligors**	**Exposure weighted average LGD (%) [7]**	**Exposure weighted average maturity (years)**	**Risk weighted exposure amount after supporting factors [8]**	**Density of risk weighted exposure amount [9]**	**Expected loss amount**	**Value adjustments and provisions**
Corporates - specialised lending [10]	0.00 to <0.15	166	-	-	166	0.09	6	7	3	5	0.03	-	-
	0.00 to <0.10	21	-	-	21	0.05	1	2	1	-	-	-	-
	0.10 to <0.15	145	-	-	145	0.10	5	8	3	5	0.03	-	-
	0.15 to <0.25	906	23	0.50	917	0.20	22	20	3	164	0.18	-	-
	0.25 to <0.50	6,135	247	0.54	6,255	0.40	127	21	3	1,633	0.26	5	4
	0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	-
	0.75 to <2.50	8,926	656	0.56	9,296	1.31	174	24	3	4,593	0.49	30	30
	0.75 to <1.75	7,669	551	0.57	7,983	1.20	154	24	3	3,802	0.48	23	23
	1.75 to <2.5	1,258	105	0.52	1,313	2.00	20	26	3	791	0.60	7	7
	2.50 to <10.00	6,381	1,759	0.71	7,635	4.08	120	25	3	5,392	0.71	79	101
	2.5 to <5	4,234	908	0.75	4,913	3.06	78	26	3	3,331	0.68	40	52
	5 to <10	2,146	851	0.68	2,722	5.93	42	24	2	2,061	0.76	39	49
	10.00 to <100.00	370	77	0.50	409	13.74	8	35	2	524	1.28	20	16
	10 to <20	320	11	0.50	326	10.37	6	35	2	397	1.22	12	15
	20 to <30	50	66	0.50	83	27.00	2	35	1	127	1.53	8	1
	30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
	100.00 (Default)	538	-	-	538	100.00	9	34	2	336	0.62	182	171
Subtotal		**23,422**	**2,762**	**0.65**	**25,216**	**4.18**	**466**	**24**	**3**	**12,647**	**0.50**	**316**	**322**

All figures in € million, unless otherwise stated

	a	b	c	d	e	f	g	h	i	j	k	l	m
A-IRB	**PD range [1]**	**On-balance sheet exposures [2]**	**Off-balance-sheet exposures pre-CCF [3]**	**Exposure weighted average CCF [4]**	**Exposure post CCF and post CRM [5]**	**Exposure weighted average PD (%) [6]**	**Number of obligors**	**Exposure weighted average LGD (%) [7]**	**Exposure weighted average maturity (years)**	**Risk weighted exposure amount after supporting factors [8]**	**Density of risk weighted exposure amount [9]**	**Expected loss amount**	**Value adjustments and provisions**
Corporates - others	0.00 to <0.15	851	-	-	796	0.08	23	11	4	57	0.07	-	-
	0.00 to <0.10	359	-	-	347	0.05	6	1	5	1	0.00	-	-
	0.10 to <0.15	492	-	-	449	0.10	17	18	4	56	0.12	-	-
	0.15 to <0.25	673	6	0.50	672	0.20	15	3	5	33	0.05	-	-
	0.25 to <0.50	471	-	-	471	0.31	21	24	4	196	0.42	-	-
	0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	-
	0.75 to <2.50	60	-	-	60	1.20	5	0	3	-	-	-	-
	0.75 to <1.75	60	-	-	60	1.20	5	0	3	-	-	-	-
	1.75 to <2.5	-	-	-	-	-	-	-	-	-	-	-	-
	2.50 to <10.00	-	-	-	-	5.00	1	23	1	-	-	-	-
	2.5 to <5	-	-	-	-	-	-	-	-	-	-	-	-
	5 to <10	-	-	-	-	5.00	1	23	1	-	-	-	-
	10.00 to <100.00	-	-	-	-	17.50	1	5	2	-	-	-	-
	10 to <20	-	-	-	-	17.50	1	5	2	-	-	-	-
	20 to <30	-	-	-	-	-	-	-	-	-	-	-	-
	30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
	100.00 (Default)	1	-	-	1	100.00	2	17	1	1	1.00	-	-
Subtotal		**2,056**	**6**	**0.50**	**2,000**	**0.25**	**68**	**11**	**4**	**287**	**0.14**	**-**	**-**
Total (all exposures classes)		**26,742**	**2,889**	**0.65**	**28,542**	**3.76**	**712**	**22**	**3**	**13,091**	**0.46**	**319**	**325**

[1] PD ranges for the estimated probability of default (PD), excluding substitution effects due to credit risk mitigation techniques.
[2] Gross carrying amount before impairments (but after amortisation) and before application of credit risk mitigation techniques.
[3] Nominal value before provisions and application of credit risk mitigation techniques and before credit conversion factors (CCF)
[4] Exposure-weighted conversion factor for off-balance sheet exposures, weighted using the off-balance sheet exposure in column (c).
[5] IRBA exposure value (exposure at default, EaD) after application of credit risk mitigation techniques and credit conversion factors (CCF), but before impairments and provisions.
[6] Exposure-weighted average probability of default (PD), weighted using the exposure value in column (e).
[7] Exposure-weighted average loss given default (LGD), weighted using the exposure value in column (e).
[8] Risk-weighted IRBA exposure amounts (risk-weighted assets, RWA) after SME and infrastructure supporting factors pursuant to Articles 501 and 501a of the CRR.
The IRBA exposure classes “Equity exposures” and “Other non-credit obligation assets”, which are not based on separate LGD and/or CCF estimates, are not disclosed.
[9] RWA density (%): calculated by dividing the RWA (column j) by the respective EaD (column e).
[10] Excluding specialised lending within the meaning of Article 153 (4) of the CRR.

EU CR6-A: Scope of the use of IRB and SA approaches

All figures in € million, unless otherwise stated		a	b	c	d	e
		Exposure value as defined in Article 166 CRR for exposures subject to IRB approach [2]	Total exposure value for exposures subject to the Standardised approach and to the IRB approach [3]	Percentage of total exposure value subject to the permanent partial use of the SA (%) [4]	Percentage of total exposure value subject to IRB Approach (%) [5]	Percentage of total exposurevalue subject to a roll-out plan (%) [6]
1	Central governments or central banks	-	23,346	100	-	-
1.1	thereof: Regional governments or local authorities	———	5,386	100	-	-
1.2	thereof: Public sector entities	———	1,982	100	-	-
2	Institutions	-	2,563	100	-	-
3	Corporates	28,708	31,796	9.71	-	90.29
3.1	thereof: Corporates - Specialised lending, excluding slotting approach	———	25,416	0.41	-	99.59
3.2	thereof: Corporates - Specialised lending under slotting approach	———	-	-	-	-
4	Retail	-	2	100	-	-
4.1	thereof: Retail – Secured by real estate SMEs	———	-	-	-	-
4.2	thereof: Retail – Secured by real estate non-SMEs	———	2	100	-	-
4.3	thereof: Retail – Qualifying revolving	———	-	-	-	-
4.4	thereof: Retail – Other SMEs	———	-	-	-	-
4.5	thereof: Retail – Other non-SMEs	———	-	-	-	-
5	Equity	-	-	-	-	-
6	Other non-credit obligation assets	68	178	62.11	-	37.89
7	**Total**	**28,776**	**57,885**	**50.29**	**-**	**49.71**

[1] Table EU CR6-A comprises information on on-balance sheet and off-balance sheet credit exposures as well as counterparty credit risk exposures (derivatives and securities financing transactions) in accordance with the COREP reporting of own funds and own funds requirements.
[2] IRBA exposure values (exposure at default, EaD) for exposures subject to the IRB approach.
[3] IRBA and CRSA exposure values for determination of the total exposure measure pursuant to Article 429 (4) of the CRR to calculate the leverage ratio.
[4] Share of exposures subject to the standardised approach (partial use in accordance with Article 150 of the CRR) in the aggregate exposure value as per column (b).
[5] Share of exposures subject to the IRB approach in the aggregate exposure value as per column (b).
[6] Share of exposures, for which the IRB approach is to be sequentially implemented in line with Article 148 of the CRR, in the aggregate exposure value as per column (b).

EU CR7-A: IRB approach – Disclosure of the extent of the use of credit risk mitigation techniques

		a	b	c	d	e	f	g	h	i	j	k	l	m	n
		Total exposures [1]	**Credit risk Mitigation techniques [2]**											**Credit risk Mitigation methods in the calculation of RWEAs**	
			Funded credit Protection (FCP)									**Unfunded credit Protection (UFCP)**		**RWA without substitution effects (reduction effects only) [3]**	**RWA with substitution effects (both reduction and substitution effects) [4]**
			Part of exposures covered by Financial Collateral (%)	**Part of exposures covered by Other eligible collaterals (%)**				**Part of exposures covered by Other funded credit protection (%)**				**Part of exposures covered by Guarantees (%)**	**Part of exposures covered by Credit Derivatives (%)**		
					Part of exposures covered by Immovable property Collaterals (%)	**Part of exposures covered by Receivables (%)**	**Part of exposures covered by Other physical collateral (%)**		**Part of exposures covered by Cash on deposit (%)**	**Part of exposures covered by Life insurance policies (%)**	**Part of exposures covered by Instruments held by a third party (%)**				
A-IRB All figures in € million, unless otherwise stated															
1	Central governments and central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Institutions	-	-	-	-	-	-	-	-	-	-	-	-		
3	Corporates	28,542	-	98.81	98.81	-	-	-	-	-	-	-	-	13,091	13,091
3.1	thereof: Corporates – SMEs	1,326	-	101.98	101.98	-	-	-	-	-	-	-	-	156	156
3.2	thereof: Corporates – Specialised lending	25,216	-	98.94	98.94	-	-	-	-	-	-	-	-	12,647	12,647
3.3	thereof: Corporates – Other	2,000	-	94.97	94.97	-	-	-	-	-	-	-	-	288	288
4	Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	**Total**	**28,542**	**0**	**98.81**	**98.81**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13,091**	**13,091**

[1] Exposure value (exposure at default, EaD) after credit conversion factors (CCF), but excluding credit risk mitigation techniques/substitution effects due to a guarantee.

[2] The collateral disclosed in columns (b) through (l) provides information on the share of the exposures secured by said collateral in the total exposures as per column (a). The collateral value is limited to the value of the secured exposure.

[3] Risk-weighted IRBA exposure amounts (risk-weighted assets, RWA) after credit risk mitigation techniques. The classification to an IRBA exposure class was carried out in line with the relevant exposure classes of the original debtor.

[4] Risk-weighted IRBA exposure amounts (risk-weighted assets, RWA) after credit risk mitigation techniques. The classification to an IRBA exposure class was carried out in line with the relevant exposure classes of the protection seller.

Credit exposures

The relevant regulatory exposure figure for the purposes of calculating the risk-weighted exposure amounts (risk-weighted assets, RWA) and the own funds requirements is the exposure at default (EAD). The CRR-compliant EAD for IRBA credit exposures represents the outstanding exposure in the event of default and corresponds to the IFRS carrying amount (including accrued interest) for most products.

In cases involving an existing committed available line, this – multiplied by the product-specific credit conversion factor (CCF) – is included as a further component of EAD. The CCF expresses how much of an available line is expected to be drawn down within one year before a possible default. The CCF is currently 50 % to 100 % for mortgage loans and 100 % for all other products (for example, guarantees and public-sector financing).

The EAD is calculated for all receivables, irrespective of whether a default event has, in fact, already occurred or not.

The EAD for on-balance sheet and off-balance sheet IRBA credit exposures amounts to € 28,542 million (€ +665 million as against 30 June 2021) and the RWAs amount to € 13,091 million (€ -1,140 million as against 30 June 2021). This excludes the exposure classes "Equity exposures" and "Other non-credit obligation assets", as these are not based on separate LGD and/or CCF estimates.

The main differences between the EAD referred to above (the exposure value pursuant to Article 166 of the CRR) and the exposure value pursuant to Article 429 (4) of the CRR (for the calculation of the total exposure measure of the leverage ratio) presented in EU CR6-A, column (b) are:

> In the IRB approach, impairments on financial assets (stages 1 to 3) and provisions in off-balance-sheet lending business are not deducted from the carrying amount reported in the financial statements, but rather are included in the comparison of impairments as against the expected loss (EL).

> The IRBA approach uses internal credit conversion factors (CCF), while the CCFs under the standardised approach (CRSA) are used to calculate the leverage ratio.

The total IRBA risk-weighted exposure amounts (RWA), including the exposure classes "Equity exposures" and "Other non-credit obligation assets", amount to € 13,157 million (30 June 2021: € 14,460 million). The main reasons behind the reduction in RWA in the second half of 2021 (€ -1,303 million) are shown in table EU CR8.

EU CR8: RWA flow statements of credit risk exposures under the IRB approach

All figures in € million		a Risk weighted exposure amount
1	**Risk weighted exposure amount as at the end of the previous reporting period**	**14,460**
2	Asset size (+/-)	466
3	Asset quality (+/-)	-194
4	Model updates (+/-)	-
5	Methodology and policy (+/-)	-1,162
6	Acquisitions and disposals (+/-)	-
7	Foreign exchange movements (+/-)	119
8	Other (+/-)	-532
9	**Risk weighted exposure amount as at the end of the reporting period**	**13,157**

[1] Risk-weighted IRBA exposure amounts (risk-weighted assets, RWA) after application of the SME supporting factor pursuant to Article 501 of the CRR and including the IRBA exposure classes "Equity exposures" and "Other non-credit obligation assets".

The main factors behind the significant reduction in RWA at the end of the year include methodological changes in the calculation of RWA (line 5), primarily the application of the SME supporting factor since November 2021, as well as maturities/repayments (line 2), which were only partly offset by new business in Commercial Real Estate Finance and the increase in the real estate financing portfolio. Other factors included rating downgrades affecting individual exposures in the Real Estate Finance portfolio (line 3), currency effects in the United Kingdom (line 7), as well as other effects (such as syndications and maturity effects in the RWA calculation, line 8).

RWA density

The average RWA density for the IRBA credit exposures is around 46 % (30 June 2021: 51 %), although the IRBA exposure classes "central governments and central banks", "institutions" and "retail exposures" do not apply within pbb Group. Risk weights are a key component used to calculate the risk-weighted exposure amounts to be backed by own funds as part of a risk-oriented approach; the RWAs are calculated by multiplying the risk weight and the IRBA exposure amount (EAD).

PD

The probability of default (PD) indicates the probability that a borrower/counterparty will not be able to service its loan in accordance with the contractual terms in the course of a given year (irrespective of the amount of the exposure and the collateral furnished). The PD for the IRBA credit exposures averages 3.76 % (30 June 2021: 3.46 %).

LGD

The loss given default (LGD) indicates the expected rate of loss that pbb Group will incur in the event that a customer defaults. The LGD averages 22 % for the credit exposures based on the IRB approach (30 June 2021: 23 %).

CCF

The undrawn IRBA loan commitments amount to a total of € 2,889 million (30 June 2021: € 2,673 million). The average CCF, which expresses how much of an available line is expected to be drawn down within one year before a possible default, comes to 65 % (30 June 2021: 66 %).

Backtesting of IRBA parameters

Table EU CR9, in accordance with Article 452(h) of the CRR, shows a comparison of the PD estimates and the actual default rate broken down by IRBA exposure class. All IRBA models used within pbb Group were taken as a basis.

Disclosure of table EU CR9.1 “IRB approach – Back-testing of PD per exposure class (only for PD estimates according to Article 180(1) (f) of the CRR)” is not relevant for pbb Group. As at the disclosure date, pbb Group does not use what are known as "shadow ratings", which replicate the credit rating awarded by external rating agencies or comparable institutions, for its internal PD estimates for IRBA exposures.

EU CR 9: IRB approach – Back-testing of PD per exposure class (fixed PD scale)

All figures in € million, unless otherwise stated

a	b	c	d	e	f	g	h
A-IRB	PD range [1]	Number of obligors at the end of previous year [2]	thereof: number of obligors which defaulted in the year 3)	Observed average default rate (%) [4]	Exposures weighted average PD (%) [5]	Average PD (%) [6]	Average historical annual default rate (%) [7]
Corporates - SMEs	0,00 to < 0,15	24	-	-	0.08	0.09	-
	0,00 to < 0,10	3	-	-	0.05	0.05	-
	0,10 to < 0,15	21	-	-	0.10	0.10	-
	0,15 to < 0,25	41	-	-	0.20	0.20	-
	0,25 to < 0,50	87	-	-	0.40	0.39	0.24
	0,50 to < 0,75	-	-	-	-	-	-
	0,75 to < 2,50	37	-	-	1.01	1.26	-
	0,75 to < 1,75	33	-	-	1.01	1.17	-
	1,75 to < 2,5	4	-	-	-	2.00	-
	2,50 to < 10,00	5	-	-	2.54	3.50	-
	2,5 to < 5	4	-	-	2.54	2.88	-
	5 to < 10	1	-	-	-	6.00	-
	10,00 to < 100,00	1	-	-	17.50	17.50	-
	10 to < 20	1	-	-	17.50	17.50	-
	20 to < 30	-	-	-	-	-	-
	30,00 to < 100,00	-	-	-	-	-	-
	100,00 (Default)	4	-	-	100	100	-

All figures in € million, unless otherwise stated

a	b	c	d	e	f	g	h
A-IRB	PD range [1]	Number of obligors at the end of previous year [2]	thereof: number of obligors which defaulted in the year 3)	Observed average default rate (%) [4]	Exposures weighted average PD (%) [5]	Average PD (%) [6]	Average historical annual default rate (%) [7]
Corporates - specialised lending	0,00 to < 0,15	13	-	-	0.09	0.09	-
	0,00 to < 0,10	2	-	-	0.05	0.05	-
	0,10 to < 0,15	11	-	-	0.10	0.10	-
	0,15 to < 0,25	34	-	-	0.20	0.20	0.49
	0,25 to < 0,50	133	2	1.5	0.40	0.39	0.30
	0,50 to < 0,75	-	-	-	-	-	-
	0,75 to < 2,50	176	4	2.27	1.31	1.36	1.04
	0,75 to < 1,75	141	3	2.13	1.20	1.20	0.85
	1,75 to < 2,5	35	1	2.86	2.00	2.00	1.89
	2,50 to < 10,00	97	1	1.03	4.08	3.78	1.03
	2,5 to < 5	72	1	1.39	3.06	3.13	0.88
	5 to < 10	25	-	-	5.93	5.68	1.35
	10,00 to < 100,00	3	-	-	13.74	13.83	-
	10 to < 20	2	-	-	10.37	10.00	-
	20 to < 30	1	-	-	27.00	21.50	-
	30,00 to < 100,00	-	-	-	-	-	-
	100,00 (Default)	8	-	-	100	100	-

All figures in € million, unless otherwise stated

a	b	c	d	e	f	g	h
A-IRB	**PD range** [1]	**Number of obligors at the end of previous year** [2]	**thereof: number of obligors which defaulted in the year** 3)	**Observed average default rate (%)** [4]	**Exposures weighted average PD (%)** [5]	**Average PD (%)** [6]	**Average historical annual default rate (%)** [7]
Corporates -others	0,00 to < 0,15	16	-	-	0.08	0.09	-
	0,00 to < 0,10	2	-	-	0.05	0.05	-
	0,10 to < 0,15	14	-	-	0.10	0.10	-
	0,15 to < 0,25	15	-	-	0.20	0.20	-
	0,25 to < 0,50	23	-	-	0.31	0.39	-
	0,50 to < 0,75	-	-	-	-	-	-
	0,75 to < 2,50	7	-	-	1.20	1.28	-
	0,75 to < 1,75	7	-	-	1.20	1.17	-
	1,75 to < 2,5	-	-	-	-	2.00	-
	2,50 to < 10,00	2	-	-	5.00	3.54	-
	2,5 to < 5	2	-	-	-	2.90	-
	5 to < 10	-	-	-	5.00	5.99	-
	10,00 to < 100,00	1	-	-	17.50	16.03	-
	10 to < 20	1	-	-	17.50	13.75	-
	20 to < 30	-	-	-	-	-	-
	30,00 to < 100,00	-	-	-	-	-	-
	100,00 (Default)	1	-	-	100	100	-

[1] PD ranges for the estimated probability of default (PD) of each obligor in this exposure class at the start of the disclosure period, excluding substitution effects due to credit risk mitigation techniques.
[2] Number of obligors at the end of previous year, i.e. at the start of the disclosure period.
[3] Number of obligors that defaulted in the course of the year (i.e. the year prior to the disclosure date) pursuant to Article 178 of the CRR.
[4] Arithmetic mean of the observed one-year default rate pursuant to Article 4(1) no. 78 of the CRR in relation to the obligors not yet subject to default at the start of the one-year observation period.
[5] Exposure value-weighted average probability of default (PD) weighted using the exposure at default (EAD) according to EU CR6 (column e) at the beginning of the disclosure period.
[6] Obligor-weighted average probability of default (PD) weighted using the number of obligors (EU CR9, column c) at the start of the disclosure period.
[7] The simple average of the annual default rates for the last five years.

There were seven defaults in the reporting period. This does not include one new obligor whose financing was not yet in place at the end of 2020. Due to what are partly low quantities (particularly with regard to defaults in recent years), as well as the calibration of the rating models to long-term average default rates, the average historical default rate can deviate from the forecast average PD. No observations are assigned to the 0.50 to 0.75 PD range due to the uniform pbb Group PD master scale used. The “Central governments and central banks”, “Institutions” and “Retail exposures” IRBA exposure classes cannot be found at pbb Group.

In the reporting period, there were no defaults involving customers that could have been assigned a credit conversion factor (CCF) and had been granted an available line one year before defaulting. As a result, no information on the backtesting of the credit conversion factor can be provided for the reporting period.

Counterparty credit risk

This chapter sets out the information on pbb Group's counterparty credit risk resulting from derivatives and securities financing transactions (securities lending/repo transactions) in accordance with Article 439 of the CRR and also Articles 438(h), 444(e) and 452(g) of the CRR.

Counterparty credit risk (CCR) is the risk of default by the counterparty in the context of a derivative or securities financing transaction before the final settlement of the payments associated with the transaction concerned.

Objectives and counterparties

Derivatives

pbb Group uses derivatives mainly to hedge market risks resulting, for example, from changes in interest rates or exchange rates. These hedging transactions are countered by underlying asset or liability items. The hedging of interest and exchange rate risks is intended to reduce and/or avoid market risks. The counterparties in derivative transactions are mainly OECD credit institutions or Eurex Clearing. pbb Group also provides derivatives for real estate customers and public-law entities, for example to enable them to hedge market risks associated with commercial real estate financing on their side.

Securities financing transactions

Securities lending/repo transactions are used for short-term liquidity management and are also an important source of collateralised funding for pbb. The counterparties are primarily OECD credit institutions or Eurex Repo.

Qualifying central counterparty

pbb is a direct clearing member of Eurex Clearing. Eurex Clearing is the central clearing house used by pbb/the qualifying central counterparty (qualifying CCP) pursuant to Article 4 no. 88 of the CRR. This allows pbb Group to make use of the option of settling certain types of contracts via a central counterparty, reducing bilateral default risk in the process.

Methods for determining the own funds requirement

Derivatives

pbb Group has applied the standardised approach (SA-CCR) to the calculation of own funds requirements for counterparty credit risk pursuant to Part 3, Title II, Chapter 6 of the of the CRR (for derivative transactions) since 28 June 2021 in accordance with Articles 274 et seqq. of the CRR. Until the CRR II came into force, pbb Group used the mark-to-market method.

pbb Group uses the standardised approach pursuant to Article 384 of the CRR to calculate the additional own funds requirement for OTC derivatives for credit valuation adjustment risk (CVA risk) according to Part 3, Title VI of the CRR.

Securities financing transactions

As far as securities financing transactions (securities lending/repo transactions) are concerned, pbb Group applies the provisions for credit risk mitigation in accordance with Chapter 4 of the CRR, namely the Financial Collateral Comprehensive Method in accordance with Articles 223 et seqq. of the CRR.

As at the reporting date of 31 December 2021, pbb Group had not agreed any securities lending/repo transactions, but had agreed reverse repo transactions in the amount of € 1,034 million.

Qualifying central counterparty

When it comes to calculating the own funds requirements for pre-funded contributions to the default fund of a qualifying central counterparty, pbb Group applies the risk-sensitive approach in accordance with Article 308 of the CRR.

Quantitative disclosures on counterparty credit risk

Tables EU CCR1 to EU CCR5 and EU CCR8 below show pbb Group's counterparty credit risk exposures as at the disclosure date of 31 December 2021.

Table EU CCR6 "Credit derivatives exposures" in accordance with Article 439(j) of the CRR is not relevant for pbb Group. pbb Group has not executed any hedging transactions with credit derivatives (purchased or sold credit protection), either as protection buyer or protection seller.

Table EU CCR7 "RWA flow statements of CCR exposures under the IMM" in accordance with Article 438(h) of the CRR is also not relevant for pbb Group. pbb Group does not use an Internal Model Method (IMM) for counterparty credit risk.

Counterparty credit risk exposures

The exposure at default (EAD) for counterparty credit risk, excluding initial margin and default fund contributions, amounts to € 423 million, € 77 million of which relates to exposures to the central counterparty Eurex Clearing. The main factor behind the reduction in the exposure amounts compared to the end of the first half of the year (€ -75 million as against 30 June 2021) was a lower volume of derivatives. The increase in reverse repo transactions (receivables from credit institutions) had the opposite effect.

The exposures for contributions to Eurex Clearing's default fund amount to approximately € 16 million (€ +8 million as against 30 June 2021). The increase is due, in particular, to methodological changes in the calculation of the contribution to the central counterparty's default fund. The default fund is used to cover losses that could arise due to the default of one or more clearing members and that exceed the losses covered by the margin calls (initial margin).

The exposure at default (EAD) for the CVA risk amounts to € 221 million (€ -15 million as against 30 June 2021). The CVA charge is the additional own funds requirement for the risk of a credit valuation adjustment (CVA risk) for OTC derivatives, i.e. for potential (unexpected) market value losses in connection with a deterioration in a counterparty's credit rating. Transactions with Eurex Clearing are not included in the own funds requirement for CVA risk.

Table EU CCR1 shows the counterparty credit risk based on the method used in accordance with Article 439(f), (g), (k) and (m) of the CRR. Exposures to central counterparties are not included; these are shown separately in table EU CCR8 below.

EU CCR1: Analysis of CCR exposure by approach

		a	b	c	d	e	f	g	h
All figures in € million, unless otherwise stated		**Replacement cost (RC)** [4]	**Potential future exposure (PFE)** [5]	**EEPE** [6]	**Alpha used for computing regulatory exposure value**	**Exposure value pre-CRM** [7]	**Exposure value post-CRM** [8]	**Exposure value** [9]	**RWA** [10]
EU-1	EU - Original Exposure Method (for derivatives)	-	-	—	1.4	-	-	-	-
EU-2	EU - Simplified SA-CCR (for derivatives)	-	-	—	1.4	-	-	-	-
1	SA-CCR (for derivatives) [2]	75	134	—	1.4	1,403	331	328	213
2	IMM (for derivatives and SFTs)	—	—	-	-	-	-	-	-
2a	Of which securities financing transactions netting sets	—	—	-	—	-	-	-	-
2b	Of which derivatives and long settlement transactions netting sets	—	—	-	—	-	-	-	-
2c	Of which from contractual cross-product netting sets	—	—	-	—	-	-	-	-
3	Financial collateral simple method (for SFTs)	—	—	—	—	-	-	-	-
4	Financial collateral comprehensive method (for SFTs) [3]	—	—	—	—	202	18	18	4
5	VaR for SFTs	—	—	—	—	-	-	-	-
6	**Total**	—	—	—	—	**1,605**	**349**	**346**	**217**

[1] Table EU CCR1 does not include any exposures to central counterparties (CCPs).
[2] pbb measures the exposure value for the counterparty credit risk associated with derivative transactions using the standardised approach (SA-CCR) in accordance with Part 3, Chapter 6, Section 3 of the CRR.
[3] As far as securities financing transactions (securities lending/repo transactions) are concerned, pbb applies the provisions for credit risk mitigation in accordance with Part 3, Chapter 4 of the CRR, namely the Financial Collateral Comprehensive Method in accordance with Articles 223 et seqq. of the CRR.
[4] Replacement cost (RC), including collateral received/furnished, calculated in accordance with Article 275 of the CRR.
[5] Potential future exposure (PFE) calculated in accordance with Article 278 of the CRR.
[6] Effective expected positive exposure (effective EPE) pursuant to Article 272 no. 22 of the CRR applying the internal model method (IMM).
[7] Derivatives (line 1): Exposure value after netting, but before credit risk mitigation (collateral received) and excluding CVA (credit valuation adjustment) losses recognised in the income statement.
SFTs (line 4): Exposure value (cash or securities amount) before netting and before credit risk mitigation.
[8] Derivatives (line 1): Exposure value after netting and after credit risk mitigation (collateral received), but excluding CVA losses recognised in the income statement.
SFTs (line 4): Exposure value (exposure at default, EaD) after netting and after credit risk mitigation.
[9] Exposure value (exposure at default, EAD), the relevant amount (this contains the counterparty risk weight) for calculating the risk-weighted exposure amounts (column h).
The EAD of a netting set is calculated as follows: EAD = 1.4 x (RC + PFE).
Derivatives (line 1): Exposure after netting and after credit risk mitigation (collateral received), and also including CVA losses recognised in the income statement.
SFTs (line 4): Exposure after netting and after credit risk mitigation.
[10] Risk-weighted exposure amount (risk-weighted assets, RWA) for calculating own funds requirements based on the Credit Risk Standardised/IRB approach

Table EU CCR8 shows the exposures to central counterparties in accordance with Article 439(i) of the CRR. The qualifying central counterparty (qualifying CCP) used by pbb is Eurex Clearing.

EU CCR8: Exposures to central counterparties (CCPs)

All figures in € million		a	b
		Exposure value [1]	**RWA** [2]
1	**Exposures to QCCPs (total)**	—	**4**
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	77	1
3	(i) OTC derivatives	6	-
4	(ii) Exchange-traded derivatives	-	-
5	(iii) SFTs	71	1
6	(iv) Netting sets where cross-product netting has been approved	-	-
7	Segregated initial margin [3]	41	—
8	Non-segregated initial margin [4]	-	-
9	Prefunded default fund contributions	-	-
10	Unfunded default fund contributions	16	3
11	**Exposures to non-QCCPs (total)**	—	**0**
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-
13	(i) OTC derivatives	-	-
14	(ii) Exchange-traded derivatives	-	-
15	(iii) SFTs	-	-
16	(iv) Netting sets where cross-product netting has been approved	-	—
17	Segregated initial margin	-	-
18	Non-segregated initial margin	-	-
19	Prefunded default fund contributions	-	-
20	Unfunded default fund contributions	-	-

[1] Exposure amount (exposure at default, EAD), excluding exposures to non-CCPs.
[2] Risk-weighted exposure amount (risk-weighted assets, RWA), excluding exposures to non-CCPs.
[3] Collateral held out of court bankruptcy remote within the meaning of Article 300 no. 1 of the CRR.
[4] Collateral not held out of court bankruptcy remote within the meaning of Article 300 no. 1 of the CRR.

Table EU CCR2 shows the own funds requirements for CVA risk based on the method used in accordance with Article 439(h) of the CRR. No CVA charge is calculated for exposures to the central counterparty Eurex Clearing in accordance with Article 382 of the CRR.

EU CCR2: Transactions subject to own funds requirements for CVA risk

		a	b
All figures in € million		**Exposure value [2]**	**RWEA**
1	Total transactions subject to the Advanced method	-	-
2	(i) VaR component (including the 3× multiplier)	———	-
3	(ii) stressed VaR component (including the 3× multiplier)	———	-
4	Transactions subject to the Standardised method [1]	221	206
EU-4	Transactions subject to the Alternative approach (Based on the Original Exposure Method)	-	-
5	**Total transactions subject to own funds requirements for CVA risk**	**221**	**206**

[1] pbb uses the standardised method in accordance with Article 384 of the CRR to calculate the own funds requirements for credit valuation adjustment risk (CVA risk) for OTC derivatives.
Transactions with Eurex Clearing, the central counterparty (CCP) used by pbb, are not included in the own funds requirements for CVA risk.
[2] Exposure amount (exposure at default, EAD), the relevant amount (this contains the counterparty risk weight) for calculating the risk-weighted exposure amounts (column b).

Table EU CCR3 shows the counterparty credit risk based on the standardised approach by exposure class and risk weight in accordance with Articles 439(l) and 444(e) of the CRR. The exposure amounts vis-à-vis Eurex Clearing are shown in the standardised approach, among other things ("Institutions" exposure class).

EU CCR3: Standardised approach – CCR exposures by regulatory exposure class and risk weights

		a	b	c	d	e	f	g	h	i	j	k	l
Exposure classes							**Risk weight**						**Total exposure value** [1]
All figures in € million, unless otherwise stated		**0%**	**2%**	**4%**	**10%**	**20%**	**50%**	**70%**	**75%**	**100%**	**150%**	**Others**	
1	Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-
2	Regional government or local authorities	1	-	-	-	-	-	-	-	-	-	-	1
3	Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	-	77	-	-	38	201	-	-	-	-	-	316
7	Corporates	1	-	-	-	-	-	-	-	14	-	-	15
8	Retail	-	-	-	-	-	-	-	-	-	-	-	-
9	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-	-	-	-	-	-
11	**Total exposure value**	**2**	**77**	**0**	**0**	**38**	**201**	**0**	**0**	**14**	**0**	**0**	**331**

[1] Exposure amount (exposure at default, EAD), including transactions settled with Eurex Clearing, in accordance with the COREP reporting of own funds and own funds requirements.

Table EU CCR4 shows the counterparty credit risk based on the IRB approach by exposure class and PD scale in accordance with Articles 439(l) and 452(g) of the CRR. No counterparty credit risk exposures are allocated to the “Central governments and central banks”, “Institutions” or “Retail exposures” IRBA exposure classes either as at the disclosure date or as at the end of the first half of the year, which is why table EU CCR4 is only shown for the “Corporates” exposure class.

EU CCR4: IRB approach – CCR exposures by exposure class and PD scale

			a	b	c	d	e	f	g
All figures in € million, unless otherwise stated		PD scale [1]	Exposure value [2]	Exposure weighted average PD (%) [3]	Number of obligors	Exposure weighted average LGD (%) [4]	Exposure weighted average maturity (years)	RWA [5]	Density of risk weighted exposure amounts [6]
1	Corporates	0.00 to <0.15	9	0.10%	6	56%	5	6	60%
2		0.15 to <0.25	4	0.20%	4	56%	4	3	79%
3		0.25 to <0.50	26	0.34%	32	56%	3	18	72%
4		0.50 to <0.75	-	-	-	-	-	-	-
5		0.75 to <2.50	34	1.33%	38	56%	3	40	117%
6		2.50 to <10.00	18	3.17%	15	56%	2	28	160%
7		10.00 to <100.00	1	10.00%	2	56%	2	1	167%
8		100.00 (Default)	-	-	-	-	-	-	-
	Sub-total		**92**	**1.28%**	**97**	**56%**	**3**	**96**	**105%**
Total (all CCR-relevant risk position classes) [7]			**92**	**1.28%**	**97**	**56%**	**3**	**96**	**105%**

[1] PD ranges for the estimated probability of default (PD), excluding substitution effects due to credit risk mitigation techniques.
[2] Exposure value (exposure at default, EAD).
[3] Exposure value-weighted average probability of default (PD), weighted using the exposure amount in column (a).
[4] Exposure value-weighted average loss given default (LGD), weighted using the exposure amount in column (a).
[5] Risk-weighted exposure amounts (risk-weighted assets, RWA).
[6] RWA density (%): calculated by dividing the RWA (column f) by the respective EaD (column a).
[7] As no CCR exposures are allocated to the “Central governments and central banks”, “Institutions” or “Retail exposures” IRBA exposure classes as at the disclosure date, no breakdown has been provided for these exposure classes.

Table EU CCR5 shows the collateral received and furnished for counterparty credit risk, with separate information provided for derivatives and securities financing transactions, in accordance with Article 439(e) of the CRR. Further information on the collateral used is described in the section entitled "Mitigation of counterparty credit risk and securing collateral".

EU CCR5: Composition of collateral for CCR exposures

		a	b	c	d	e	f	g	h
		Collateral used in derivative transactions				**Collateral used in SFTs**			
Collateral type		**Fair value of collateral received**		**Fair value of posted collateral**		**Fair value of collateral received**		**Fair value of posted collateral**	
All figures in € million		**Segregated [1]**	**Unsegregated [2]**	**Segregated [1]**	**Unsegregated [2]**	**Segregated [1]**	**Unsegregated [2]**	**Segregated [1]**	**Unsegregated [2]**
1	Cash – domestic currency	-	611	-	1,580	-	4	-	-
2	Cash – other currencies	-	-	-	-	-	-	-	-
3	Domestic sovereign debt	-	-	-	-	-	-	-	-
4	Other sovereign debt	-	-	-	-	-	196	-	-
5	Government agency debt	-	-	-	-	-	-	-	-
6	Corporate bonds	-	-	-	-	-	-	-	-
7	Equity securities	-	-	-	-	-	-	-	-
8	Other collateral	-	-	-	-	-	835	-	-
9	**Total**	**0**	**611**	**0**	**1,580**	**0**	**1,035**	**0**	**0**

[1] Collateral held out of court bankruptcy remote within the meaning of Article 300 no. 1 of the CRR.
[2] Collateral not held out of court bankruptcy remote within the meaning of Article 300 no. 1 of the CRR.

Internal capital allocation and upper limits for counterparty credit risk exposures

Capital allocation and the limits that apply to default risks vis-à-vis counterparties (including Eurex Clearing, the central clearing house used by pbb) are embedded in the general allocation and limit-setting process for default risks that apply within pbb Group. pbb Group does not have any separate capital allocation or limits for default risks in connection with derivative or securities financing transactions. Limits are allocated based primarily on counterparty credit ratings, which are determined to a decisive degree by the rating procedures used. For details on capital allocation to risk types, please refer to the chapter on the ICAAP and monitoring of risk-bearing capacity (see chapter entitled "Economic capital and risk-bearing capacity"). In all other respects, the methodology used in the context of regulatory large exposure management applies. Counterparty limit utilisation is monitored continually by Risk Management & Control (RMC) on a daily basis.

Wrong-way risk

The requirement set out in Article 439(c) of the CRR regarding a discussion of policies with respect to wrong-way risk exposures is not relevant for pbb Group. pbb Group does not trade in products whose underlying is directly correlated with the counterparty's probability of default.

Mitigation of counterparty credit risk and securing collateral

In accordance with Article 439 (b) of the of the CRR, the section below discusses the policies for mitigating default risk and securing collateral. Within this context, pbb Group applies the regulatory provisions on off-balance sheet netting for both derivative financial instruments and securities lending/repo transactions where the contractual agreements meet the requirements for risk-mitigating recognition in accordance with Article 296 of the of the CRR and Article 206 of the CRR. pbb Group uses the standard market master agreements, including the relevant collateral agreements.

Netting agreements

The business with both derivatives and securities lending/repo transactions is usually concluded based on standardised bilateral netting contracts which serve to minimise the legal risk, as well as the economic and regulatory default risk and which enable mutual risks to be netted (netting). In doing so, the positive and negative market values of all contracts included in one netting arrangement may be netted, and the future regulatory risk premiums for these products may be reduced. As a result of the netting process, the default risk is reduced to one single net receivable from the counterparty. pbb Group does not use cross-product netting (derivatives versus securities financing transactions).

These risk-reducing methods are used for both regulatory reporting and internal measurement and monitoring of credit exposures – only when these are considered enforceable upon the relevant business partner's insolvency in the respective jurisdiction. Validity and enforceability are reviewed on the basis of legal opinions.

The national/international agreements used for derivative and securities lending/repo transactions are the German Master Agreement on Financial Derivatives (Deutscher Rahmenvertrag für Finanztermingeschäfte – "DRV") under German law and the ISDA Master Agreement of the International Swaps and Derivatives Association (ISDA), as well as the Global Master Repurchase Agreement (GMRA), the German Master Agreement for Securities Repurchase Transactions (DRV), the Master Agreement for Financial Transactions/ European Master Agreement (EMA), the German Master Agreement for Securities Lending (DRV) and the Global Master Securities Lending Agreement (GMSLA).

pbb is a direct clearing member of Eurex Clearing. Eurex Clearing is the central clearing house used by pbb/the qualifying central counterparty (qualifying CCP) pursuant to Article 4 no. 88 of the CRR. This allows pbb Group to make use of the option of settling certain types of contracts via a central counterparty, reducing bilateral default risk in the process.

Collateral agreements

In line with the netting contracts, pbb Group also enters into standard market collateral agreements (German Collateral Annex to the DRV or ISDA Collateral Support Annex) with certain counterparties in addition to the netting contracts in order to hedge the net receivable/liability that remains after netting (receipt or furnishing of collateral). The collateral agreements limit the default risk through prompt valuation and adjustment of the customer exposure (limit relief), meaning that they free up scope for new transactions within the counterparty lines that have been granted.

Collateral used for derivative and securities lending/repo transactions comprises financial collateral (mainly cash collateral, but partly also securities). Collateral is usually provided by full transfer of rights, and in the case of securities, also by way of pledging. pbb usually furnishes and receives cash collateral in euros. The collateral received is documented in the system. pbb Group also verifies the validity and enforceability of collateral by means of legal opinions.

The current hedging requirements are calculated on a daily basis using mark-to-market valuations and are coordinated with the counterparties. Where threshold amounts have been agreed, collateral is only requested when the threshold amount that applies to the counterparty concerned has been reached. If minimum transfer amounts have been agreed, the same procedure as that used for threshold amounts applies. A payment request (call) is only made when the relevant minimum transfer amount is reached or exceeded. No call is made in the event of changes in the mark-to-market valuation below this threshold in order to limit the settlement costs. Incoming payments are monitored and the counterparty is issued with a reminder where appropriate.

There is also a collateral agreement in place for the central counterparty Eurex Clearing. The collateral furnished for both derivatives and securities lending/repo transactions consists primarily of securities made available specifically for Eurex Clearing in a securities portfolio. Cash collateral can also, however, be furnished.

Rating-based collateral service agreements

pbb Group has concluded rating-based collateral service agreements (CSA) with certain counterparties which provide for a reduction in the minimum transfer amount in the event of a rating downgrade. The extent of the adjustment is explicitly agreed with the counterparty in the collateral service agreement. At present, however, the collateral service agreements do not include any provision for threshold amounts based on which pbb would have to make a correspondingly higher collateral contribution in the event of an adjustment to the threshold amount.

In the event of an amendment to the minimum transfer amount, the cash flows are postponed and no additional payments are made. This is due to the fact that the minimum transfer amount, unlike the threshold amount, does not involve the provision of additional collateral and instead specifies the amount as of which payments have to be made. If the minimum transfer amount is reduced, meaning that payments have to be made as of a lower threshold, this has no impact on the amount of collateral itself, but rather only on the amount as of which changes in value in the CSA portfolio are offset. This means that changes in value are offset earlier on for smaller minimum transfer amounts.

The minimum transfer amounts agreed in the collateral agreements which are still relevant in conjunction with current ratings total € 22 million as at 31 December 2021. In a small number of cases, these amounts depend on the rating. No threshold amounts have been agreed at present. In this respect, the impact of a rating downgrade on the liquidity of pbb Group is not material. This is also due to the fact that pbb's long-term ratings are already in the lowest category for most collateral service agreements (CSA).

The following table shows the senior unsecured ratings mandated by pbb as at the disclosure date.

Senior unsecured ratings (EU CCRA)

Deutsche Pfandbriefbank AG		Standard & Poor's
	Long-term issuer rating / outlook	BBB+ / Negative
	Short-term issuer rating	A-2
	Long-term “preferred” senior unsecured debt rating [1]	BBB+
	Long-term “non-preferred” senior unsecured debt rating [2]	BB+

[1] „Senior Unsecured Debt“.
[2] „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 not be rated at all. For the assessment and usage of ratings, please refer to the rating agencies' pertinent criteria and explanations, and pay attention to the relevant terms of use. 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.

Establishing credit reserves

The section below describes the policies for establishing credit reserves (loss allowance) for derivatives and securities financing transactions (securities lending/repo transactions) pursuant to Article 439 (b) of the CRR.

Derivatives

Under IFRS 9, derivatives are to be measured at fair value through profit or loss, unless they are used as hedging instruments in cash flow hedge accounting. For those financial assets that are subsequently measured at fair value through profit or loss, an impairment is implied in the fair value. This means that value adjustments resulting from a counterparty credit risk are reflected directly in the calculation of fair value. The maximum default risk is reflected in the nominal value for derivative assets measured at fair value through profit or loss.

The positive/negative market values of stand-alone derivatives are reported in the balance sheet under "Financial assets at fair value through profit or loss" or "Financial liabilities at fair value through profit or loss". Changes in fair value within a period are recognised through profit or loss in the income statement item “Result of financial instruments measured at fair value

through profit or loss” (fair value valuation result).

The positive/negative market values of hedge accounting derivatives are shown under the balance sheet items “Positive fair values of hedge accounting derivatives” or “Negative fair values of hedge accounting derivatives”. Hedge accounting derivatives contain the fair values of the derivatives which are used as hedges in hedge accounting. As the pbb Group no longer designates any derivatives in cash flow hedge accounting, this only includes derivatives in micro fair value hedge accounting or the portfolio hedge for interest rate risks and, to a minimal extent, currency risks. These are measured at fair value. Changes in fair value during a period are shown through profit or loss in the item “Net income from hedge accounting” in the income statement.

CVA and DVA

In order to account for expected counterparty credit risks in the case of OTC derivatives, the pbb Group recognises credit value adjustments (CVA) and debt value adjustments (DVA), i.e. adjustments to the valuation of OTC derivatives for accounting purposes. The CVA describes the valuation adjustments to reflect the counterparty default risk (the deterioration in the counterparty's credit standing), and the DVA describes the adjustments relating to pbb's own default risk (the deterioration in pbb's own credit standing) with regard to a counterparty. The CVA losses are recognised in the income statement and are taken into account when calculating the exposure value. The DVA adjustments are deducted from the CET1 capital.

CVA charge

pbb Group uses the standardised approach pursuant to Article 384 of the CRR to calculate the additional own funds requirement for OTC derivatives for credit valuation adjustment risk (CVA risk) according to Part 3, Title VI of the CRR, i.e. for potential market value losses in connection with a deterioration in the counterparty's credit rating.

Securities financing transactions

In the case of securities financing transactions (securities lending/repo agreements), the general provisions and regulations on credit risk adjustments and impairment according to IFRS 9 described in the chapter "Credit risk", in the section "Credit risk adjustments" apply. These regulations apply, among other things, to financial assets “at amortised cost” or “measured at fair value through other comprehensive income”.

Securitisations

As at the disclosure date of 31 December 2021, pbb Group still has no exposures from securitisations in its portfolio. As a result, the information and tables pursuant to Article 449 CRR in conjunction with EU SEC1 to EU SEC5 do not have to be disclosed for pbb Group.

There are no plans for any new securitisations of pbb's own exposures in the 2022 financial year. pbb Group's business strategy does not currently define new securitisation transactions as an objective.

Market risk

The chapter “Market risk” describes the risk management targets and policy for pbb Group’s market risk (including interest rate risk) in accordance with Article 435 (1) of the CRR, and offers information about the calculation of own funds requirements pursuant to Article 445 of the CRR and also about interest rate risk in the banking book pursuant to Article 448 of the CRR. However, disclosure pursuant to Article 455 of the CRR (“Use of Internal Market Risk Models”) is not relevant for pbb Group. pbb Group is currently not using internal models (IMA) for calculating its own funds requirements, but instead adopts the Standardised Approach as set out in Articles 325 et seqq. of the CRR.

Management of 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).

Risk strategy

pbb Group 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 (VaR) and performance, which is independent from trading units.

- Interest rate risk in the banking book 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 quarterly net interest income. In addition, credit spread risks in the banking book (CSRBB) are included in the regular risk measurement, controlling and monitoring as well.

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 interest rate risk for the period.

Risk reporting

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 across all relevant levels of the portfolio structure,
- 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 interest rate risk for the period.

Risk quantification – 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.

As at 31 December 2021, market risk VaR amounted to € 17 million, taking diversification effects between the individual market risk types into consideration (31 December 2020: € 51 million). The decline in the market risk VaR was mainly due to lower credit spread risks, which were caused above all by declining credit spread market volatility in historical market data underlying the VaR model. Given that the VaR model is based on a one-year data history, market turbulence at the outset of the COVID-19 pandemic in the spring of 2020 was gradually removed from VaR calculations during the course of 2021. Accordingly, the total market risk VaR limit was € 100 million throughout 2021 (in line with the level at the end of 2020).

The consolidated IRRBB VaR of all interest rate risk categories in the banking book (general interest rate risk, tenor risks, cross-currency spread risks, option risks and volatility risks) amounted to € 12 million as at year-end 2021 and CSRBB VaR amounted to € 11 million. As well as limiting market risk VaR, specific limits have been monitored daily for IRRBB VaR (limit as at the 2021 year-end: € 30 million) and CSRBB VaR (limit as at the 2021 year-end: € 90 million).

There were no breaches of market risk VaR limits during the period under review.

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 a, 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 are used to map market risk in difficult or even extreme economic framework 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 of pbb 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. pbb Group has adopted the Basel Capital Accord's "traffic light" system for the qualitative analysis of its risk model. For this purpose, the number of outliers detected in backtesting within a period of 250 trading days are counted. Two outliers were observed during the 250 trading days until the end of 2021; both were attributable in particular to relatively strong changes in interest rates, related to the ECB's monetary policy decisions in October 2021. The risk model employed by pbb Group 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 period interest rate risks, thus simulating changes in future income statements and balance sheet developments, which will materialise if the balance sheet develops as planned, and under predefined 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 year under review.

Economic capital for market risk

The chapter "Economic capital and risk-bearing capacity" (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 relation- ships 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.

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 (gap risk) amounted to € 12 million as at year-end 2021 and was thus below the figure seen at year-end 2020 (€ 17 million).

Basis risks

Basis risks refer to tenor basis spread and cross-currency basis spread risks. Tenor basis spread risks (€ 1 million; 31 December 2020: € 3 million) and cross-currency basis spread risks (€ 1 million; 31 December 2020: € 2 million) were shown at the reporting date.

Volatility risk

Volatility risk amounted to € 1 million as at end of December 2021 (end of 2020: € 1 million).

Credit spread risk (CSRBB)

The present value Credit spread risk reflects potential changes in the present value of exposures as a result of changes in the corresponding credit spread. 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, the credit spread risks of those securities held as assets are measured at amortised cost.

The credit spread risk amounted to € 11 million as at the end of December 2021 (year-end 2020: € 48 million). As outlined above in the section Market risk Value at Risk, the decline in credit spread VaR was primarily due to lower credit spread market volatility, following market turbulence caused by the COVID-19 pandemic in the spring of 2020.

Foreign currency risks

The present value of foreign currency risk amounted to € 0.3 million as at end of 2021 (year-end 2020: € 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 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 incomeenhancing for periodic interest rate risk; this is the case for medium- to long-term fixed-rate loans, for example.

Own funds requirement for the market risk

In accordance with Part 3, Title IV of the CRR, market risks must be backed by own funds. pbb Group still does not maintain a trading book for securities or derivatives portfolios held to realise short-term gains. Thus, only own funds requirements for foreign exchange risk (the risk arising from changes in interest rates) apply to pbb Group's operations, as illustrated in table EU MR1 (be-low) in accordance with Article 445 of the CRR. pbb Group uses the Standardised Approach pursuant to Articles 325 et seqq. of the CRR to calculate its own funds requirements.

pbb Group is currently not using any internal models (IMA) pursuant to Articles 362 et seqq. for calculating its own funds requirements. Tables EU MRB, EU MR2-A / EU MR2-B, EU MR3 and EU MR4 in accordance with Articles 455 and 438 (h) of the CRR are therefore not relevant for pbb Group.

Quantitative information on market risk

Table EU MR1 in accordance with Article 445 of the CRR shows the own funds requirements and risk-weighted assets (RWAs) for pbb Group's market risk.

The own funds requirement for market risks as at the reporting date amounts to €5 million, in line with the level of the first half of 2021 (€ -1 million compared to 30 June 2021). The small decline results from lower foreign currency exposure (€ -16 million decline in RWAs compared to 30 June 2021).

EU MR1: Market risk using the Standardised Approach

		a	a
All figures in € million		**Risk-weighted assets (RWA)**	**Minimum capital requirement**
	Outright products		
1	Interest rate risk (general and specific)	-	-
2	Equity risk (general and specific)	-	-
3	Foreign exchange risk	59	5
4	Commodity risk	-	-
	Options		
5	Simplified approach	-	-
6	Delta-plus approach	-	-
7	Scenario approach	-	-
8	Securitisation (specific risk)	-	-
9	**Total**	**59**	**5**

Interest rate risk in the banking book

In contrast to counterparty credit risk, other market risks (foreign currency risks) or operational risk, the CRR stipulates no regulatory own funds requirement for interest rate risk in the banking book.

However, in the absence of a regulatory own funds requirement, pbb Group nevertheless applies the same methods and processes for interest rate risk in the banking book as for market risk, as set out in the chapter “Market risk management”. As set out therein, pbb also incorporates periodic interest rate risks in parallel with present value interest rate risks, and measures, manages and monitors these risks on a regular basis.

pbb is directly supervised by the ECB and meets the additional own funds requirements and capital requirements under the ECB’s Supervisory Review and Evaluation Process (SREP).

Risk metrics and risk reporting

Interest rate risk at present value

Interest rate risk in the banking book at present value refers to an institution’s risk in terms of economic value resulting from unfavourable interest rate movements that impact instruments sensitive to interest rates, and includes the risk of yield curve shifts (gap risk), base risk and option risk. Interest rate risk at present value is measured through sensitivities and Value-at-Risk metrics and is determined by Risk Management & Control (RMC) on a daily basis, independently of trading, for all items in the banking book sensitive to interest rates. Compliance with sensitivity triggers and Value at Risk (VaR) limits is also checked on a daily basis and reported to pbb’s Management Board. The internal and regulatory stress scenarios for interest rate risk in the banking book, including the six interest rate scenarios prescribed by the EBA Guidelines EBA/GL/2018/02, are calculated on a monthly basis.

Periodic interest rate risk

The periodic interest rate risk in the banking book reflects the risk arising from changes in the yield curve relative to the Bank’s earnings. The measurement looks at changes in net interest income which result from interest rate changes, assuming a constant balance sheet (delta static net interest income) pursuant to IFRS 9. Calculations are carried out at the end of each half of the year and at year-end, for a simulation horizon covering the following four quarters.

The dynamic earnings model is also used to manage periodic interest rate risk (in accordance with EBA/GL/2018/02). In contrast to the static net interest income assumption, this model does not assume a constant balance sheet, but instead uses new business data from multi-year planning. Furthermore, not only net income, but also fee and commission income, net income from realisations, net income on financial instruments recognised through profit or loss, and changes of cumulative other income are calculated. Negative deviations from the base value are monitored at the end of each quarter, using a trigger each for changes in the in-come statement and for changes in accumulated other comprehensive income. No trigger event occurred in any of the eight different interest rate stress scenarios (including those prescribed by the EBA) in the reporting period from 30 June 2021 to 31 December 2021. Periodic interest rate risk is assessed on a quarterly basis, using the dynamic earnings model.

Disclosures on models and parameters

In line with regulatory requirements (see EBA/GL/2018/02 “Guidelines on the management of interest rate risk arising from non-trading book activities”), non-interest-bearing equity components (recognised under liabilities) are not taken into account. However, investments of such funds (recognised under assets) are included in the calculation of interest rate risk in the banking book. To determine the present value of regulatory shocks, risk-free yield curves (based on currency-specific overnight index swap curves) are used for the purposes of discounting. As a matter of consistency, the cash flows of all financial instruments included in interest rate risk in the banking book do not comprise any client-related spreads. In addition, the present-value perspective assumes a constant balance sheet as at the reporting date (i.e. no assumptions are made as to the reinvestment of maturing exposures, or as to new business). Assumptions are also made regarding the cash flows of any recognised write-downs and their fixed-rate period. Moreover, specific assumptions are made as to early loan repayments and for the interest rate adjustment period of perpetual core deposits in the retail business. For these core deposits, the average time interval for adjustments of the interest rate is 0.85 years, while the longest is 3.0 years For non-core perpetual deposits in the retail business, the contractually agreed overnight fixed-rate period applies.

Regarding periodic interest rate risk in the banking book, maturing exposures and repaying units are closed again at equal terms (based on the assumption of a constant balance sheet). Under the constant balance sheet (renewals) assumption, maturing or re-paying units of assets, liabilities or derivatives with equivalent characteristics, especially in terms of volume, currency, term, fixed-rate period, reference index, and terms specific to a particular interest rate scenario, are renewed. Overnight deposits are used according to their terms and conditions and are extended on a rolling basis. In addition, the model book for early repayments implemented at pbb is also used as part of the internal method.

Risk management and mitigation strategy

To ensure sustainable risk management, pbb aims for stable profitability. This requires that (normative and economic) risk-bearing capacity is given, and that specific risk limits and triggers are complied with. pbb also aims to maintain and strengthen equity from the annual results, and to distribute the anticipated dividend. At the same time, the Bank strives to contain fluctuations in the periodic income statement emanating from interest rate and credit spread effects.

Under the present-value perspective, long-term interest rate risks excluding client margins are assessed on a daily basis and man-aged as efficiently as possible using natural hedging (reduction of interest rate risks through offsetting hedged items, excluding derivatives), portfolio hedging (portfolio fair value hedge accounting), micro hedges (micro fair value hedge accounting), and derivatives outside of hedge accounting.

Quantitative information on interest rate risk in the banking book

Table EU IRRBB1 in accordance with Article 448 (1) (a) and (b) of the CRR shows pbb Group’s interest rate risk in the banking book. The table includes changes in net interest income and in the present value of banking book positions resulting from yield curve shifts within the six interest rate scenarios prescribed in the EBA Guidelines EBA/GL/2018/02.

Under the assumptions made above in accordance with EBA/GL/2018/02, the largest potential change in present value as at 31 December 2021 arises from the interest rate shock scenario simulating a parallel upward shift in the yield curve. In this scenario, the present value loss in the banking book amounts to €368 million.

Looking at periodic interest rate risks, a sudden parallel upward shift of the yield curve would benefit delta static NII. In case of a parallel shift in the yield curve by +200 basis points or -200 basis points (with a dynamic interest rate floor in accordance with EBA/GL/2018/02), the change in delta static NII as at 31 December 2021 amounts to a total of € 122 million or € 38 million, respectively. In these scenarios, the net interest income is strongly influenced by pbb’s participation in the ECB’s Targeted Longer Term Refinancing Operations III (TLTRO III) and the related special conditions. The changed delta compared to the previous year is largely due to the stressed interest rates obtained for lower cash reserves.

EU IRRBB1: Interest rate risk of non-trading book activities

Supervisory shock scenarios		a	b	c	d
		Changes of economic value of equity [1]		Changes of the net interest income [2]	
All figures in € million, unless otherwise stated		31.12.2021	30.06.2021	31.12.2021	30.06.2021
1	Parallel up	-368	-342	122	142
2	Parallel down	110	81	38	29
3	Steepener	-10	-13	-	-
4	Flattener	-15	-4	-	-
5	Short rate up	-128	-117	-	-
6	Short rate down	98	88	-	-

[1] ∆ EVE: This is a metric measuring changes – in the net present value of all instruments in the banking book sensitive to interest rates – resulting from sudden interest rate movements, assuming that all banking book positions run off.
[2] ∆ NII: This is an earnings-based metric measuring changes in the net interest income originating from sudden interest rate changes for the subsequent four quarters. The ∆ NII information presented here refers to a parallel shift in the yield curves by +/- 200 basis points.

Liquidity and funding risk

The chapter “Liquidity and funding risk” presents pbb Group’s risk management targets and policies for liquidity and funding risk in accordance with Articles 435 (1) and 451a (1) and (4) of the CRR. It also includes information about pbb Group’s Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) in accordance with Article 451a (2) and (3) of the CRR.

Management of 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.

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.

Risk strategy

The Management Board determines both the risk strategy as well as the risk appetite of pbb Group. The liquidity risk strategy is a key component of pbb Group’s risk strategy. It is broken down into various modules (comprising various liquidity scenarios, given certain market conditions and stress parameters). This ensures that the Group’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

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.

Risk reporting

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.

Risk quantification – 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.

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 ensures that pbb Group has adequate liquidity reserves at its disposal.

Risk hedging and risk mitigation

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.

Opportunities

pbb Group's cumulative liquidity position of € 4.6 billion in the base scenario over a 12-month horizon, which is detailed in the section "Development of pbb Group's risk position", as at 31 December 2021 provides the Group with scope for a flexible response, particularly with regard to possible new business.

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

Liquidity risk development

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 2021 amounted to € 4.6 billion for a 12-month horizon in the base scenario – a € 1.1 billion decrease compared to the previous year (based on the same projection horizon). As at 31 December 2021, the cumulative liquidity position for a six-month horizon amounted to € 1.8 billion in the risk scenario (31 December 2020: € 2.8 billion). The cumulative liquidity position in the stress scenario for a six-month horizon amounted to € 0.6 billion as of 31 December 2021 (31 December 2020: € 1.4 billion).

Regulatory liquidity coverage requirements

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 for pbb Group during 2021 were at any time clearly in excess of 100 %. The Liquidity Coverage Ratio as at 31 December 2021 was 227 %.

A Net Stable Funding Ratio (NSFR) 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 for pbb Group during 2021 were clearly above the ratio required under the regulatory regime. As at 31 December 2021, the NSFR was 118 %.

More detailed information on the LCR and NSFR can be found in the chapters „Liquidity coverage ratio“ and „Net stable funding ratio“.

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 pbb's 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:

- further developments in the context of the European financial crisis, COVID-19 pandemic and possible effects 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 “Economic capital and risk-bearing capacity” (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.

Liquidity coverage ratio

The liquidity coverage requirement or Liquidity Coverage Ratio (LCR) is the ratio of an institution's liquidity buffer (i.e. the sum of high-quality liquid assets) and its net cash outflows during a phase of stress lasting 30 calendar days. The LCR is stated as a percentage.

Pursuant to Article 412 of the CRR, the LCR obliges institutions to hold a liquidity buffer in the form of high-quality liquid assets, in order to be able to compensate for net cash outflows under stressed conditions over a period of thirty days. The prescribed scenario includes both market-wide and institution-specific effects. In phases of stress, institutions may use up their liquid assets to cover their net cash outflows, even if the LCR might then fall below the applicable minimum of 100 %.

Regulatory provisions require a minimum LCR of 100 %. The LCR figures for pbb Group during 2021 significantly exceeded 100 % at all times. As at 31 December 2021, the Liquidity Coverage Ratio amounted to 227 % (30 September 2021: 299 %).

Disclosures on the Liquidity Coverage Ratio

Table EU LIQ1 below, in accordance with Article 451a (2) of the CRR, shows all information on the LCR for pbb Group, including all values and figures for each of the four calendar quarters preceding the disclosure date (31 December 2021). However, as op-posed to the above-mentioned values as at the reporting date, these values and figures are simple averages of the figures collected at the end of each month over the twelve months preceding the end of each quarter. Table EU LIQ1 includes all items needed for the calculation of the LCR.

The LCR exceeded 200 % on the reporting dates during the period under review, largely due the institution’s substantial liquidity reserve consisting of high-quality liquid assets (HQLA). Changes in the liquidity reserve and in net cash outflows are linked to the different dynamics in the new Real Estate Finance business and its funding.

Liquidity management within pbb Group

pbb is pbb Group’s only credit institution. Thus, only pbb performs liquidity management.

Funding sources

pbb Group uses a broad range of funding sources. Aside from deposits made by retail and institutional clients, funding is obtained through the issuance of Pfandbriefe, promissory notes and unsecured bonds on the capital market, but also through open-market transactions with the ECB and repo transactions on the interbank market and Eurex.

Liquidity buffer

As at the disclosure date of 31 December 2021, liquidity reserves amounted to € 5,808 million (on average), consisting of high-quality level 1 liquid assets. The liquidity buffer consists primarily of liquid cash reserves (around 90 %) and HQLA level 1 bonds. Level 1 comprises deductible deposits at Deutsche Bundesbank, along with debt securities issued by central governments, regional governments or local authorities, public institutions, multilateral development banks, international organisations or credit institutions backed by state guarantees.

Liquidity inflows and outflows

Liquidity inflows primarily consist of expected loan repayments and obtained funding. Liquidity outflows are composed as follows (in order of size):

- Zugesagte, aber noch nicht gezogene Hypothekendarlehen beziehungsweise sonstige Darlehen
- fällige Refinanzierungsmittel
- potentielle Besicherungsaufforderungen.

On average, cash outflows from derivatives accounted for only a minor share of all net cash outflows in the fourth quarter of 2021. To calculate potential collateral calls for derivatives, pbb Group uses the historical look-back approach (HLBA), meaning that collateral calls from the past are analysed to derive a conservative assumption as to future collateral calls. The assumption amounted to € 403 million on average. Potential rating changes are not expected to have significant effects on the ability to provide collateral.

Currency mismatches

The sensitivity of foreign currency cash flows has no material impact on pbb Group’s liquidity position. Based on the definition of the Basel Committee on Banking Supervision (BCBS), pbb Group's currency exposures are not considered material.

EU LIQ1: Quantitative information on LCR

All figures in € million, unless otherwise stated		a	b	c	d	e	f	g	h
		Total unweighted value (average) [1]				Total weighted value (average) [1]			
EU 1a	**Quarter ending on:**	**31.12.2021**	**30.09.2021**	**30.06.2021**	**31.03.2021**	**31.12.2021**	**30.09.2021**	**30.06.2021**	**31.03.2021**
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
High-quality liquid assets									
1	Total high-quality liquid assets (HQLA)	—	—	—	—	**5,808**	**5,778**	**5,728**	**5,417**
Cash - outflows									
2	Retail deposits and deposits from small business customers, of which:	729	729	716	694	157	153	149	144
3	Stable deposits	-	-	-	-	-	-	-	-
4	Less stable deposits	715	719	709	688	143	144	142	138
5	Unsecured wholesale funding	863	753	670	610	610	522	460	414
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	-	-	-	-	-	-	-	-
7	Non-operational deposits (all counterparties)	541	472	448	417	288	241	238	221
8	Unsecured debt	322	281	222	193	322	281	222	193
9	Secured wholesale funding	—	—	—	—	-	-	-	-
10	Additional requirements	457	455	454	453	457	455	454	453
11	Outflows related to derivative exposures and other collateral requirements	457	455	454	453	457	455	454	453
12	Outflows related to loss of funding on debt products	-	-	-	-	-	-	-	-
13	Credit and liquidity facilities	-	-	-	-	-	-	-	-
14	Other contractual funding obligations	33	35	51	46	16	18	34	30
15	Other contingent funding obligations	3,514	3,609	3,733	3,826	1,106	1,121	1,114	1,101
16	**Total cash outflows**	—	—	—	—	**2,346**	**2,269**	**2,211**	**2,142**
Cash - inflows									
17	Secured lending (e.g. reverse repos)	78	25	67	42	4	-	-	-
18	Inflows from fully performing exposures	431	494	562	514	262	293	328	305
19	Other cash inflows	104	121	184	191	104	121	184	191
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)	—	—	—	—	-	-	-	-
EU-19b	(Excess inflows from a related specialised credit institution)	—	—	—	—	-	-	-	-
20	**Total cash inflows**	613	640	813	747	**370**	**414**	**512**	**496**
EU-20a	Fully exempt inflows	-	-	-	-	-	-	-	-
EU-20b	Inflows subject to 90% cap	-	-	-	-	-	-	-	-
EU-20c	Inflows subject to 75% cap	612	640	813	747	369	414	512	496
Total adjusted value									
EU-21	**Liquidity buffer**	—	—	—	—	**5,808**	**5,778**	**5,728**	**5,417**
22	**Total net cash outflows**	—	—	—	—	**1,978**	**1,855**	**1,699**	**1,646**
23	**Liquidity coverage ratio (%)**	—	—	—	—	**308%**	**321%**	**347%**	**338%**

[1] These values and figures are calculated for each of the four calendar quarters preceding the disclosure date, simply using the average of the figures collected at the end of each month over the twelve months preceding the end of each quarter.

Net stable funding ratio

The Net Stable Funding Ratio (NSFR) is the ratio of available stable funding (ASF) and required stable funding (RSF). The NSFR is stated as a percentage.

In contrast to the Liquidity Coverage Ratio (LCR), which is designed to ensure a liquidity buffer under stressed conditions over a period of 30 days, the Net Stable Funding Ratio (NSFR) serves to secure stable liquidity over the medium- and long term. The goal is to ensure a robust maturity structure of assets vs. liabilities. Determining factors are real estate and public infrastructure financing on the one hand and corresponding funding activities on the other. No assets or liabilities are treated as being interdependent by pbb Group.

With effect from 28 June 2021, regulatory provisions require a minimum LCR of 100 %. The NSFR determined for pbb Group exceeds the regulatory minimum level, amounting to 118 % as at 31 December 2021 (30 June 2021: 119 %).

Quantitative information on the Net Stable Funding Ratio (NSFR)

Below, the tables EU LIQ2 pursuant to Article 451a (3) of the CRR show the quarter-end figures relevant for pbb Group's NSFR, broken down to each quarter of the relevant disclosure period 2021. With effect from 30 June 2021, the NSFR became part of the disclosure requirements pursuant to Part 8 of the CRR. As a consequence, pbb Group presents tables for the disclosure date of 31 December 2021, as well as for the two preceding quarters (30 June and 30 September 2021), however, not for 31 March 2021.

The fluctuations in the NSFR in the second half of the year 2021 primarily result from changes in the maturity structure of assets vs. liabilities, which were particularly driven by roll-down effects within funding.

EU LIQ2: Net Stable Funding Ratio (quarter-end values as at 31 December 2021)

		a	b	c	d	e
		Unweighted value by residual maturity				
Quarter-end figures as of 31.12.2021 All figures in € million, unless otherwise stated		**No maturity**	**< 6 months**	**6 months to < 1yr**	**≥ 1 year**	**Weighted value**
Available stable funding (ASF) Items						
1	Capital items and instruments	3,084	-	-	592	3,676
2	Own funds	3,084	-	-	592	3,693
3	Other capital instruments	———	-	-	-	-
4	Retail deposits	———	1,292	636	1,303	3,039
5	Stable deposits	———	-	-	-	-
6	Less stable deposits	———	1,292	636	1,303	3,039
7	Wholesale funding:	———	4,214	2,909	40,936	42,890
8	Operational deposits	———	-	-	-	-
9	Other wholesale funding	———	4,214	2,909	40,936	42,890
10	Interdependent liabilities	———	-	-	-	-
11	Other liabilities:	-	-	-	89	89
12	NSFR derivative liabilities	-	———	———	———	———
13	All other liabilities and capital instruments not included in the above categories	———	-	-	89	89
14	**Total available stable funding (ASF)**	———	———	———	———	**49,695**
Required stable funding (RSF) Items						
15	Total high-quality liquid assets (HQLA)	———	———	———	———	6,015
EU-15a	Assets encumbered for more than 12m in cover pool	———	-	-	26,410	22,449
16	Deposits held at other financial institutions for operational purposes	———	-	-	-	-
17	Performing loans and securities:	———	3,278	2,825	10,611	12,759
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut	———	1,034	-	-	1,034
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions	———	123	65	248	293
20	Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, thereof:	———	1,314	2,552	7,482	9,171
21	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk	———	75	88	174	936
22	Performing residential mortgages, thereof:	———	47	146	1,190	-
23	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk	———	21	100	1,047	-
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products	———	760	62	1,691	2,261
25	Interdependent assets	———	-	-	-	-
26	Other assets:	-	-	-	-	863
27	Physical traded commodities	———	———	———	-	-
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	———	-	-	-	-
29	NSFR derivative assets	———	31	-	-	31
30	NSFR derivative liabilities before deduction of variation margin posted	———	1,572	-	-	79
31	All other assets not included in the above categories	———	395	1	357	753
32	Off-balance sheet items	———	-	-	-	-
33	**Total RSF**	———	———	———	———	**42,084**
34	**Net stable funding ratio (%)**	———	———	———	———	**118%**

EU LIQ2: Net Stable Funding Ratio (quarter-end values as at 30 September 2021)

		a	b	c	d	e
		Unweighted value by residual maturity				
Quarter-end figures as of 30.09.2021		**No maturity**	**< 6 months**	**6 months to < 1yr**	**≥ 1 year**	**Weighted value**
All figures in € million, unless otherwise stated						
Available stable funding (ASF) Items						
1	Capital items and instruments	3,081	-	-	593	3,673
2	Own funds	3,081	-	-	593	3,673
3	Other capital instruments	—	-	-	-	-
4	Retail deposits	—	1,156	712	1,327	3,008
5	Stable deposits	—	-	-	-	-
6	Less stable deposits	—	1,156	712	1,327	3,008
7	Wholesale funding:	—	5,086	2,751	40,557	42,386
8	Operational deposits	—	-	-	-	-
9	Other wholesale funding	—	5,086	2,751	40,557	42,386
10	Interdependent liabilities	—	-	-	-	-
11	Other liabilities:	-	35	-	54	56
12	NSFR derivative liabilities	-	—	—	—	—
13	All other liabilities and capital instruments not included in the above categories	—	35	-	54	54
14	**Total available stable funding (ASF)**	—	—	—	—	**49,121**
Required stable funding (RSF) Items						
15	Total high-quality liquid assets (HQLA)	—	—	—	—	6,113
EU-15a	Assets encumbered for more than 12m in cover pool	—	-	-	27,090	23,026
16	Deposits held at other financial institutions for operational purposes	—	-	-	-	-
17	Performing loans and securities:	—	2,294	3,925	10,518	12,252
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut	—	-	1,369	-	684
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions	—	106	66	259	303
20	Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, thereof:	—	1,888	1,639	7,349	8,956
21	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk	—	80	83	135	940
22	Performing residential mortgages, thereof:	—	239	86	1,165	-
23	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk	—	223	51	975	-
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products	—	61	765	1,745	2,309
25	Interdependent assets	—	-	-	-	-
26	Other assets:	-	1,983	48	414	-658
27	Physical traded commodities	—	—	—	-	-
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	—	-	-	-	-
29	NSFR derivative assets	—	57	-	-	57
30	NSFR derivative liabilities before deduction of variation margin posted	—	1,565	-	-	78
31	All other assets not included in the above categories	—	361	48	414	-793
32	Off-balance sheet items	—	-	-	-	-
33	**Total RSF**	—	—	—	—	**42,284**
34	**Net stable funding ratio (%)**	—	—	—	—	**116%**

EU LIQ2: Net Stable Funding Ratio (quarter-end values as at 30 June 2021)

		a	b	c	d	e
		Unweighted value by residual maturity				
Quarter-end figures as of 30.06.2021 All figures in € million, unless otherwise stated		**No maturity**	**< 6 months**	**6 months to < 1yr**	**≥ 1 year**	**Weighted value**
Available stable funding (ASF) Items						
1	Capital items and instruments	3,074	-	-	618	3,693
2	Own funds	3,074	-	-	618	3,693
3	Other capital instruments	—	-	-	-	-
4	Retail deposits	—	1,198	682	1,426	3,118
5	Stable deposits	—	-	-	-	-
6	Less stable deposits	—	1,198	682	1,426	3,118
7	Wholesale funding:	—	4,017	3,641	40,687	43,096
8	Operational deposits	—	-	-	-	-
9	Other wholesale funding	—	4,017	3,641	40,687	43,096
10	Interdependent liabilities	—	-	-	-	-
11	Other liabilities:	-	36	-	56	56
12	NSFR derivative liabilities	-	—	—	—	—
13	All other liabilities and capital instruments not included in the above categories	—	36	-	56	56
14	**Total available stable funding (ASF)**	—	—	—	—	**49,963**
Required stable funding (RSF) Items						
15	Total high-quality liquid assets (HQLA)	—	—	—	—	6,525
EU-15a	Assets encumbered for more than 12m in cover pool	—	-	-	26,676	22,674
16	Deposits held at other financial institutions for operational purposes	—	-	-	-	-
17	Performing loans and securities:	—	2,789	3,186	10,712	12,184
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut	—	200	600	-	300
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions	—	107	44	311	344
20	Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, thereof:	—	2,129	1,635	7,508	9,256
21	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk	—	90	79	172	1,026
22	Performing residential mortgages, thereof:	—	301	140	1,171	-
23	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk	—	237	99	1,018	-
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products	—	52	767	1,722	2,284
25	Interdependent assets	—	-	-	-	-
26	Other assets:	-	1,978	-	220	-606
27	Physical traded commodities	—	—	—	-	-
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs	—	-	-	-	-
29	NSFR derivative assets	—	70	-	-	70
30	NSFR derivative liabilities before deduction of variation margin posted	—	1,583	-	-	79
31	All other assets not included in the above categories	—	325	-	220	545
32	Off-balance sheet items	—	-	-	-	-
33	**Total RSF**	—	—	—	—	**42,078**
34	**Net stable funding ratio (%)**	—	—	—	—	**119%**

Operational risk

The chapter “Operational risk” describes pbb Group’s risk management targets and policies for operational risk pursuant to Article 435 (1) of the CRR, and provides information on operational risk management and the assessment of own funds requirements pursuant to Article 446 of the CRR. Disclosure pursuant to Article 446 (b) and (c) of the CRR and pursuant to Article 454 of the CRR is not relevant for pbb Group. pbb Group is currently using no advanced measurement approaches for calculating its own funds requirements, but instead adopts the Standardised Approach set out in Articles 317 et seqq. of the CRR.

Management of 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).

Risk strategy

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. The risk strategy describes the pbb Group’s risk management strategy as well as the risk appetite regarding operational risk.

Organisation

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). Compliance, Corporate Office, Finance (Outsourcing Risk) and Risk Management & Control (RMC) essentially comprise the second line of defence. Within RMC, the Operational Risk unit is responsible for uniform procedures and methods for identifying, assessing, quantifying, monitoring and reporting on operational risk. Internal Audit constitutes the third line of defence.

Risk reporting, risk monitoring and risk management

Essential components of operational risk management are as follows: recording 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 relevant loss events, top risk issues, development of risk indicators, 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 pbb's risk and compliance structure. Risk management for ICT systems risk generally applies at process level. The annual protection requirement analysis, the quarterly re-porting of relevant information and metrics such as the key performance indicators (KPIs) as well as the IT security management, 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), 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 quantification

Please refer to the chapter “Economic capital and risk-bearing capacity” (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.

The regulatory own funds requirement for operational risk, which is calculated annually at year end, amounted to € 74 million as at 31 December 2021 (31 December 2020: € 70 million) according to the Standardised Approach set out in Articles 317 et seqq. of the CRR, and is described in detail in the following chapter (“Own funds requirement for operational risk”).

Opportunities

pbb Group aims to reduce potential operational risk to the extent possible, through continuous development of its operational risk framework and the ongoing optimisation of processes.

Operational risk profile

pbb Group suffered a financial loss of € 0.3 million from operational risks during 2021 (2020: € 1 million). pbb assesses its operational risk profile as stable.

Own funds requirement for operational risk

To comply with the own funds requirements pursuant to the CRR, operational risk must be backed with own funds. pbb Group determines the own funds requirement for operational risk using the Standardised Approach in accordance with Articles 317 et seqq. of the CRR.

EU OR1: Operational risk own funds requirements and risk-weighted exposure amounts

		a	b	c	d	e
		Relevant indicator [1]			Own funds requirements	Risk weighted exposure amount
		Year-3	Year-2	Last year		
1	Banking activities subject to basic indicator approach (BIA)	-	-	-	-	-
2	Banking activities subject to standardised (SA) / alternative standardised (ASA) approaches	462	484	514	74	922
3	Subject to SA	462	484	514		
4	Subject to ASA	-	-	-		
5	Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

[1] After confirmed financial statements and appropriation of profits.

For each business line, the relevant indicator is determined for the last three financial years in accordance with Article 316 of the CRR. The corresponding beta factors per business line comply with the values defined in Article 317 of the CRR. pbb Group's business lines consist only of commercial and retail banking, with commercial banking being the decisive contributor to the relevant indicator. The own funds requirement for operational risk is based on the sum of the three-year averages of the relevant indicator per business line, weighted with the corresponding beta factor.

The regulatory own funds requirement, which is calculated annually at year-end, amounted to € 74 million at the disclosure date (31 December 2020: € 70 million).

pbb Group is currently not using any advanced measurement approaches to determine its own funds requirements pursuant to Articles 321-324 of the CRR. Thus, disclosure pursuant to Article 446 (b) and (c) of the CRR and pursuant to Article 454 of the CRR is not relevant for pbb Group.

Sustainability risks

This chapter includes information on environmental, social and governance (ESG) risks. The disclosure requirement pursuant to Article 449a of the CRR first applies as at 31 December 2022.

Definition

In accordance with the EBA Report on Management and Supervision of ESG Risks for Credit Institutions and Investment Firms (EBA/REP/2021/18) 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 expected impact of ESG factors on the Group's counterparties, or on its in-vested 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

pbb uses the concept of 'environmental risks' as an umbrella term for both climate and environmental risks. Climate and environmental risks refer to risks of losses and negative impacts due to climate change and the destruction of the environment. Climate change is generally understood as being the change to the global climate caused by humans. Consequences of climate change include global warming (higher annual average temperature) as well as increased climate variability and extreme weather. 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 a negative financial impact on the institution resulting from current or future effects of Social factors on its counterparties or invested assets. Negative effects can also result from social factors associated with the institution's own activities.

Governance risks

pbb Group 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.

Identifying and accounting ESG risk

pbb Group considers risks emanating from ESG components taking an overall view, since the respective risk factors have an impact on other types of risk. ESG risk is classified overall as being material.

In order 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 has been established as a firm component of the annual risk inventory. Identifying and describing the possible transmission channels of potential ESG risk factors revealed the extent to which a company's economic and financial activities are affected (financial materiality/outside-in), or how a company's activities impact ESG factors (environmental and social materiality/inside-out) and in what time frame.

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 and liability risks, as well as business and strategic risk. No significant impact on market, liquidity or funding risk was identified. The Bank is working on the full inclusion of ESG risk factors in the risk management tools for all affected risk types, including monitoring, reporting and quantification, as well as in the stress tests and scenario analyses.

pbb Group has commenced analysing and assessing its loan book in terms of environmental criteria. The Group plans to review this analysis and valuation process at least once a year, extending it as appropriate, and to establish a standard process in this respect. The same applies to the ESG risk analysis prior to granting a new loan, which is already an integral part of the process, but will be performed more systematically.

Taking the risks resulting from 'E', 'S' and 'G' into account in terms of the ICAAP in particular, these are currently being incorporated via other types of risk (counterparty credit risk, business and strategic risk, market risk, operational risk). The model-based assessment is to be continuously improved and completed over the next few years. The aim is to have completed these activities by 2023.

Monitoring and managing 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.

In order to ensure even better compliance in this respect, pbb's Management Board appointed a specialist ESG Committee in July 2021, which addresses ESG aspects and ESG risks within pbb Group. Aside from the Management Board members, the majority of the Committee members are second-level management executives. In July 2021, the Management Board also established an ESG programme, which, next to a programme management, includes various project and working groups working on specific ESG topics such as ESG risk, strategy, disclosure, management and data. The ESG Committee is the core authority for relevant decision-making processes and resolutions.

Specific risk indicators have been defined and assigned to the individual components for monitoring the various aspects of the Group's own ESG risk. 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.

pbb Group manages ESG risks in line with the Three Lines of Defence ("3LoD") principle, whereby risk owners in the various divisions which are particularly close to clients or the general public (Sales, PAV, CRM, Communications, Finance, Treasury, and the Corporate Office) form the first line of de-fence. The second line of defence comprises Risk Management & Control and Compliance, together with Legal, Human Resources, and IT. Group Internal Audit (GIA) is the third line of defence.

Opportunities

ESG risks generally also offer potential opportunities for pbb, related to sector-specific aspects – especially related to the offering of sustainable financing solutions (“green loans”) as well as the issue of green bonds. Sustainable financing solutions reduce the probability of loan defaults, in-crease the value of the collateral furnished and prevent potential reputational damage. Client orientation and internal governance are further fundamental success factors for pbb Group 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.

Green Bond and Green Loan Framework

To take sustainability aspects more into account when granting loans, pbb has been systematically gathering data on various sustainability criteria pertaining to its financed properties since May 2020. These criteria include energy consumption and Green Building certificates, amongst others; whilst the Bank’s IT systems already capture these criteria for partial portfolios, in future they will do so for the entire REF portfolio. pbb is thus gaining an overview of the sustainability of its loan portfolio and the associated risks.

Green Bond Framework

On this basis, pbb Group has established a Green Bond Framework, allowing it to raise funding via so-called green bonds. In January 2021, pbb successfully placed its first Green Bond on the market, and has since then placed further issues. By issuing green bonds, pbb Group enables investors to make targeted investments in sustainable capital market products.

Green Loan Framework

In addition, pbb Group has developed a Green Loan Framework in accordance with the LMA Green Loan Principles and taking the EU taxonomy into account, whose requirements go even further than those of the Green Bond Framework.

pbb has been offering green loans as a new credit product since the fourth quarter of 2021. There is as yet no established standard for green loans on the market. Therefore, pbb has developed a Green Loan Framework based on two elements: a standalone sustainability scoring model, and the EU Taxonomy. The pbb scoring model allows for the assessment of real estate using specific criteria; from a defined score upwards, real estate qualifies for green lending. As an alternative, pbb grants green loans to buildings compliant with the EU Taxonomy. pbb’s scoring model takes into account three dimensions: the energy efficiency of a building, building certifications, and further sustainability factors. The latter include factors such as soil surface sealing or the availability of, and distance to, the public transportation network, as well as the use of recycled materials for construction or the type of heating and use of green electricity.

Carbon footprint

pbb has progressively expanded its carbon footprint reporting in recent years and launched initiatives with the objective of further reducing its carbon emissions and broadening reporting, with the carbon footprint of lending being one crucial element.

Information regarding Covid-19 measures

This chapter provides information on the measures implemented by pbb Group in response to the COVID-19 crisis in line with the European Banking Authority's „Guidelines on reporting and disclosure of exposures subject to measures applied in response to the COVID-19 crisis“ (EBA/GL/2020/07).

As with the previous year, the 2021 financial year was also shaped by the COVID-19 pandemic and its global repercussions; meanwhile, uncertainties and risks related to the further development of the COVID-19 pandemic persist. These include – more specifically – the continued pandemic progression, as underlined by the recent global spread of the Omicron variant of corona-virus. This has prompted many countries to impose renewed contact restrictions in order to contain the rapid spread of the variant, and to prevent the healthcare system from being overwhelmed.

General payment moratoria

To alleviate the effects of the COVID-19 pandemic, Germany and other countries agreed to impose varying forms of payment holidays in 2020, including statutory deferrals of certain loan instalments for clients in financial distress owing to the crisis. In Germany, the corresponding rules related exclusively to loan agreements concluded with consumers and microenterprises, and are therefore of no significance to pbb Group. The same applies for other countries' moratoria, if they were extended solely to consumer business, and for private moratoria initiated by the banking associations in which pbb is not involved.

In its existing business, pbb has instead actively sought economically viable solutions on an individual basis together with clients. In agreement with the clients, the contractual cash flows were adjusted on a small number of financings. In most cases, contractual agreements for calculating financial covenants were suspended, or relief was provided, for a certain period of time; alternatively, current principal repayments were deferred when adjusting contractual cash flows.

Quantitative information on the payment moratoria

The following table "EU COVID-19 / Template 3" pursuant to EBA/GL/2020/07 shows the new financings made by pbb in response to COVID-19 for clients secured by public guarantees.

As explained above, pbb Group does not use general payment moratoria pursuant to margin no. 10 of EBA/GL/2020/02 in conjunction with EBA/GL/2020/08 and EBA/GL/2020/15. This applies to both legislative and non-legislative moratoria. Therefore, the other tables related to EBA/GL/2020/07, i.e. "Information on loans and advances subject to legislative and non-legislative moratoria" and "Breakdown of loans and advances subject to legislative and non-legislative moratoria by residual maturity of moratoria", are not relevant for pbb Group.

EU COVID-19 / Template 3: Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis

All figures in € million		a	b	c	d
		Gross carrying amount [1]		Maximum amount of the guarantee that can be considered [2]	Gross carrying amount [1]
			thereof: forborne	Public guarantees received	Inflows to non-performing exposures
1	**Newly originated loans and advances subject to public guarantee schemes**	**1**	**1**	**1**	**0**
2	thereof: Households	-			-
3	thereof: Collateralised by residential immovable property	-			-
4	thereof: Non-financial corporations	1	1	1	-
5	thereof: Small and Medium-sized Enterprises	-			-
6	thereof: Collateralised by commercial immovable property	1			-

[1] Gross carrying amount before impairments on financial assets and provisions in the lending business, but after amortisation.
[2] The reported volume of the public guarantee is limited to the gross carrying amount of the loan receivable. Other collateral and/or guarantees are not taken into account.

The number and scope of increased financings to clients – guaranteed by KfW or other development banks – in the context of the COVID-19 crisis was very low. Their volume amounted to approx. € 1 million as at the disclosure date. This refers to financings granted by pbb which are guaranteed by KfW. The complete or partial indemnification guaranteed by KfW releases pbb from maintaining own funds, amongst others.

Outlook

Pillar 3 disclosures

The disclosure requirements pursuant to Part 8 of the CRR, which were updated along with CRR II, and the Implementing Regulation (EU) 2021/637 (Pillar 3 framework), which defines EU-wide uniform disclosure formats developed by the EBA in accordance with Article 434a of the CCR to comply with the disclosure requirements pursuant to Part 8 of the CRR, have been applicable since 28 June 2021. These regulations are designed to serve as a complete and coherent framework for Pillar 3 disclosures.

The information provided in this disclosure report in accordance with Part 8 of the CRR in conjunction with the Pillar 3 framework will be progressively expanded:

> information on environmental, social and governance (ESG) risks pursuant to Article 449a of the CRR is to be partially disclosed for the first time as at the disclosure date of 31 December 2022.

> Information on own funds and eligible liabilities (MREL) pursuant to Article 437a of the CRR and section 51 (3) of the German Act on the Recovery and Resolution of Credit Institutions (SAG) is to be disclosed for the first time as at 31 December 2024.

The disclosure requirements in response to the COVID-19 crisis, which were initially limited until 31 December 2021, continue to apply beyond December 2021. In a press release of 17 January 2022, EBA confirmed that exposures and the credit quality of loans that benefit from public support measures still need be monitored and disclosed until further notice.

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Confirmation of the Management Board

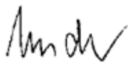
In accordance with article 431 (3) sentence 1 to 3 CRR

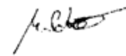
The Management Board of pbb confirms that, to the best of its knowledge, this Disclosure Report has been prepared in accordance with and in compliance with the formal procedures and regulations implemented in the pbb Group for complying with the disclosure obligations in accordance with part 8 of the CRR.

Munich, 19 April 2022

Deutsche Pfandbriefbank AG

The Management Board





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