Capital Adequacy and Other Information of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group Subject to Disclosure as at 31 December 2022

INTRODUCTION

The report "Capital Adequacy and Other Information of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group Subject to Disclosure as at 31 December 2022", hereinafter referred to as the "Report", was prepared in accordance with:

- Article 111a of the Act of 29 August 1997 – Banking Law[1], hereinafter referred to as the "Banking Law",
- Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms, hereinafter referred to as the "CRR", taking into account acts amending the CRR,
- Commission Implementing Regulation (EU) 2021/637 of 15 March 2021 laying down implementing technical standards with regard to public disclosures by institutions of the information referred to in Titles II and III of Part Eight of Regulation (EU) No 575/2013 of the European Parliament and of the Council (hereinafter 'Regulation 2021/637'), including acts amending Regulation No 2021/637,
- and in accordance with recommendations and guidelines issued by the Polish Financial Supervision Authority, hereinafter referred to as the "PFSA", in particular:
- Recommendation M on operational risk management,
- Recommendation P concerning the management of financial liquidity risk of banks,
- Recommendation R on the principles of classification of credit exposures, estimation and recognition of expected credit losses and credit risk management, and
- Recommendation Z on internal governance principles and in accordance with the requirements contained in the following guidelines of the European Banking Authority:
- EBA/GL/2020/07 of 2 June 2020 on reporting and disclosure of exposures subject to measures applied in response to the COVID-19 crisis, hereinafter referred to as the "EBA/GL/2020/07 Guidelines)
- EBA/GL/2020/12 amending guidelines EBA/GL/2018/01 of 4 August 2017 on uniform disclosures under Article 473a of Regulation (EU) No 575/2013 as regards the transitional period for mitigating the impact of the introduction of IFRS 9 on own funds in order to ensure compliance with the amendments to the CRR resulting from COVID-19.

Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna, hereinafter referred to as "PKO Bank Polski S.A." or the "Bank", meeting the definition of large institutions within the meaning of Article 4(1)(146) of the CRR, in accordance with Article 13(1) and Article 433a of the CRR, announces information on capital adequacy referred to in Part Eight of the CRR on an annual, semi-annual and quarterly basis in a separate document. Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna, hereinafter referred to as "PKO Bank Polski S.A." or the "Bank", meeting the definition of large institutions within the meaning of Article 4(1)(146) of the CRR, in accordance with Article 13(1) and Article 433a of the CRR, announces information on capital adequacy referred to in Part Eight of the CRR on an annual, semi-annual and quarterly basis in a separate document.

This Report has been prepared in accordance with the Bank's internal regulations concerning the information policy of PKO Bank Polski S.A. regarding capital adequacy and other information subject to disclosure (hereinafter: "The information policy of PKO Bank Polski S.A. regarding capital adequacy and other information subject to disclosure"). In accordance with Article 431(1) of the CRR, such information is disclosed on the Bank's website (www.pkobp.pl), and, in accordance with the Bank's internal regulations in this respect, it contains detailed information on capital adequacy, the method of its verification, approval and publication.

Pursuant to the Commission Delegated Regulation (EU) No 183/2014, the capital adequacy account reflects the credit risk adjustments recognised in the income statement, relating to the periods included in Tier 1 capital. In view of the above, the Bank took into account specific credit risk adjustments as at 30 June 2022, appropriate adjustments were also taken into account at the level of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group.

The Report covers the year 2022 and presents data as at 31 December 2022. It has been prepared in accordance with the regulations referred to in the above paragraph, which were in force as at 31 December 2022. The Report presents the consolidated data of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group, hereinafter called the "Bank's Group". A part of the information contained in the Report concerns stand-alone data of PKO Bank Polski S.A. due to the significant effect of the Bank on the risk profile of the Bank's Group.

Unless otherwise stated, the figures presented in the Report are expressed in PLN million. Any differences in totals and percentages result from rounding amounts off to PLN million and rounding percentages off to one place after the decimal point.

The Report has been prepared taking into account all data available as at 31 December 2022. The Report addresses the requirements of the regulations described above insofar as they relate to the Bank and the Bank's Group. Lack of a reference to a particular article means that the related disclosures are not applicable. This Report was subject to an internal verification by the Bank's Internal Audit Department.

[1] The data includes only the entities in the prudential consolidation.

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1 Information about the Bank and the Bank's Group

According to CRR Regulation, prudential consolidation is used for capital adequacy purposes, which unlike consolidation in accordance with the International Financial Reporting Standards, covers only subsidiaries that meet the definition of an institution, financial institution or any ancillary services enterprise.

In accordance with the CRR, for the purposes of prudential consolidation, the Group consists of following entities: PKO Bank Polski S.A., PKO Leasing S.A. Group, PKO BP BANKOWY PTE S.A., PKO Towarzystwo Funduszy Inwestycyjnych S.A., KREDOBANK S.A. Group, PKO Finance AB, PKO BP Finat sp. z o.o., PKO Bank Hipoteczny S.A., and Bankowe Towarzystwo Kapitałowe S.A. Group.

Non-financial and insurance entities are excluded from the prudential consolidation. Tables 1.1-1.3 present the differences in the scope of consolidation of the Bank's Group for the purposes of accounting and prudence regulations as at 31 December 2022.

The Bank's Group does not identify any subsidiaries which are not covered by prudential consolidation and whose own funds are lower than required. Furthermore, the Group does not apply the derogation mentioned in Article 7 of the CRR or the individual consolidation method defined in Article 9 of the CRR.

Table 1.1 Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories [Template EU LI1]

		31.12.2022						
		a	b	c	d	e	f	g
				Carrying values of items				
		Carrying values as reported in published financial statements	Carrying values under scope of prudential consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to own funds requirements or subject to deduction from own funds
Breakdown by asset clases according to the balance sheet in the published financial statements								
1	Cash and balances with the Central Bank	15 917	15 917	15 917	-	-	-	-
2	Amounts due from banks	16 101	15 965	8 533	7 432	-	-	-
3	Hedging derivatives	1 042	1 042	1 042	1 042	-	1 042	-
4	Other derivative instruments	13 162	13 162	13 162	13 162	-	12 343	-
5	Securities	135 632	133 324	129 522	-	-	3 802	-
6	Reverse repo transactions	7	7	7	-	-	-	-
7	Loans and advances to customers	231 721	231 871	230 786	-	1 085	-	-
8	Receivables in respect of insurance activities	555	-	-	-	-	-	-
9	Property, plant and equipment transferred under operating lease	1 764	1 764	1 764	-	-	-	-
10	Property, plant and equipment	2 917	2 741	2 741	-	-	-	-
11	Non-current assets held for sale	10	10	10	-	-	-	-
12	Intangible assets	3 527	3 325	3 325	-	-	-	2 469
13	Investments in associates and joint ventures	285	1 504	1 504	-	-	-	-
14	Current income tax receivables	52	52	52	-	-	-	-
15	Deferred income tax assets	5 187	5 140	4 940	-	-	-	200
16	Other assets	2 804	2 742	2 742	-	-	-	-
TOTAL ASSETS		430 683	428 566	416 047	21 636	1 085	17 187	2 669
Breakdown by liability classes according to the balance sheet in the published financial statements								
1	Amounts due to the Central Bank	9	9	-	-	-	-	9
2	Amounts due to banks	3 011	3 011	-	-	-	-	3 011
3	Hedging derivatives	7 469	7 469	-	7 469	-	7 469	-
4	Other derivative instruments	12 978	12 978	-	12 978	-	6 520	-
5	Amounts due to customers	339 582	338 866	-	-	-	-	338 866
6	Repo transactions	-	-	-	-	-	-	-
7	Liabilities in respect of insurance activities	1 732	-	-	-	-	-	-
8	Loans and advances received	2 294	2 293	-	-	-	-	2 293
9	Debt securities in issue	15 510	15 774	-	-	-	-	15 774
10	Subordinated liabilities	2 781	2 781	-	-	-	-	2 781
11	Other liabilities	7 014	6 910	-	-	-	-	6 910
12	Current income tax liabilities	765	725	-	-	-	-	725
13	Deferred income tax provision	13	7	-	-	-	-	7
14	Provisions	2 090	2 083	-	-	-	-	2 083
TOTAL LIABILITIES		395 248	392 906	-	20 447	-	13 989	372 459

The carrying values shown under the regulatory model differ from the values recognised in the published financial statements as at and for the year ended 31 December 2022 due to the application of different scopes of consolidation.

Assets and liabilities subject to more than one type of risk listed in Part Three of the CRR are mainly derivatives, which are subject to both capital requirements for counterparty credit risk, CVA for selected entities, and market risk in the case of the trading book.

(IN PLN MILLION)

Table 1.2 Main sources of differences between regulatory exposure amounts and carrying values in financial statements [Template EU LI2]

		31.12.2022				
		a	b	c	d	e
		Total	Items subject to			
			Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	**Assets carrying value amount under the scope of regulatory consolidation (as per template LI1)**	425 897	416 047	1 085	21 636	17 187
2	**Liabilities carrying value amount under the regulatory scope of consolidation (as per template LI1)**	20 447	-	-	20 447	13 989
3	**Total net amount under the regulatory scope of consolidation**	405 450	416 047	1 085	1 189	3 198
4	**Off-balance-sheet amounts**	84 143	24 878	-	-	
5	Differences in valuations	380	-	-	-	
6	Differences due to different netting rules, other than those already included in row 2	27 839	1 752	-	9 358	
7	Differences due to consideration of provisions	243	243	-	-	
8	Differences due to the use of credit risk mitigation techniques (CRMs)	-5 829	-2 404	-	-3 425	
9	Differences due to credit conversion factors	-59 266	-	-	-	
10	Differences due to Securitisation with risk transfer	-1 085	-	-1 085	-	
11	Other differences	-5 981	1 451	-	-	
	Transitional adjustment for MSSF9 in RWA	1 651	1 651	-	-	
	deduction of funds according to art.. 48 CRR	-200	-200	-	-	
	Balance sheet - exclusion of CCPs (in the main note in valuation differences)	-7 432	-	-	-	
13	**Exposure amounts considered for regulatory purposes**	453 327	441 967	-	7 122	4 238

Table 1.3 Outline of the differences in the scopes of consolidation (entity by entity) [Template EU LI3]

No.[1]	31.12.2021							
	a	b	c	d	e	f	g	h
	Name of the entity	Method of accounting consolidation	Method of prudential consolidation					Description of the entity
			Full consolidation	Proportional consolidation	Equity method	Neither consolidated nor deducted	Deducted	
1	PKO Bank Polski S.A.	Parent company						Banking activities.
2	PKO Bank Hipoteczny S.A.	Full consolidation	X					Banking activities.
3	PKO Towarzystwo Funduszy Inwestycyjnych S.A,	Full consolidation	X					Creation and management of Open-and and Clodes-end Investment Funds and management of trading book.
4	PKO BP BANKOWY PTE S.A.	Full consolidation	X					Management of an open and voluntary pension fund.
5	PKO Leasing S.A.	Full consolidation	X					Leasing and provifing bank loans.
	PKO Agencja Ubezpieczeniowa sp. z o.o.	Full consolidation	X					Insurance brokerage.
	PKO Leasing Finanse sp. z o.o.	Full consolidation	X					Support services for the sale of post-leasing items.
	PKO Leasing Sverige AB	Full consolidation	X					Leasing.
	Prime Car Management S.A.	Full consolidation	X					Leasing and fleet management services.
	Futura Leasing S.A.	Full consolidation	X					Leasing and ancillary services in the field of storing and selling post-Leasing items.
	Masterlease sp. z o.o.	Full consolidation	X					Leasing.
	MasterRent24 sp. z o.o.	Full consolidation	X					Short-term rental of vehicles.
	Polish Lease Prime 1 DAC[3]	Full consolidation	X					A special-purpose vehicles set up for the purpose of leasing receivables.
	PKO Faktoring S.A.	Full consolidation	X					Factoring.
6	PKO BP Finat sp. z o.o.	Full consolidation	X					Service activities, including transfer agent services and outsourcing of IT specialists. On the basis of the KNF authorization - services as a national payment institution.
7	PKO Życie Towarzystwo Ubezpieczeń S.A.	Full consolidation					X	Life insurance.
	Ubezpieczeniowe Usługi Finansowe sp. z o.o.	Full consolidation				X		Service activities.
8	PKO Towarzystwo Ubezpieczeń S.A.	Full consolidation					X	Other personal insurance and property insurance.
9	PKO Finance AB	Full consolidation	X					Financial services, including obtaining funds by issuing bonds and granting loans to companies from the PKO Bank Polski SA Group, including the Bank.
10	KREDOBANK S.A.	Full consolidation	X					Banking activities.
	„KREDOLEASING" sp. z o.o.	Full consolidation	X					Financial services, mainly leasing - at the end of 2021 the company is under organization.
11	Merkury - fiz an	Full consolidation				X		Placing funds collected from fund participants.
	„Zarząd Majątkiem Górczewska" sp. z o.o.	Full consolidation				X		Real estate management.
	Molina sp. z o.o.	Full consolidation				X		A general partner in limited joint-stock partnerships of the fund.

	Molina spółka z ograniczoną odpowiedzialnością 1 S.K.A.	Full consolidation				X		Buying and selling real estate for own account. Real estate management.
	Molina spółka z ograniczoną odpowiedzialnością 2 S.K.A.[4]	Full consolidation				X		
	Molina spółka z ograniczoną odpowiedzialnością 4 S.K.A.[4]	Full consolidation				X		
	Molina spółka z ograniczoną odpowiedzialnością 6 S.K.A. w likwidacji	Full consolidation				X		
12	NEPTUN - fizan	Full consolidation				X		Placing funds collected from fund participants.
	Bankowe Towarzystwo Kapitałowe S.A.	Full consolidation	X					Service activities and portfolio management.
	„Inter-Risk Ukraina" spółka z dodatkową odpowiedzialnością	Full consolidation	X					Real estate development.
	Finansowa Kompania „Prywatne Inwestycje" sp. z o.o.	Full consolidation	X					Financial services.
	Finansowa Kompania „Idea Kapitał" sp. z o.o.	Full consolidation	X					Legal service of acquired pecuniary claims under credit agreements.
	Qualia sp. z o.o.	Full consolidation	X					After-sales service for development products.
	Sarnia Dolina sp. z o.o.	Full consolidation				X		Developement activities.
	„Sopot Zdrój" sp. z o.o.	Full consolidation				X		Real estate management.
13	PKO VC - fizan	Full consolidation				X		Placing funds collected from fund participants.

[1] The “numbered” entities other than PKO Bank Polski S.A. – the direct subsidiaries of PKO Bank Polski S.A.; other entities – indirect subsidiaries

[2] The item “deducted” indicates the Bank’s capital exposures (other than the entities subject to prudential consolidation) taken into account in calculating deductions from the own funds of the Bank’s Group. In view of the fact that the total exposures to the Common Equity Tier 1 instruments of financial sector entities did not exceed the thresholds defined in the CRR, the Common Equity Tier 1 capital of the Bank’s Group for prudential consolidation as at 31 December 2021 was not reduced by the aforementioned exposures. These exposures, in accordance with the CRR requirements, were included in risk-weighted assets with a risk weight of 250%. The Bank’s Group does not have any exposures constituting deductions from Tier 2 capital, either.

[3] In accordance with IFRS 10, PKO Leasing S.A. controls the aforementioned company even though it does not have a capital investment in it.

[4] The company’s Extraordinary General Shareholders’ Meeting resolved to put the company into liquidation as of 1 December 2022 – the change had not been entered in the National Court Register by 31 December 2022.

(IN PLN MILLION)

Table 1.4 Prudent valuation adjustments (PVA) [Template EU PV1]

Category level AVA		31.12.2022									
		a	b	c	d	e	EU e1	EU e2	f	g	h
		Risk category					Category level AVA - Valuation uncertainty		Total category level post-diversification		
		Equity	Interest Rates	Foreign exchange	Credit	Commodities	Unearned credit spreads AVA	Investment and funding costs AVA		Of which: Total core approach in the trading book	Of which: Total core approach in the banking book
1	Market price uncertainty	0	27	1	-	0	4	-	32	2	30
2	Not applicable										
3	Close-out cost	0	17	1	-	0	4	-	21	1	20
4	Concentrated positions	37	283	-	-	-	Not applicable	Not applicable	320	90	231
5	Early termination	-	-	-	-	-	Not applicable	Not applicable	-	-	-
6	Model risk	-	-	0	-	-	0	4	4	0	4
7	Operational risk	-	-	-	-	-	Not applicable	Not applicable	-	-	-
8	Not applicable										
9	Not applicable										
10	Future administrative costs	0	2	0	-	0	Not applicable	Not applicable	2	0	2
11	Not applicable										
12	Total Additional Valuation Adjustments (AVAs)								380	93	287

There were no significant changes in the structure of the Bank's Group in 2022.

Liquidation of ROOF Poland Leasing 2014 (an entity from the PKO Leasing S.A. portfolio) and Molina spółka z ograniczoną odpowiedzialnością 5 S.K.A. w likwidacji (in liquidation) (an entity from the Merkury fiz an portfolio) was completed. The aforementioned companies ceased to be members of the Bank's Group.

The Parent Company of the Bank's Group is PKO Bank Polski S.A. whose share in the consolidated total assets amounts to 88.22%[2].

PKO Bank Hipoteczny S.A. is a specialist bank operating on the basis of the Act of 29 August 1997 on Mortgage Covered Bonds and Mortgage Banks. The Bank specialises in granting residential mortgage loans for individuals. The Bank also acquires receivables in respect of such loans from PKO Bank Polski S.A. PKO Bank Hipoteczny S.A. issues mortgage covered bonds which constitute one of the main sources of long-term financing for loans secured with real estate. The company operates in the territory of the Republic of Poland, with mortgage covered bonds being issued in Poland and on the European market.

The PKO Leasing S.A. Group (i.e., PKO Leasing S.A. and its subsidiaries) mainly provides leasing, factoring, fleet management and vehicle rental services. The companies in the aforementioned Group operate mainly in the territory of the Republic of Poland and in Sweden (PKO Leasing Sverige AB) and Ireland (Polish Lease Prime 1 DAC).

KREDOBANK S.A. carries out banking activities in the territory of Ukraine and is subject to Ukrainian banking supervision. KREDOBANK S.A. is a universal bank which services customers mainly in the western part of Ukraine and in Kyiv. As at the end of 2022, the Company's head office was in Lviv, there were 66 branches, 13 of which are located in regions most affected by warfare. From February 2022, in connection with the military aggression of Russia, KREDOBANK S.A.'s priority is to ensure the safety of its employees and maintain uninterrupted operations servicing customers on an on-going basis. The Company services customers in regions where no active military actions are in progress. "KREDOLEASING" sp. z o.o. – a subsidiary of KREDOBANK S.A. with its registered office in Lviv – did not develop its operating activities due to the war.

The other entities listed in Table 1.3, which form part of the Bank's Group (under prudential consolidation), operate mainly in the territory of the Republic of Poland and in Ukraine (Finansowa Kompania "Prywatne Inwestycje" sp. z o.o., Finansowa Kompania "Idea Kapitał" sp. z o.o. and "Inter-Risk Ukraina" spółka z dodatkową odpowiedzialnością [an additional liability company]) and in Sweden (PKO Finance AB).

Through its foreign branches, PKO Bank Polski S.A. also operates in the Federal Republic of Germany (PKO Bank Polski S.A. Niederlassung Deutschland), the Czech Republic (PKO BP S.A., the Czech Branch) and in the Slovak Republic (PKO BP S.A., pobočka zahraničnej banky)

Information about all of the Bank's subsidiaries, including the Bank's interests in the share capitals of the individual entities, is provided in the consolidated financial statements of the Bank's Group as at and for the year ended 31 December 2022, which were published on 10 March 2023 (Note 1 Activities of the Group).

Within the Bank's Group, there are certain restrictions (described below) on early repayment of liabilities by the subsidiaries[3] and with regard to the transfer of funds in the form of dividends:

1) according to the Decision of the National Bank of Ukraine, due to the ongoing war Ukrainian banks, including KREDOBANK S.A., may not effect: early repayment of (term) deposits to the bank's related persons, dividend payments and distribution of capital in a form other than allocation of profits to increase the share capital, creation of general reserves and funds of the bank within regulatory capital and coverage of losses from previous years,
2) KREDOBANK S.A. also applies a moratorium to dividend payment introduced by resolution of the Extraordinary General Meeting of Shareholders in 2009,
3) the leasing receivables securitisation plan carried out within the PKO Leasing S.A. Group cannot be terminated before the contractual deadline (no possibility of early repurchase of the receivables sold) unless with the repayment of the securitised receivables the scheme balance falls below 10% of the original balance.

Furthermore, in making decisions on dividend payments or early repayment of liabilities, PKO Bank Polski S.A. and its subsidiaries follow the legal regulations (including the regulations regarding the amount of own funds and capital adequacy ratios) and the PFSA recommendations. The supervisory expectations regarding capital adequacy measures are described in more detail in the following chapter: "3. Capital adequacy" of this Report.

[2] The share was calculated in relation to the consolidated total assets of the companies subject to prudential consolidation before consolidation adjustments and exemptions as at 31 December 2022.
[3] Other than the redemption of bonds or mortgage covered bonds at the request of the issuer before the maturity date.

2 MANAGEMENT SYSTEM

2.1 Risk management

Risk management is one of the key internal processes, both in PKO Bank Polski S.A., including its foreign branches, and in the other entities of the Bank's Group. Risk management is aimed at ensuring the profitability of business activities while ensuring control over the risk level and maintaining it under the risk tolerance framework and the limits system adopted by the Bank and the Bank's Group in the changing macroeconomic and legal environment. The expected level of risk plays an important role in the planning process.

The objective of the risk management is to strive to maintain the level of risk within the accepted tolerances in order to:
1) protect the value of shareholders' capital and protection of customer deposits with the simultaneous support for the Bank's Group in conducting efficient operations,
2) provide the fullest possible information on risk in decision-making,
3) improve the processes and effectively establish risk management within the organisational culture of the Bank's Group.

Risk management in the Bank's Group is based, in particular, on the following principles:
1) the Bank's Group manages all identified types of risk,
2) the risk management process is adequate to the scale of operations and materiality, level, and complexity of a given risk, and it is tailored to new risk factors and sources of risk on an ongoing basis,
3) the risk management methods (especially models and their assumptions) and risk measurement or assessment systems are tailored to the level and complexity of the risks, the current and planned operations and the operating environment, and are periodically verified or validated,
4) ESG risk is managed at the Bank as part of the management of other risks. Due to its specific nature, the ESG risk is a comprehensive risk affecting the individual risks that occur at the Bank rather than a separate type of risk; the ESG risk management takes into account the effect of ESG factors on the Bank's operations, its financial result and development and the effect of the Bank's operations on the society and the environment – the information on the approach to ESG risk management is provided in Chapter 5,
5) organisational independence of the risk management area from business operations is maintained,
6) risk management is integrated with planning and controlling systems,
7) the risk level (including ESG risk levels) is monitored and controlled on an ongoing basis,
8) the risk management process supports the implementation of the Bank's strategy and is consistent with the risk management strategy, in particular in terms of the level of risk tolerance.

The risk culture is described in Bank's risk management strategy along with the types of risk managed by the Bank and the risk appetite (strategic tolerance levels). The Bank's risk management strategy and internal procedures containing guidelines for handling irregularities and instances of exceeding risk thresholds are available to all employees in the internal regulations database and on the Bank's intranet portals addressing the management of the individual risks. Furthermore, the information on updates of these procedures is communicated regularly to the Bank's employees and appropriate training is provided in the case of the risks that affect all employees.

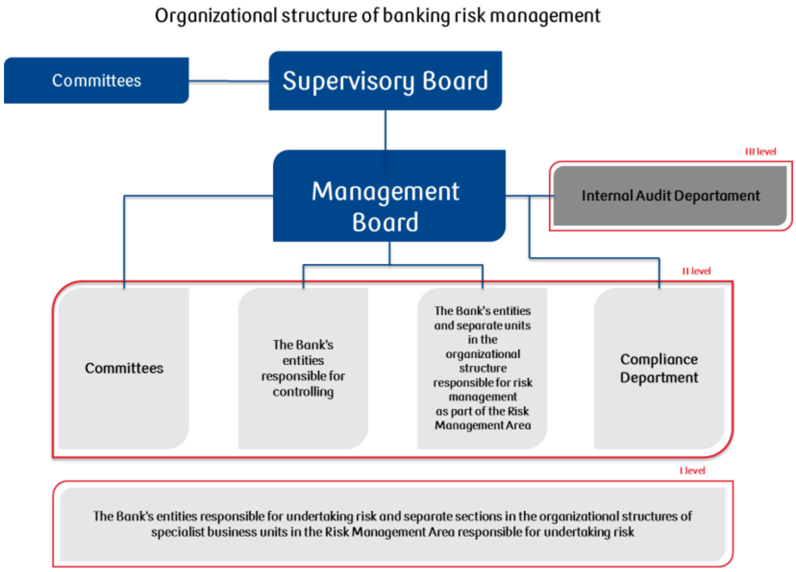
The risk management process in the Bank's Group consists of the following elements:

1) risk identification, which involves the identification of current and potential sources of risk and estimating the materiality of its potential impact on the Bank's and the Bank's Group's operations. As part of risk identification, the risks considered to be material in the operations of the Bank, the entities of the Bank's Group and at the Group as a whole are identified. The assessment of risk materiality and the analysis of the impact of individual risks on the business operations of the Bank and the Bank's Group entities are carried out at least once a year. In the event of new risk types arising, significant changes in the strategy and action plans of the Bank or the Bank's Group or in the external environment, a materiality assessment may be carried out more frequently. A materiality assessment is carried out by determining the degree of occurrence of individual factors affecting a given risk, determining whether the analysed risk is a material risk that has a material impact on profitability and the capital necessary to cover it, or whether it is subject to monitoring. As far as prudential consolidation is concerned, the following risks are considered material in the Bank's Group: credit risk, risk of mortgage loans in foreign currencies for households, foreign exchange risk, interest rate risk, liquidity risk (including financing risk), operational risk, business risk, risk of macroeconomic changes and model risk. For the risk types which have been recognised as material, the method of estimating internal capital is determined at the next stage. For the risk types recognised as being subject to monitoring at the Bank and the Bank's Group entities, the current values of materiality ratios are compared with the respective thresholds on a semi-annual and annual basis. The entities of the Bank's Group may consider other risks to be material for them, taking into account the specific nature and scale of their operations and the market on which a specific entity operates. The Bank verifies the materiality of such risks at the Bank's Group level. The entities of the Bank's Group participate in the assessment of materiality of the risks initiated by the Parent Company and assessed at the Bank's Group level;
2) risk measurement and assessment – risk measurement that includes determining risk measures adequate to the type and materiality of a risk, data availability, and the quantitative measurement of the risk by means of defined measures, as well as a risk assessment that consists of determining the volume or scope of the risk from the perspective of achieving risk management objectives. Risk measurement involves carrying out tasks related to measuring risks for pricing policy purposes as well as stress tests and reverse stress tests which are elements of reliable risk assessment. Stress tests are carried out to determine the expected impact of assumed events on the results of the Bank and the Bank's Group (e.g., profits or capital, etc.). On the other hand, a reverse stress test is a rigorous test of the ability of the Bank and the Bank's Group to survive. Moreover, the Bank also performs comprehensive stress tests (CSTs), which include analysing the impact of changes in the Bank's environment and functioning on the financial position of the Bank and the Bank's Group;
3) risk control – which consists of defining the tools used to diagnose or mitigate risk levels in the individual areas of operation of the Bank and the Bank's Group. Risk control involves determining risk controls tailored to the scale and complexity of the operations of the Bank and the Bank's Group, in particular in the form of monitored strategic tolerance limits for individual risk types, and if such limits are exceeded, management activity is undertaken;
4) risk forecasting and monitoring – which consists of preparing risk level forecasts on a regular basis and monitoring deviations of the actual values from the forecasts or the assumed benchmarks (e.g., limits, thresholds, plans, prior period measurements, recommendations and guidance issued by an external supervisory and control authority), as well as conducting specific, reverse and comprehensive stress tests. Risk level forecasts are verified. Risk is monitored at a frequency adequate to the materiality of a given risk type and its volatility;
5) risk reporting – which consists of informing the Bank's bodies regularly of the results of risk measurement or risk assessment, the activities undertaken and the recommended activities. The scope, frequency and the form of reporting are adjusted to the management level of the recipients. In the event of the Bank's potential liquidity problems, the Supervisory Board is informed immediately of the Bank's liquidity level, threats and the remedial measures

being undertaken, as well as situations which require launching capital emergency actions and a recovery plan for the Bank or the Bank's Group and in the case of occurrence of material operational events or security incidents;
6) management activities – which consist, in particular, of issuing internal regulations that determine the process of managing individual risk types, define risk tolerance levels, establish limits and thresholds, issuing recommendations, making decisions, including decisions regarding the use of tools supporting risk management. The objective of management activities is to shape the risk management process and the risk levels.

Risk management in the Bank takes place on all levels of the Bank's organisational structure.

Chart 2.1. Bank's risk management organisation



The risk management process is supervised and assessed by the Supervisory Board, which regularly receives information on the Bank's and the Bank's Group's risk profile and the most important actions taken in the area of risk management.

The Supervisory Board is supported by the following committees:
1) Appointments and Remuneration Committee (SBARC),
2) Risk Committee (SBRC),
3) Audit Committee (SBAC).

The SBARC supports the Supervisory Board in its statutory duties and tasks arising from the legal regulations, with regard to shaping and pursuing the Policy of Remuneration of the employees of the Bank and the PKO Bank Polski S.A. Group. 10 meetings of SBARC have been held in 2022. The SBARC is described in more detail in Chapter "6. Remuneration policy" of this Report.

The Risk Committee of the Supervisory Board supports the Supervisory Board by, among other things, formulating opinions on the Bank's overall, current and future readiness to take risks, taking into account the risk profile of the Bank's Group entities, as expressed, in particular, in the strategic limits of tolerance for individual risk types, formulating opinions on solutions related to mitigating the operational risk, supporting the Supervisory Board in supervising the implementation of the risk management system in the Bank by the Management Board, in assessing the adequacy and effectiveness of the risk management system, as well as in supervising the implementation of the risk management strategy.

The Audit Committee of the Supervisory Board supports the Supervisory Board, in particular, by monitoring the financial reporting process and performing financial audit activities, as well as controlling the independence of the registered auditor and the audit firm. The SBAC also supports the Supervisory Board by monitoring the adequacy and effectiveness of the internal audit system, including the adequacy and effectiveness of the control function, the compliance unit and the internal audit unit, as well as monitoring the effectiveness of the risk management system, in particular by analysing the information received from the Risk Committee.

9 meetings of the SBRC and 12 meetings of the SBAC were held in 2022.

In terms of risk management, the Management Board is responsible for strategic risk management, including supervision and monitoring of actions undertaken by the Bank regarding risk management, as well as the volume and profile of the risk associated with the operations of the Bank's Group entities. The Management Board makes major decisions affecting the risk profile of the Bank and adopts internal regulations concerning risk management.

In its risk management activities, the Management Board is supported by the following committees:
1) Risk Committee (RC),
2) Asset and Liability Management Committee (ALCO),
3) Bank's Credit Committee (BCC),
4) Operational Risk Committee (ORC).

The RC monitors the integrity, adequacy and effectiveness of the risk management system, capital adequacy and the implementation of the risk management policies in compliance with the Bank's strategy, it also analyses and evaluates the application of the strategic risk tolerance limits defined in the Risk Management Strategy of PKO Bank Polski S.A. and the Bank's Group. The RC supports the Management Board in the risk management process by formulating recommendations and issuing opinions on capital adequacy and the effectiveness of the risk control system.

10 meetings of the Risk Committee were held in 2022.

The ALCO manages the Bank's assets and liabilities by influencing the structure of the Bank's balance sheet and its off-balance sheet items in a manner conducive to achieving the optimum financial result. The Committee supports the Management Board in the activities of the Bank and the Bank's Group, related to shaping the balance sheet structure, capital adequacy management, profitability management, taking into account the specific nature of the operations and the generated risk, financial risk management, including market risk and liquidity risk, business risk and credit risk (both settlement and pre-settlement) of wholesale market transactions.

In 2022, the ALCO made decisions using the electronic means and at 15 meetings.

The BCC issues opinions and makes credit decisions in respect of individual, quantitatively material credit exposures or issues recommendations in this respect for the Management Board, issues recommendations and makes decisions regarding the management of non-performing receivables, as well as decisions related to the approval of credit risk models and parameters and the results of validation of such models and accepts credit risk reports.

In 2022, the BCC made decisions using the electronic means and at 79 meetings.

The ORC supports the Management Board in operational risk management by making decisions, in particular, concerning the AMA approach and operational risk management tools used in the Bank, as well as issuing recommendations and guidance regarding the activities related to operational risk management. The ORC formulates opinions and recommendations regarding operational risk management in the entities of the Bank's Group, which are forwarded as part of the Bank's corporate governance of those entities.

In 2022, the ORC made decisions using the electronic means and at 11 meetings.

The ALCO, BCC, ORC, RC, the Management Board, SBRC, SBAC and the Supervisory Board receive periodical reports concerning individual risk types and capital adequacy.

The committees functioning in the Bank within the scope of their tasks and competences take decisions, issue recommendations and opinions on activities related to ESG risk.

The risk management process is carried out at three independent but complementary levels:

1) The First Level – consists of the product management organisation structures selling products and supporting customers, as well as other structures performing operational tasks that generate risk, which operate under separate internal rules. This function is performed by all of the Bank's and the Bank's Group's entities. The Bank's entities implement appropriate risk controls, including in particular limits, designed by them and located at the second level. They also ensure that they are met by means of appropriate controls. At the same time, the entities of the Bank's Group are obliged to comply with the principles of consistency and comparability of risk assessment and control in the Bank and the Bank's Group entities, taking into account the specific nature of an entity's business and the market in which it operates,
2) the second level comprises the activities of the compliance unit, as well as identification, measurement, assessment or control, monitoring and reporting material risk types and the identified threats and irregularities, those tasks are carried out by specialised organisational structures operating based on the Bank's internal regulations; the objective of those structures is to ensure that the operations carried out on the first level are properly designed in the Bank's internal regulations, and that they effectively mitigate risk, support risk measurement, assessment and analysis and the effectiveness of the operations. The second level supports actions undertaken in order to eliminate unfavourable deviations from the financial plan which affect the quantitative strategic risk tolerance limits. The function is performed in particular by the Risk Management Area, the Compliance Department, the Bank's units responsible for controlling and the relevant committees,
3) the third level comprises the internal audit, which performs independent audits of elements of the Bank's management system, including the risk management system, as well as the internal audit system. The internal audit operates separately from the first and second levels. The function is executed in accordance with the Bank's internal regulations governing the functioning of the internal audit system.

The independence of the levels consists of ensuring organisational separation at the following levels:
1) the second level function regarding the creation of system solutions is independent of the first level functions,
2) the function of the third level is independent of the functions of the first and second levels.
3) the function of compliance risk management reports to the President of the Management Board.

In 2022, the Bank's units responsible for managing material risk and other risks identified in the Bank's operations, within the scope of their respective competences, were situated in: The Banking Risk Division, Corporate Receivables Department, Restructuring and Debt Collection Centre, Outsourcing and Sale of Receivables and Isolated Receivables Department, Retail Customer Credit Risk Centre and Corporate Customer Credit Risk Centre, which are supervised by the Vice-President of the Management Board responsible for the Risk Management Area, and in the Compliance Department supervised by the President of the Management Board.

The objective of the Banking Risk Division is to develop and implement systemic solutions for managing risks that have been identified as material, to manage capital adequacy, and to initiate and coordinate integrating activities in relation to risk management in the Bank's Group.

As far as risk management is concerned, the Banking Risk Division is responsible for, in particular:
1) identification of risk factors and sources,
2) measuring, assessing, monitoring and reporting risk levels on a regular basis,
3) coordinating Strategy-related activities,
4) measuring and assessing capital adequacy,
5) preparing recommendations for the Management Board or the committees on the acceptable risk level,
6) developing and formulating opinions on the Bank's internal regulations concerning risk and capital adequacy management,
7) developing IT systems and applications dedicated to support risk and capital adequacy management,
8) coordinating the implementation of consistent risk management standards in the Bank's Group,
9) validating models used in risk management[4].

The Corporate Debt Department is responsible for, in particular:
1) managing the acquired non-performing receivables, as defined in the Bank's separate internal regulations, including developing and implementing the optimal method for recovering such receivables,
2) cooperating with the Bank's Group entities in assessing customer or transaction risk and developing a strategy for dealing with non-performing receivables from the same customers,

[4] The validation of models is under the direct supervision of the Vice-President of the Management Board responsible for the Risk Management Area.

3) preparing proposals for outsourcing the collection or sale of non-performing receivables,
4) foreclosing property as a result of the collection of receivables,
5) reviewing and classifying the receivables managed by the Department and the off-balance sheet liabilities granted, and determining the amounts of impairment allowances related to the risk of the Bank's operations.

The Restructuring and Debt Collection Centre is responsible for, in particular:
1) managing the taken-up debt claims, including taking effective steps to recover the receivables,
2) creating system solutions in order to recover difficult receivables,
3) acquiring and managing the assets taken over as a result of enforcement of the receivables,
4) monitoring the Bank's business in the area of difficult receivable operations and providing information for the management of these receivables,
5) conducting investigations and conducting early monitoring of delays in debt repayment.

The Outsourcing and Sale of Receivables and Isolated Receivables Department is responsible for, in particular:
1) participating in identifying non-performing receivables which can be sold or outsource,
2) preparing proposals for taking measures related to the sale and outsourcing of non-performing receivables and monitoring the execution of related agreements,
3) transferring selected difficult receivables to outsourcing,
4) sales of selected difficult receivables.

The Retail Customer Credit Risk Division is responsible for, in particular:
1) designing and developing the effective system of credit risk assessment connected with financing of customers served within the Retail Market Division and International Banking, as well as the Analysis, Corporate and Business Banking and Wealthy Customer Area, including the Bank's internal rules laying down the principles (policies) and methodologies of credit risk assessment and the tools supporting processes,
2) assessing and taking credit risk within the powers granted, and monitoring the customer and transaction credit risk.

The Corporate Customer Credit Risk Division is responsible for, in particular:
1) designing and developing the effective system of credit risk assessment connected with financing of corporate market customers, including the Bank's internal rules laying down the principles (policies, including industry policies) and methodologies of credit risk assessment and the tools supporting processes,
2) assessing and taking credit risk within the powers granted, and monitoring the customer and transaction credit risk,
3) operationally managing the Bank's exposure concentration risk.

As far as risk management is concerned, the Compliance Department is responsible for, in particular:
1) managing compliance risk,
2) managing conduct risk,
3) managing reputation risk,
4) organising and monitoring control function.

The Bank supervises the functioning of the individual entities of the Bank's Group. As part of its supervisory role, the Bank supervises the risk management systems and supports their development. In addition, the Bank takes into account the level of risk of the operations of the individual entities for the purposes of the risk monitoring and reporting system at the Bank's Group level.

The principles and methods for assessing the specific risks of the Bank's Group entities are defined in the internal regulations implemented by these entities. The Bank's Group entities create and update internal regulations concerning the management of specific risks in consultation with the Bank and taking into account the recommendations issued by the Bank and the Risk Management Strategy of PKO Bank Polski S.A. and the Bank's Group. The internal risk management regulations of the Bank's Group entities take account of:
1) the principle of consistency and comparability of methods of assessing individual risks at the Bank and entities of the Bank's Group,
2) the structure of and the relationships between the Bank's Group entities,
3) specificity and scale of operations of the Bank's Group and the market in which it operates,
4) the risks managed in the Bank's Group entities resulting from the specific nature of their activities.

At least once a year, the units of the Banking Risk Division and the Compliance Department review the Risk Management Strategy of PKO Bank Polski S.A. and the Bank's Group, including, in particular, the strategic risk tolerance limits, in order to tailor them to the current and forecast market conditions and the needs of the Bank and the Bank's Group. In justified cases resulting from significant changes in macroeconomic conditions or the results of the stress tests performed, a review may be conducted more frequently than once a year. Moreover, the risk management methods and the risk measurement or assessment systems are tailored to the scale and complexity of risk, the Bank's current and planned operations and its environment, and they are verified and validated periodically.

In the Bank's Group entities, risk management is supervised, in particular, by involving the units of the Risk Management Area and the Compliance Department, the Planning and Controlling Department or the relevant committees operating in the Bank in the process of formulating opinions on the transactions of the Bank's Group entities in accordance with the Bank's separate internal regulations. At least once a year, a list of the key entities of the Bank's Group having a significant impact on the risk profile of the Bank's Group is prepared. For those entities, the units of the Risk Management Area and the Compliance Department, in accordance with the Bank's separate internal regulations, formulate an approach to minimum quantitative strategic tolerance limits for the risks specific to a given entity and the method of reporting them.

The priority of the Bank's Group is to maintain its strong capital position, which includes effective capital adequacy management, supporting Polish enterprises, ensuring customer satisfaction, innovations, involvement in creating new market standards and counteracting cyber threats, while maintaining the priorities with regard to business effectiveness and effective cost control, an adequate level of own funds, and an appropriate assessment and level of risk.

The Bank is in the process of the systemic resolution of the problem of Swiss franc (CHF) housing loans by offering settlements to its retail Customers who had active loans in CHF, which were intended for satisfying their own housing needs. This solution is based on the proposal of the President of the Polish Financial Supervision Authority and consists of conversion of a CHF loan to a PLN loan on the terms that would apply had the loan been initially granted in PLN with interest based on WIBOR plus a historical margin applicable to such loans. By 31 December 2022, 37.5 thousand mediation applications were registered, 20,944 mediations concluded with a positive outcome, 8,124 mediations concluded with a negative outcome. The total number of settlements concluded as at 31 December 2022 was 20,396, of which 19,786 were concluded in mediation proceedings and 610 in court proceedings.

The transactions conducted in 2022 within the Bank's Group with related entities and related parties of the Bank's Group did not have a significant effect on the Bank's risk profile.

2.2 Comprehensive stress tests and reverse stress tests

Comprehensive stress tests are complementary to stress tests specific to individual risks, and they take into account collectively identified risks, in particular the risks considered material from the perspective of the Bank or the Bank's Group. They include analysing the impact of changes in the macroeconomic environment or the functioning of the Bank's Group on the financial position of the Bank's Group, in particular: the income statement, the statement of financial position, own funds, capital adequacy (including own funds requirements), internal capital, capital adequacy measures, credit portfolio quality, and selected liquidity measures and indicators initiating the Recovery Plan. Calculations are performed using the Bank's internal models, taking into account the macroeconomic assumptions adopted. The data is analysed with a high degree of detail, taking into account the segmentation into portfolios and product types.

Comprehensive stress tests include periodical tests and supervisory tests. Periodical tests are performed on an annual basis, over a 3-year time horizon, in order to assess the risk of macroeconomic changes and to update the Recovery Plan. The stress scenarios used to assess the level of risk of macroeconomic changes assume a shock weakening of the economy compared with the baseline scenario, reflecting the historical cases of global financial crises. The stress scenarios for the purposes of the Recovery Plan, in accordance with the regulations of the Banking Law, are used to estimate the impact of harsh changes in the macroeconomic environment or the functioning of the Bank and the Bank's Group on the position of the Bank and the Bank's Group in crisis conditions and to verify the effectiveness of recovery measures.

Supervisory tests are conducted at the request of external supervisory authorities, over a time horizon set by the supervisory body, based on the macroeconomic and financial variables contained in the scenarios given by the supervisory authorities.

Comprehensive stress tests collectively cover the following risks:
1) credit and concentration risk,
2) market risk,
3) liquidity risk,
4) operational risk,
5) business risk,
6) risk of excessive leverage.

Reverse stress tests (RSTs) complement the results of the comprehensive stress tests and are intended to assess the Bank's resilience to macroeconomic changes. As regards the risk of macroeconomic changes, RSTs are conducted in the form of a sensitivity analysis and consist of formulating potential, negative scenarios related to the Bank's liquidity or capital adequacy, and then finding events contributing to their materialisation.

2.3 Internal audit and risk management system

The Bank has an internal audit system in place, which forms part of the Bank's management system. The Bank's Management Board is responsible for the design, implementation and functioning of an adequate and effective internal audit system. The Supervisory Board supervises the implementation and functioning of an adequate and effective internal audit system and evaluates its adequacy and effectiveness, including the adequacy and effectiveness of the control function, the compliance unit, and the internal audit unit. The internal audit system is evaluated on the basis of specific criteria, taking into account the information provided by the Bank's Management Board, the Audit Committee of the Supervisory Board, the compliance unit, and the internal audit unit, findings of the registered auditor and those resulting from the supervisory activities of the competent institutions, as well as other information and documents which are relevant to the adequacy and effectiveness of the internal audit system. In this respect, the Supervisory Board is supported by the Supervisory Board Audit Committee which is responsible, in particular, for monitoring the effectiveness of the internal audit system.

The objectives of the internal audit system are to ensure:
1) efficiency and effectiveness of the Bank's operations,
2) reliability of the financial reporting,
3) compliance with the risk management principles at the Bank,
4) compliance of the Bank's activities with the generally binding legal regulations, internal regulations of the Bank, supervisory recommendations and market standards adopted Bank.

The internal audit system is arranged at the Bank on three independent levels:
1) the first level consists of the Bank's organisational structures conducting operating activities, including in particular the sales of products and customer service, and the Bank's other organisational structures carrying out risk-generating operating tasks and functioning on the basis of the Bank's separate internal regulations,
2) the second level comprises the activities of:
   a) the compliance unit,
   b) the specialised organisational structures of the Bank responsible for identification, measurement, control, monitoring and reporting of risks, threats and irregularities in order to ensure that the activities implemented at the first level are properly designed and the second level structures effectively manage the risks and support the effectiveness of the Bank's operations,
3) the third level comprises the activities of the internal audit unit, which performs independent audits of elements of the Bank's management system, including the risk management system and the internal audit system.

The said levels are independent, which means that:
1) the second level is independent of the first level as regards the creation of system solutions,
2) the third level is independent of the first and second level.

The internal audit system at the Bank comprises:
1) the control function,
2) the compliance unit – the Compliance Department,
3) the internal audit unit – the Internal Audit Department.

The control function ensures compliance with controls relating, in particular, to risk management at the Bank, this function covers all of the Bank's units and the organisational positions in these units responsible for the performance of tasks allocated to the specific function.

The control function comprises:
1) control mechanisms,
2) independent monitoring of compliance with control mechanisms,
3) reporting as part of the control function.

The Bank determines and the Management Board approves the list of material processes which have a material impact on the achievement of the internal audit system objectives and business objectives of the Bank and ensures periodical reviews of the processes in place at the Bank from the perspective of their materiality.

Controls are embedded in the processes taking place at the Bank and in the systems or applications which support these processes. These controls are tailored to the objectives of the internal audit system, which are related to the processes in place at the Bank and their complexity, the risk of irregularities and the specific nature of the Bank's operations, and take into account the resources available to the Bank. These controls are subject to independent monitoring at all levels of the internal audit system. Such independent monitoring of compliance with controls is performed:
1) horizontally – by a Bank unit within that unit or within another unit at the same level,
2) vertically – by the Bank units at the second level with respect to the first level units.

The Bank's units are responsible for performing specific activities associated with horizontal or vertical monitoring within the scope of their tasks and powers. Independent monitoring includes current verification and testing of the controls.

The compliance unit is an organisationally separate, independent unit which plays the key role in ensuring compliance and managing compliance risk understood as the risk of suffering legal sanctions, financial losses or reputation loss as a result of non-compliance on the part of the Bank, the Bank's employees or the entities acting on its behalf with the generally applicable laws, the Bank's internal regulations and the market standards adopted by the Bank.

The compliance unit is responsible for developing solutions aimed at ensuring compliance and compliance risk management, as well as identification, assessment, control, monitoring and reporting of this risk at the Bank.

Internal audit is an independent and objective assurance and advisory function which performs systematic and organised assessments of the individual areas of the Bank's operations and suggests steps to be taken to increase the quality and effectiveness of the Bank's operations.

The objective of the audit unit is:
1) as part of its assurance activities – to evaluate the adequacy and effectiveness of the risk management system and the internal audit system at the first and second levels of the internal audit system, taking into account the adequacy and effectiveness of the risk controls and control mechanisms selected for auditing,
2) as part of its advisory activities – adding value to and improving the processes in the Bank.

The Bank operates the following mechanisms to ensure independence of the compliance unit and the internal audit unit:
1) approval of the Audit Charter and the rules for ensuring compliance and managing compliance risk by the Management Board of the Supervisory Board,
2) subordination of the compliance unit to the President of the Management Board,
3) functional subordination of the internal audit unit to the Audit Committee of the Supervisory Board and its administrative subordination to the President of the Management Board,
4) the internal audit unit, as a third level unit, not being subject to independent monitoring by the Bank's organisational units situated at the second level of the internal audit system,
5) ensuring direct access to members of the Management Board and the Supervisory Board to directors of the said units,
6) participation of the directors of the said units in the meetings of the Management Board,
7) participation of the directors of the said units in the meetings of the Supervisory Board and the relevant Committees when their agenda includes issues relating to the internal audit system or risk management,
8) appointment and dismissal of internal audit unit director and the compliance unit director require prior approval of the Supervisory Board,
9) approval of the amount of remuneration of the internal audit unit director by the Supervisory Board or its competent committee, respectively,
10) approval of the amount of remuneration (including bonuses) of the compliance unit director by the Audit Committee of the Supervisory Board, taking into account the principle that the said remuneration may not differ from the remuneration of other persons performing key functions at the Bank and that it should not be directly dependent on the Bank's financial results,
11) notifying the PFSA of any changes of directors of the said units, including the reasons for those changes,
12) providing the employees of the aforementioned units with access to all necessary information (including confidential and sensitive information), rooms and IT systems (without the possibility of interference with the system's resources), as well as communication with the Bank's employees, to the extent they deem necessary to perform their tasks,
13) non-participation of the employees of the said units in the execution of day-to-day business tasks,
14) providing solutions for controlling the remuneration of the employees of the aforementioned units which guarantee their independence and objectivity in the performance of their tasks and which enable employing people with appropriate qualifications, experience and skills,
15) protecting employees of the said units from unjustified termination of their employment,
16) organisational separation of the aforementioned units and preventing the employees of these units from performing any duties other than those assigned to them;
17) ensuring financial resources necessary for the effective performance of duties and continuous improvement of the skills and qualifications of the employees of the said units;

Information on irregularities, results of assessments and other material issues identified by the individual components of the internal audit system are presented in periodical reports addressed to the Management Board, the Supervisory Board Audit Committee, the Supervisory Board Risk Committee, or the Supervisory Board.

On the Bank's website (www.pkobp.pl in the Investor Relations section, in the Corporate Governance tab), the Bank has placed a description of the internal audit system which takes into consideration, in particular, a description of: the objectives of the internal audit system; the roles of the Management Board, the Supervisory Board and the Audit Committee of the Supervisory Board; the three independent levels on which the internal audit system is organised; the individual elements of the internal audit system, i.e., the control function, the compliance unit, and the internal audit unit.

The entities belonging to the Bank's Group have internal audit systems adapted to the specific nature of their operations. These entities develop and implement internal regulations defining, in particular, tasks relating to the control activities carried out within the internal audit system and the division of responsibility for these tasks. The operation of the internal audit systems in the companies depends on the size and scope of operations of the entities belonging to the Bank's Group. In most entities, there are separate organisational units or positions performing these functions, reporting directly to the Management Board of the given company or to the Supervisory Board. In the cases justified by an entity's operating profile and its organisational structure (small entities with a limited range of activities), control activities are performed by their managers, without a structurally separated internal audit function or unit. The Bank takes into account the role of the Bank's Group entities in identifying the material processes with regard to their contribution to ensuring the achievement of the objectives of the Bank's internal audit system.

2.4 Assessment of the members of the Management Board and the Supervisory Board, information on the recruitment policy and the suitability assessment

The members of the Management Board and the Supervisory Board are subject to a suitability assessment in accordance with the regulations in place at the Bank, i.e.:

1) the Policy on the suitability of the members of the Management Board and key officers of the Bank and a suitability assessment in the Bank's Group companies (and the Principles and methods for suitability assessment of candidates for Management Board members and members of the Bank's Management Board).
2) the Policy on assessing the suitability of candidates for members and members of the Bank's Supervisory Board.

The above-mentioned policies define the directions of actions taken with respect to the selection, appointment and succession planning of members of the Management Board the and Supervisory Board and define the principles for assessing the suitability of these bodies. Based on the provisions introduced, the Supervisory Board (with the participation of the Supervisory Board Appointments and Remuneration Committee, hereinafter: SBARC) makes decisions regarding the selection and suitability assessment of the candidates and members of the Management Board, and the General Shareholders' Meeting (hereinafter: GSM) makes decisions regarding the selection and suitability assessment of the candidates and members of the Supervisory Board.

The suitability assessment of the members of the Management Board is carried out by the SBARC, by accepting a relevant assessment report, which is then approved by the Supervisory Board. The sources of data for the report include the information and documents submitted by candidates for members of the Management Board or persons already appointed to these positions. In making the assessment, the SBARC may be assisted by the Bank's unit responsible for human resources or an external consultant and use other sources of information. The report is forwarded to the Supervisory Board which, if it is required by the regulations and guidelines of the supervisory authorities, informs the PFSA of the results of the suitability assessments made.

Verification of suitability of the members and candidates for members of the Management Board takes the form of an individual and collective assessment. Such assessment is carried out as a preliminary assessment during the qualification procedure before appointing a Management Board member, and as a periodical assessment carried out once a year for persons already holding these positions. In other justified cases, in particular in the event of the occurrence of any circumstances affecting the individual or collective suitability assessment performed to date, an additional suitability assessment may be performed.

The GSM performs the individual suitability assessment of the individual candidates to and members of the Supervisory Board and the collective assessment of the whole Supervisory Board each time a new Supervisory Board member is appointed and once a year as part of the periodical assessment. The GSM may also perform an additional suitability assessment in other, justified situations, which affect the requirements addressed to the Supervisory Board or its individual members. Such additional assessments shall be initiated by the Bank.

The suitability assessment takes into account the criteria arising from the respective guidelines issued by a national or European supervisory authority and the requirements set out in the generally applicable laws, while focusing primarily on the assessment of qualifications understood as knowledge, experience and skills in the field of the relevant position, as well as in the field of supervision (the Supervisory Board), management (the Management Board), the structure of the Bank's Group and the related potential conflicts of interest, as well as sufficiently impeccable reputation. Additionally, the assessment involves the evaluation of integrity and adherence to ethical rules, the ability to formulate independent judgments and the possibility to dedicate a sufficient amount of time to performing the relevant duties, while taking into account the limitations on undertaking other activities and the ability to discharge duties in periods requiring particularly increased activity, including, but not limited to, those arising from restructuring, transfer of institutions, acquisitions, mergers, acquisitions or crisis situations.

The assessment of collective suitability, in addition to the guidelines and requirements set out in the generally applicable laws, is focused primarily on ensuring an appropriate "collective" level of knowledge, skills and experience in the context of the nature and scope of the Bank's operations and the material risks of such operations and in terms of the ability of the Management Board as a whole to manage the Bank and the Supervisory Board as a whole to supervise the Bank's operations.

The selection of Supervisory Board members also takes into account the fact that the Bank is obliged to have a sufficient number of independent Supervisory Board members who satisfy the independence criteria applicable to audit committee members, as specified in the Act on registered auditors, audit firm and public oversight.

In selecting the members of the Management Board and the Supervisory Board, the principle of diversification of the members and the principles of succession management are taken into account. These principles are aimed at ensuring the continuity of decision-making and an appropriate selection of the Management Board and the Supervisory Board members in order to obtain a wide range of powers, knowledge and skills adequate to the position, which guarantee that the members of the Management Board and the Supervisory Board will, individually and collectively, issue and make high quality independent opinions and decisions relating to the entire range of the Bank's operations.

While respecting the outcome of the suitability assessment, the Supervisory Board and the GSM strive to achieve a gender balance within the structure of those bodies, or at least to achieve 30% as minimum participation level of the less numerous gender. However, the objectives of diversification in the composition of the Management Board and the Supervisory Board are taken into account in the selection process only to the extent that it does not adversely affect the functioning and suitability of these bodies. More information on diversity is included in the Directors' Report on the operations of the PKO Bank Polski S.A. Group for 2022, prepared together with the Directors' Report on the operations of PKO Bank Polski S.A. for 2022 (11. Corporate Governance, 11.2.10 Policy for ensuring diversity in the composition of the Bank's Management Board and Supervisory Board).

In the course of the Management Board and the Supervisory Board members carrying out their functions, pursuant to Article 395(2)(3) of the Commercial Companies Code, the Annual General Shareholders' Meeting acknowledges the fulfilment of duties by each member of the Management Board and the

Supervisory Board once a year. The acknowledgement of the fulfilment of duties represents a positive assessment of these persons' work, irrespective of the approval of the Directors' Report by the Annual General Shareholders' Meeting, whereas the absence of such acknowledgement represents a negative assessment of a Management Board or Supervisory Board member's work and, in consequence, may lead to their dismissal.

Due to the changes in the composition of the Management Board in 2022 (11. Corporate Governance, item 11.2.9, The Management Board of PKO Bank Polski – composition, c powers and principles of functioning in the Directors' Report of the PKO Bank Polski S.A. Group for 2022) and the related changes in the internal division of powers within the Management Board of the Management Board, the SBARC conducted:

- preliminary suitability assessments – associated with appointment of new Management Board members,
- periodical suitability assessments – associated with the annual suitability assessment of the existing members of the Management Board of the Bank, taking into account the changes in the internal division of powers of the Management Board,
- collective suitability assessments of the Management Board – taking into account the changes in the composition of the Management Board and in the internal division of powers.

As a result of the assessments performed, the SBARC each time confirmed the individual suitability of the newly appointed and existing Management Board members and the collective suitability of the Management Board, taking into account the personal changes made and the changes in the internal division of powers within the Management Board. The above suitability assessments were approved by the Supervisory Board.

Pursuant to the Supervisory Board's decisions made in December 2022, there were 8 members of the Management Board as at 31 December 2022, whereas as at 1 January 2023 there were 9 members of the Management Board. In accordance with the assessments made, as at the abovementioned dates, all members of the Management Board met the requirements set out in Article 22aa of the Banking Law.

Overall, the members of the Management Board occupy 17 positions in the Supervisory Boards of other entities, most of which are the PKO Bank Polski S.A. Group companies, the Bank's joint ventures or associated entities. The number of positions occupied by the individual members of the Management Board complies with the requirements of Article 22aa, clauses 3-5 of the Banking Law.

In connection with the resignation submitted by a member of the Supervisory Board, the General Shareholders' Meeting, appointing a new member of the Supervisory Board in October 2022 (11. Corporate Governance, item 11.2.8, The Supervisory Board of PKO Bank Polski – composition, powers and principles of functioning in the Directors' Report of the PKO Bank Polski S.A. Group for 2022), confirmed the suitability of the individual new Member of the Supervisory Board in connection with their appointment to the current joint term of office and the collective suitability of the entire body which takes into account the existing personal changes. Moreover, the OGSM confirmed the suitability of the existing members remaining on the Supervisory Board as part of the annual suitability assessment.

As at 31 December 2022, there were 11 members of the Supervisory Board. As at that date, all members of the Bank's Supervisory Board met the requirements set out in Article 22aa of the Banking Law.

Overall, the members of the Supervisory Board occupy 17 positions in the Management Boards and Supervisory Boards of other entities (mostly in the Supervisory Boards). The number of positions occupied by the individual members of the Supervisory Board complies with the requirements of Article 22aa, clauses 3-5 of the Banking Law[5].

2.5 Credit risk, including counterparty credit risk

2.5.1 Introduction

Credit risk is understood as the risk of incurring losses as a result of a customer defaulting on their liabilities to the Bank's Group or the risk of a decrease in the economic value of the Bank's Group receivables as a result of a deterioration in a customer's ability to service their liabilities.

The objective of credit risk management is to reduce losses on the loan portfolio and changes in the economic value of exposures on the wholesale market and to minimise the risk of the occurrence of loan exposures at risk of impairment to an acceptable level, while maintaining the expected level of profitability and value of the loan portfolio by shaping on-balance sheet and off-balance sheet items.

The Bank and its subsidiaries forming the Bank's Group are mainly guided by the following principles of credit risk management:

1) every loan transaction is subject to comprehensive credit risk assessment, which is reflected in an internal rating or credit scoring,
2) credit risk relating to lending transactions is measured at the stage of examining a loan application and on a regular basis, as part of the monitoring process, taking into consideration changes in external conditions and in the financial standing of the borrowers,
3) the credit risk of exposures which are material due to their risk level or value is assessed by credit risk assessment units which are independent of the business units,
4) terms and conditions of a loan transactions offered to a customer depend on the assessment of credit risk level generated by the transaction,
5) credit decisions may be taken only by authorised persons,
6) credit risk is diversified, in particular, in terms of geographical areas, industries, products and customers,
7) depending on the credit risk level, appropriate collateral is taken by the Bank to minimise potential future losses.

In the Bank's Group, as part of credit risk, the risk of foreign currency mortgage loans to households is identified. This risk is understood as the risk of incurring losses as a result of a customer defaulting on their liabilities to the Bank in respect of a foreign currency mortgage loan. This risk is considered material at the Bank.

2.5.2 Risk identification

The identification of credit risk consists of recognising current and potential sources and factors affecting the credit risk level in the current and planned lending activities of the Bank's Group.

Credit risk identification involves determining the factors which have a significant impact on the level of credit risk in the operations of the Bank's Group and estimating their potential impact on the operations of the Bank's Group

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[5] In connection with information on the professional activity of a member of the Supervisory Board taken in the course of preparing this report by the Bank, the information is subject to additional verification.

Credit risk identification addresses both the existing and planned loan products offered to the customers of the Bank's Group, the processes of implementation of such products, using IT tools and databases.

2.5.3 Credit risk measurement, estimation and assessment

Credit risk measurement, estimation and assessment take place at customer level, individual lending transaction level and at the level of the loan portfolios of the Bank's Group. The measurement or estimation of credit risk involves carrying out stress tests of the risk related to credit exposures in foreign currencies and in PLN. The assumptions for conducting stress tests ensure a reliable measurement/ estimation of credit risk in the Bank's Group.

The measurement, estimation and assessment of portfolio credit risk includes periodical assessment of such risk taking into account all credit exposures of customers, as well as various aspects of the portfolio, such as customer groups or groups of loan products.

2.5.4 Credit risk measurement methods

Various measures are used to measure and assess portfolio credit risk, in particular:
1) probability of default (PD),
2) loss given default (LGD),
3) credit conversion factor (CCF),
4) expected credit loss (EL),
5) credit value at risk (CVaR),
6) share and structure of impaired credit exposures,
7) coverage ratio of impaired loans,
8) cost of credit risk,
9) stress testing.

PKO Bank Polski S.A. gradually improves the scope of its credit risk parameters, taking into account the IRB approach and expands the scope of application of risk measures so as to fully cover the Bank's loan portfolio with this approach.

The results of portfolio credit risk measurement are taken into account, in particular, in determining the profitability and pricing terms of new or modified loan products, the optimum threshold values conditioning the customer's access to financing by the Bank, determining allowances for expected credit losses and establishing bonus rules.

The credit risk assessment process at the Bank's Group takes into account the requirements of the Polish Financial Supervision Authority as laid down in the PFSA Recommendations. The Bank conducts analyses and stress tests, taking into account, in particular, the PFSA's Recommendations S, T, C, and R. The Bank sets limits which constitute an internal tool determining the appetite for credit risk and concentration risk These limits are a tool which supports the management of these risks. The stress tests and analyses concern the impact of potential changes in the macroeconomic environment on the quality of the Bank's Group's loan portfolio, and their results are presented in the reports for the Bank's bodies. The above information makes it possible to identify and take measures to reduce the negative effects of the impact of unfavourable market situations on the Bank's Group's performance.

2.5.5 Rating and scoring methods

The Bank assesses the risk of individual lending transactions using the scoring and rating methods which are created, developed and supervised by the Risk Management Area. The functioning of these methods is supported by specialist IT applications. The assessment method is defined in the Bank's internal regulations whose main purpose is to ensure a uniform and objective credit risk assessment in the lending process.

The credit risk assessment process at the Bank takes into account the requirements of the PFSA as defined in Recommendation S concerning good practices for the management of mortgage-secured credit exposures and Recommendation T concerning good practices for the management of retail credit exposures.

The Bank assesses the credit risk of retail customers from two perspectives: credit standing in terms of quantity and quality. The assessment of credit standing in terms of quantity consists of examining a customer's financial position, whereas the assessment of credit standing in terms of quality (the assessment of creditworthiness) covers credit scoring and the assessment of information about the customer's credit record, obtained from the Bank's internal databases and external databases.

In the case of companies and enterprises which meet specific criteria, the Bank assesses credit risk using the scoring method. This assessment refers to low-value, non-complex loan transactions and it is performed in two dimensions: a customer's borrowing capacity and their creditworthiness. The assessment of credit standing consists of examining the customer's ability to settle their liabilities, whereas the assessment of the customer's creditworthiness covers credit scoring and the assessment of the past and present conduct of an enterprise and its owners (natural persons) in their lending dealings with banks. In other cases, the credit rating method is used.

The assessment of credit risk related to financing institutional customers is performed in two perspectives: the customer and the transaction. The assessment measures comprise assessing the customer's credibility, i.e., credit rating, and assessing the transaction, i.e., the ability to repay the liability in a specific amount and within a specified time limit. The rating models for institutional customers are developed using the Bank's internal data, thus ensuring that they are tailored to the risk profiles of the Bank's customers. The models are based on a statistical analysis of the relationship between default and a customer's risk scoring. The customer's risk assessment is dependent on the size of the enterprise for which the analysis is conducted and the industry in which the customer conducts business activities. In addition, the Bank uses a model for the assessment of enterprises credited using a specialist financing formula which makes it possible to adequately assess the credit risk of large projects consisting of financing real estate (e.g., office space, retail space, storage space) and infrastructure projects (e.g., telecommunications, industrial, and public utility infrastructure).

Risk assessment models are subject to monitoring at least once a quarter in accordance with the Bank's internal regulations regarding periodical verification of credit risk models. They are also subject to regular independent validation conducted by the Model Validation Department.

The rating and scoring information is widely used at the Bank in credit risk management within the system of competences to make lending decisions and within the system for credit risk measurement and reporting.

2.5.6 Credit risk control

Credit risk control consists of defining tools for diagnosing the credit risk level, applying credit risk controls to reduce the level of that risk and complying with the controls as part of credit risk management, both in lending processes and at portfolio level.

The Bank and the Bank's Group use, in particular, the following risk control tools and mechanisms to manage credit risk:
1) strategic limits of concentration risk tolerance,
2) internal limits of tolerance to credit risk or concentration risk:
   a) limits determining the level of tolerance to portfolio credit risk and concentration risk,
   b) industry limits,
   c) competence limits,
3) verification of the quality of the lending processes,
4) a branch's rating,
5) threshold amounts which trigger involvement of risk analysts in the credit risk assessment.

The Bank and the Bank's Group set internal limits of tolerance for portfolio credit risk, in particular, with regard to:
1) industry segments,
2) exposures arising from credit exposures secured by mortgage and retail exposures,
3) credit portfolio quality,
4) portfolio structure in terms of product/segment/currency/distribution channels,
5) the maximum and individual ratios of the expenditures related to servicing loan and financial liabilities to retail customers' income,
6) loan duration,
7) exposures resulting from leveraged transactions.

The Bank controls the level of its credit exposure to its customers or groups of related customers within the meaning of the Banking Law by setting the maximum level of powers required to make lending decisions concerning lending transactions, including changes in their terms and conditions, and the maximum limits of the competences for these levels, as referred to in the Bank's internal regulations concerning the segregation of competences to make lending decisions. As part of monitoring the competence limits, the Bank verifies, in particular, the level of the lending competences of the authorised persons and the validity of the lending competence certificates awarded to these persons.

The Bank and the entities in the Bank's Group monitor and control the utilisation of strategic credit risk tolerance limits and internal limits on a monthly and quarterly basis. The results of the monitoring are presented in the monthly information for the members of the Risk Committee and in the quarterly or monthly report on credit risk at PKO Bank Polski S.A., respectively. Where the level of utilisation of a strategic limit exceeds the set threshold, the Bank initiates measures to prevent the set level from being exceeded.

2.5.7 Credit risk forecasting and monitoring

Forecasting credit risk and concentration risk consists of predicting the future level of credit risk and concentration risk, taking into account the assumed projection of the development of lending activities and external and internal events. Monitoring credit risk consists of monitoring deviations of the actual values from the forecasts or the assumed points of reference (e.g., limits, thresholds, plans, prior period measurements, recommendations and guidance issued by an external supervisory and control authority), as well as conducting specific and comprehensive stress tests.

Risk level forecasting is subject to backtesting.

Credit risk is monitored for individual lending transactions and for portfolios.

Credit risk monitoring for individual lending transactions is defined, in particular, in the Bank's internal regulations concerning:
1) the assessment of the Bank's credit risk related to financing its customers,
2) customer assessment methodologies or methods,
3) identification of groups of related entities,
4) evaluation of collateral and inspection of real estate and investment projects,
5) recognition of allowances for expected credit losses,
6) the Early Warning System (EWS),
7) operating activities within the lending process.

In order to reduce the time of response to the observed warning signals indicating an increase in the credit risk level, the Bank uses an EWS IT application as well as scoring models used for behavioural assessment.

2.5.8 Risk concentration

The objective of concentration risk management is to ensure a safe loan portfolio structure by mitigating the risks arising from excessive concentrations of exposures which have the potential to generate losses large enough to threaten the financial standing of the Bank's Group or its ability to carry on its core operations or lead to a significant change in the risk profile of the Bank's Group.

The Bank's Group identifies concentration at portfolio level and concentration at entity level.

The Bank's Group monitors exposure concentration risk in relation to:
1) exposures to individual customers and groups of related customers, including large exposures,
2) exposures to groups of customers or credit portfolios exposed to one risk factor.

The risk of concentration of exposures to individual customers and groups of related customers is monitored in relation to the exposure concentration limit, where the total exposure may not exceed 25% of consolidated own funds (Tier 1 capital).

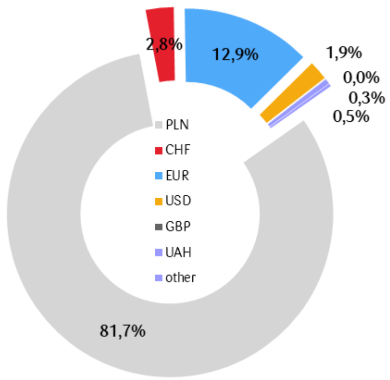
In the process of monitoring the concentration of exposures at entity level, the Bank takes into account:
1) daily monitoring of the concentration level of large exposures within the meaning of Article 392 of the CRR,
2) a monthly check of the utilisation of the limits arising from Article 395(1) of the CRR and from Article 79a(4) of the Banking Law,
3) a quarterly check of internal limits on the risk of concentration at entity level,
4) identification of warning signals and initiating measures aimed at preventing limits from being exceeded,
5) performing stress tests for concentration risk (including scenarios which are the input for comprehensive stress tests that make it possible to assess the impact of correlated factors of credit risk, interest rate risk, currency risk, operational risk and liquidity risk on the level of the Bank's expected credit loss).

Moreover, the Bank's Group analyses concentration risk for:
1) geographical areas,
2) currencies,

(IN PLN MILLION)

3) industries,
4) exposures secured by mortgage,
5) largest entities or groups of related customers.

Chart 2.1. Group credit portfolio currency structure (balance and off-balance)



EUR-denominated exposures constitute the largest part of the foreign currency exposure of the Bank's Group, and they relate to the Bank's loan portfolio. The share of these loans in the foreign currency portfolio amounted to 70.27% as at the end of 2022, which represents a 11.39 p.p. increase compared with the end of 2021. Another group of foreign currency loans are loans in CHF which represented 15.13% of the Bank's Group's foreign currency portfolio as at the end of 2022, which represents a 7.64 p.p. drop compared with the end of 2021.

Table 2.1 Exposures towards the 10 largest customers*

No.	31.12.2022		31.12.2021	
	Value*	Own funds percentage	Value*	Own funds percentage
1	4 700	12.3	5 939	15.4
2	2 756	7.2	2 607	6.8
3	2 453	6.4	2 453	6.4
4	2 164	5.7	2 377	6.2
5	1 928	5.1	1 984	5.2
6	1 775	4.7	1 774	4.6
7	1 657	4.3	1 756	4.6
8	1 676	4.4	1 549	4.0
9	1 595	4.2	1 538	4.0
10	1 500	3.9	1 485	3.9
Total	**22 203**	**58.2**	**23 462**	**60.9**

* Total (on-balance sheet and off-balance sheet) exposure to non-bank customers, which is the basis for determining the exposure concentration limit.

As at 31 December 2022 and 31 December 2021, concentration limits were not exceeded. As at 31 December 2022, the largest concentration of the exposure of the Bank's Group to a group of related customers within the meaning of the Banking Law accounted for 12.3% of the consolidated Tier 1 capital.

As at 31 December 2021, the largest exposure of the Bank's Group to a single entity accounted for 15.4% of the consolidated Tier 1 capital.

Table 2.2 Exposures towards the 5 largest groups of related customers*

No.	31.12.2022		31.12.2021	
	Value	Own funds percentage	Value	Own funds percentage
1	5 836	15.3	6 287	16.3
2	2 869	7.5	2 977	7.7
3	2 762	7.2	2 896	7.5
4	2 705	7.1	2 868	7.4
5	2 704	7.1	2 744	7.1
Total	**16 877**	**44.3**	**17 772**	**46.1**

* Total exposure towards groups of related customers not being a bank (balance sheet and off-balance sheet) which constitute the basis for determining the limit of exposure concentration, except exposures towards the State Treasury (information applies to groups controlled by the State Treasury).

(IN PLN MILLION)

Table 2.3 Maturity of exposures [Template EU CR1-A]

Bank's Group*		31.12.2022				
		a b	c	d	e	f
		Net exposure value				
		On demand and <= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Loans and advances	69 097	81 224	98 074	3 020	251 415
2	Debt securities	10 250	75 091	47 609	-	132 950
3	Total	79 347	156 315	145 683	3 020	384 365

(*) data is presented on a consolidated basis

2.5.9 Impairment of credit exposures

In the area of impairment, the Bank's Group applies IFRS 9 which is based on the concept of expected losses.

The impairment model is applicable to financial assets that are not measured at fair value through profit or loss, comprising:
1) debt financial instruments comprising credit exposures and securities,
2) lease receivables,
3) off-balance sheet financial and guarantee liabilities.

In accordance with IFRS 9, no expected credit losses are recognised for equity investments.

The impairment of credit exposures is measured as 12-month or lifetime expected credit losses on an asset. The horizon of measuring the expected loss depends on whether from the time of initial recognition of the asset the credit risk has significantly increased. Due to this criterion, financial assets are allocated to 3 Stages:
1) Stage 1 – assets, for which credit risk is not significantly higher from credit risk from the date of their initial recognition and impairment is not recognised,
2) Stage 2 – assets, for which credit risk is significantly higher from credit risk from the date of their initial recognition, but impairment is not recognised,
3) Stage 3 – assets, for which impairment is recognised,

Additional category comprises assets granted or purchases with the Purchased or Originated Credit Impaired (POCI) recognised (on the date of granting or purchase).

In order to assess a significant increase in credit risk for mortgage exposures and other retail exposures, the Bank's Group uses a model based on calculating the marginal PD, i.e., the probability of default in a specified month calculated from the date of origination of an exposure. The Bank identifies an indication of significant increase in risk for a given exposure by comparing the curves of the probability of default over the horizon when the exposure persists, as of the date of initial recognition and the reporting date.

In order to assess a significant increase in credit risk for institutional customers, the Bank's Group uses a model based on Markov chains. The calculation of the curve of maximum acceptable deterioration of the loan quality in time, which is not identified as a significant increase in credit risk, takes place on the basis of the probabilities of default estimated on the basis of migrations of customers between individual rating and scoring classes.

In order to identify other indications of significant increase in credit risk the full available qualitative and quantitative information is used, including:
1) marking a credit exposure as POCI without any indication of impairment,
2) restructuring activities granting forbearance to a debtor due to difficult financial situation,
3) delinquency in the repayment of a material amount of principal or interest of more than 30 days, with the exception of credit exposures in respect of interbank deposits, debt securities held by the Group, guarantees for debt security issues, receivables in respect of purchase of securities with a repurchase clause or in respect of "old book" housing loans, in the case of which such delinquency is not an indication of impairment,
4) a material increase in the probability of insolvency compared with the probability of insolvency on the date of initial recognition of a credit exposure,
5) classification of a credit exposure or customer to the Watch List in a given customer segment,
6) the identified early warning signals within the monitoring process indicating the significant increase in credit risk,
7) significant increase in the LTV ratio (for individual mortgage loans),
8) the assessment by an analyst within the tailor-made analysis.

The indications of default and impairment of a credit exposure include, in particular:
1) delinquency in the repayment of a material amount of principal or interest of more than 90 consecutive days,
2) deterioration in the debtor's economic and financial position or a threat to the completion of the investment project financed in the lending period, expressed by putting the debtor into a rating class or risk class indicating a significant threat to debt repayment,
3) the conclusion of a forbearance agreement or the application of relief in the settlement of a receivable due to economic or legal reasons resulting from a customer's distress (until the receivable is recognised as healed),
4) filing a petition for bankruptcy of the debtor, putting the debtor into liquidation or commencing enforcement proceedings against the debtor,
5) declaration of consumer bankruptcy by any of the joint borrowers,
6) information on the death of all borrowers who are natural persons or entrepreneurs running individual business activity or a civil partnership (unless such business activity is continued by a successor).

Changes in the terms and conditions of an agreement, agreed with a debtor or an issuer, forced by their distress (forbearance measures introducing concessions which otherwise would not be granted) are considered forbearance and an indication of impairment. The objective of forbearance is to restore a debtor's or an issuer's ability to fulfil their obligations to the Bank's Group and to maximise the effectiveness of non-performing loan management, i.e., obtaining the highest recoveries possible while minimising the related costs.

Forbearance changes in repayment terms may consist of:
1) dividing the debt due into instalments,
2) changing the repayment scheme (annuity payments, degressive payments),
3) extending the loan period,
4) changing the interest rate,

5) changing the margin,
6) reducing the debt.

Granting concessions recognised as indications of impairment as part of forbearance results in the recognition of a default event and the classification of a credit exposure in the non-performing exposure portfolio. The exposure is excluded from this portfolio (a forbearance agreement ceases to be recognised as an indication of impairment) after 12 months from the introduction of forbearance, provided that all past due payments and at least 6 instalments arising from an agreed schedule are settled during this period, and the customer's current financial position does not pose, in the Bank's Group's opinion, a threat to their compliance with the terms and conditions of the forbearance agreement (unless forbearance includes reducing the amounts due).

Exposures subject to forced forbearance cease to meet the criteria for exposures under forbearance status no earlier than after 24 months from the time this status ceases to be recognised as an indication of impairment, provided that the customer has repaid at least 12 instalments in the target amount and has no debt past due by more than 30 days as at the end of that period.

Information concerning forbearance at the Bank's Group level is described in the consolidated financial statements of the PKO Bank Polski S.A. Group as at and for the year ended 31 December 2022 (Note 61).

In the portfolio method, the expected loss is calculated as the product of credit risk parameters: probability of default (PD), loss given default (LGD) and exposure at default (EAD), each of these parameters is a vector representing the number of months covering the expected credit loss horizon. In the case of exposures classified to the Stage 1 the Bank applies maximally 12-month horizon of estimating the expected loss. In the case of exposures classified as Stages 2 or 3, the expected loss is estimated over the horizon up to the maturity of an exposure or its renewal. With regard to retail exposures without a repayment schedule, the Bank determines such horizon based on behavioural data arising from past observations. The loss expected both in the entire duration of the exposure and in a period of 12 months is the sum of expected losses in the individual periods discounted using the effective interest rate. The Bank adjusts the parameter specifying the level of exposure at the time of default by the future repayments arising from the schedule and potential overpayments and underpayments to specify the value of the asset at the time of default in a given period.

In the calculations of expected credit losses the estimates concerning future macroeconomic conditions are taken into account. In terms of portfolio analysis, the impact of macroeconomic scenarios is taken into account in the amount of the individual risk parameters. The methodology for calculating the risk parameters includes the study of the dependencies of these parameters on the macroeconomic conditions based on historical data. For the purposes of calculating the expected loss, three macroeconomic scenarios based on own forecasts are used, namely the base scenario and two alternative scenarios. The range of the forecast indicators includes the GDP growth rate, unemployment rate, WIBOR 3M, Libor CHF 3M, CHF/PLN exchange rate, property price index, and the NBP reference rate. The final expected loss is the weighted average probability of scenarios from expected losses corresponding to individual scenarios. The Bank's Group assures compliance of the macroeconomic scenarios used for the calculation of the risk parameters with macroeconomic scenarios used for the credit risk budgeting processes.

In case of identifying an impairment of individually significant exposures, the expected credit loss on exposures shall be measured using the tailor-made approach, as a difference between its gross carrying value (for off-balance sheet credit exposure – the value of its balance-sheet equivalent) and the current value of expected future cash flows determined with taking into account the possible scenarios relating to performance of the agreement and credit exposure management, weighted with the probability of their realisation.

The tailor-made approach to the measurement of the expected loss is also applied to individually significant exposures without impairment, in the case of which the application of portfolio parameters in such calculations would be unjustified due to the specifics of the case.

Both the process of assessing a significant increase in credit risk and the process of calculating the expected loss are conducted monthly at the level of individual exposures. They use a computing environment which makes it possible to distribute the results to the Bank's Group's internal units.

The indications for classifying credit exposures as non-performing items (at risk of default) are consistent with the indications of default and impairment.

Past due exposures include credit exposures in the case of which there is delinquency in principal or interest payments, concerning amounts exceeding the quantitative thresholds taken into account when recognising the past due status as impairment.

As far as a specific credit risk adjustment is concerned, the Bank's Group uses the impairment loss on assets which was included in the Bank's Tier 1 funds, in accordance with the CRR and the CRR implementing rules.

In 2022, in the macroeconomic model, the Bank dropped the solutions resulting directly from the approach adopted during the pandemic, i.e., the inclusion of the 2-year average GDP and unemployment projection from the pandemic period as the basis for estimating macroeconomic indicators and the inclusion of the impact of credit moratoria on the reduced materialisation of credit risk. At the same time, factors are included in the model to reflect current domestic and global events: the impact of the current macroeconomic situation (high inflation) on customers' ability to settle their obligations, as well as the impact of Russia's invasion of Ukraine on fuel prices and, consequently, on the health of companies. Additional factors in the model include:

- taking into account an increase in the interest rate on the quality of the credit portfolio and increases in energy prices on the situation of enterprises, using the historically observed portfolio quality dependency on the level of interest rates and energy prices,
- taking into account the rise in energy prices on the situation of enterprises using historically observed dependence,
- consideration of the effect of exchange rate volatility on the quality of the foreign currency housing loan portfolio, as a result of the escalation of hostilities in Ukraine.

In addition, due to the significant influx of refugees and the uncertainty of its impact on the labour market, the model in all portfolios does not take into account a decrease in unemployment as a factor improving the quality of the loan portfolio.

The applied approach to the impact of macroeconomic forecasts on risk parameters describes the situation simultaneously in all branches of the economy and may not take into account the problems of individual industries caused by the pandemic, which is why the Group has conducted additional analyses of the loan portfolio. These analyses, carried out by risk experts, mainly included an assessment of the impact of specific macroeconomic conditions not taken into account in the portfolio approach and helped identify customers and industries particularly affected by the current economic situation. This is particularly the case in the construction, hotel, automotive, office and retail rental sectors, as well as in energy-intensive industries. Exposures with highest PD values (D rating or worse) belonging to identified industries were marked with the indication of "significant increase in credit risk" and covered by increased write-downs. In the fourth quarter, the forecasts of macroeconomic indicators were taken into account in the estimates, and thus the allowance for these customers was determined based on PD for the worst rating class. As a result of these analyses, the Bank increased the write-downs for expected credit losses by approx. PLN 399 million, which represents approx. 25% of the value of write-downs on the entire portfolio of economic loans classified as Stage 2.

(IN PLN MILLION)

Table 2.4 Homogenous exposures portfolio: Corporate portfolio

31.12.2022		a	b	c	d	e	f	g	h
	Scale PD	Oryginal gross carrying amount	Off-balance sheet exposures	EAD after credit risk mitigation and application of the credit conversion factor	Average PD in %	Number of exposures	Average LGD in %	Average maturity	Expected Credit Loss (ECL)
Stage 1	from 0,00 to <0,15%	4 057	4 893	5 686	0.10%	4 126	44.11%	3	11
	from 0,15% to <0,25%	3 588	3 484	4 707	0.19%	8 000	46.31%	5	12
	from 0,25% to <0,50%	7 382	4 648	8 826	0.37%	16 926	39.18%	3	14
	from 0,5% to <0,75%	7 131	9 375	10 591	0.63%	12 815	36.71%	3	17
	from 0,75% to <2,50%	22 911	10 795	26 403	1.66%	104 598	32.71%	3	91
	from 2,50% to <10,00%	23 250	11 633	27 319	4.62%	119 936	30.01%	4	369
	from 10,00% to <45,00%	928	440	1 062	13.91%	5 662	32.92%	4	46
	from 45,00% to <100,00%	14	2	14	69.58%	213	38.76%	2	2
Stage 2	from 0,00 to <0,15%	1	18	4	0.10%	14	34.31%	1	0
	from 0,15% to <0,25%	2	1	2	0.20%	12	33.53%	3	0
	from 0,25% to <0,50%	314	1 234	509	0.29%	74	37.57%	1	7
	from 0,5% to <0,75%	47	27	52	0.68%	87	33.42%	5	1
	from 0,75% to <2,50%	3 480	1 252	3 837	1.84%	16 577	35.31%	4	389
	from 2,50% to <10,00%	11 939	3 693	13 038	5.50%	58 645	32.24%	3	1 282
	from 10,00% to <45,00%	2 987	431	3 125	17.10%	20 086	28.90%	4	339
	from 45,00% to <100,00%	582	17	591	78.78%	6 519	24.27%	3	117

31.12.2022		a	b	c	d
	Time in default	EAD after credit risk mitigation and application of the credit conversion factor	Number of exposures	Average LGD in %	Expected Credit Loss (ECL)
Stage 3	to 12 months	1 221	15 711	36.04%	449
	from 13 to 24 months	783	6 804	45.24%	383
	from 25 to 36 months	650	3 849	45.83%	266
	from 37 to 48 months	483	3 451	68.54%	291
	from 49 to 60 months	319	1 926	78.66%	208
	from 61 to 84 months	1 317	3 461	62.13%	714
	over 84 months	1 286	2 704	73.83%	710
POCI	to 12 months	43	414	37.08%	-3
	from 13 to 24 months	17	263	51.81%	4
	from 25 to 36 months	8	67	53.74%	1
	from 37 to 48 months	9	40	72.75%	2
	from 49 to 60 months	9	33	35.57%	1
	from 61 to 84 months	175	140	5.86%	10
	over 84 months	15	45	61.31%	8

(IN PLN MILLION)

Table 2.5 Homogenous exposures portfolio: Retail portfolio

31.12.2022		a	b	c	d	e	f	g	h
	Scale PD	Oryginal gross carrying amount	Off-balance sheet exposures	EAD after credit risk mitigation and application of the credit conversion factor	Average PD in %	Number of exposures	Average LGD in %	Average maturity	Expected Credit Loss (ECL)
Stage 1	from 0,00 to <0,15%	751	459	948	0.09%	77 100	32.12%	11	1
	from 0,15% to <0,25%	843	724	1 237	0.21%	131 734	44.25%	7	2
	from 0,25% to <0,50%	4 263	1 455	5 124	0.37%	425 645	47.72%	6	13
	from 0,5% to <0,75%	3 859	619	4 248	0.61%	297 353	49.22%	6	18
	from 0,75% to <2,50%	8 937	626	9 345	1.36%	599 663	50.45%	6	99
	from 2,50% to <10,00%	3 949	136	4 049	4.54%	273 592	51.34%	6	158
	from 10,00% to <45,00%	544	6	548	14.45%	43 595	52.50%	6	65
	from 45,00% to <100,00%	1	0	1	80.67%	79	55.87%	6	1
Stage 2	from 0,00 to <0,15%	4	2	5	0.10%	323	31.10%	9	0
	from 0,15% to <0,25%	11	10	15	0.20%	1 284	33.80%	12	0
	from 0,25% to <0,50%	43	9	47	0.38%	1 957	34.51%	9	1
	from 0,5% to <0,75%	62	24	73	0.62%	4 526	39.27%	9	3
	from 0,75% to <2,50%	579	186	690	1.63%	56 189	47.18%	7	44
	from 2,50% to <10,00%	1 036	118	1 109	5.34%	92 417	48.15%	7	136
	from 10,00% to <45,00%	992	19	1 006	20.83%	72 417	49.82%	6	258
	from 45,00% to <100,00%	377	3	380	78.60%	23 573	53.71%	6	217

31.12.2022		a	b	c	d
	Time in default	EAD after credit risk mitigation and application of the credit conversion factor	Number of exposures	Average LGD in %	Expected Credit Loss (ECL)
Stage 3	to 12 months	1 026	84 543	61.36%	549
	from 13 to 24 months	458	33 992	71.85%	268 039
	from 25 to 36 months	236	19 167	75.26%	136 837
	from 37 to 48 months	127	8 538	78.05%	70 828
	from 49 to 60 months	59	4 494	86.63%	35 583
	from 61 to 84 months	100	14 882	98.86%	72 303
	over 84 months	135	13 353	97.51%	80 144
POCI	to 12 months	48	3 649	49.46%	-6 199
	from 13 to 24 months	34	2 827	46.87%	-7 138
	from 25 to 36 months	28	2 165	49.52%	-5 059
	from 37 to 48 months	14	718	53.42%	-1 932
	from 49 to 60 months	2	136	68.29%	-195
	from 61 to 84 months	0	81	100.00%	140
	over 84 months	39	60	37.10%	6 811

Table 2.6 Homogenous exposures portfolio: Mortgage portfolio

31.12.2022		a	b	c	d	e	f	g	h
	Scale PD	Oryginal gross carrying amount	Off-balance sheet exposures	EAD after credit risk mitigation and application of the credit conversion factor	Average PD in %	Number of exposures	Average LGD in %	Average maturity	Expected Credit Loss (ECL)
Stage 1	from 0,00 to <0,15%	59 941	1 079	60 999	0.07%	369 029	31.53%	21	26
	from 0,15% to <0,25%	14 326	86	14 415	0.19%	79 983	32.22%	20	16
	from 0,25% to <0,50%	11 401	56	11 453	0.33%	65 035	32.56%	19	21
	from 0,5% to <0,75%	3 872	46	3 901	0.59%	18 295	33.35%	19	13
	from 0,75% to <2,50%	3 706	418	3 954	1.25%	18 475	35.89%	17	28
	from 2,50% to <10,00%	542	926	1 088	4.16%	1 768	37.97%	6	16
	from 10,00% to <45,00%	13	22	26	12.54%	53	39.36%	4	0
	from 45,00% to <100,00%	-	-	-	-	-	-	-	-
Stage 2	from 0,00 to <0,15%	354	2	356	0.08%	2 420	32.10%	21	15
	from 0,15% to <0,25%	326	3	329	0.20%	2 532	31.71%	18	11
	from 0,25% to <0,50%	2 291	22	2 315	0.38%	16 047	32.82%	17	49
	from 0,5% to <0,75%	1 192	13	1 206	0.61%	7 461	33.78%	17	35
	from 0,75% to <2,50%	3 726	34	3 757	1.41%	21 263	33.97%	18	172
	from 2,50% to <10,00%	2 432	31	2 458	4.80%	12 458	37.18%	18	290
	from 10,00% to <45,00%	602	2	605	19.30%	3 354	42.55%	19	181
	from 45,00% to <100,00%	179	1	182	74.01%	1 213	47.89%	17	112

(IN PLN MILLION)

31.12.2022		a	b	c	d
	Time in default	EAD after credit risk mitigation and application of the credit conversion factor	Number of exposures	Average LGD in %	Expected Credit Loss (ECL)
Stage 3	to 12 months	688	3 002	48.26%	189
	from 13 to 24 months	302	1 839	59.16%	103
	from 25 to 36 months	229	1 546	68.70%	96
	from 37 to 48 months	263	1 356	76.38%	123
	from 49 to 60 months	226	980	90.32%	128
	from 61 to 84 months	450	1 490	99.54%	272
	over 84 months	698	1 273	88.12%	384
POCI	to 12 months	79	235	42.63%	-24
	from 13 to 24 months	10	51	54.25%	0
	from 25 to 36 months	8	36	58.41%	1
	from 37 to 48 months	7	35	65.20%	0
	from 49 to 60 months	11	17	48.33%	1
	from 61 to 84 months	6	14	100.00%	2
	over 84 months	75	84	100.00%	38

2.5.10 Credit risk reporting

Credit risk reporting includes periodical reporting of the loan portfolio risk exposure.

The Bank prepares monthly and quarterly reports on credit risk. In addition to the information concerning the Bank, the reports also contain information on the credit risk level of the entities in the Bank's Group in which a material credit risk level has been identified (among other things, in the KREDOBANK S.A. Group, PKO Leasing SA Group, and PKO Bank Hipoteczny S.A). The scope of reporting takes into account recommendations addressed to the Bank by the regulators.

Moreover, the Bank prepares daily, weekly, monthly and quarterly reports on credit exposures in respect of transactions in derivative instruments, concluded with financial institutions and non-financial institutional entities. The reports contain information on credit exposures in respect of derivative instruments concluded with financial institutions and non-financial institutional entities as well as information on the utilisation of limits. The reports are addressed mainly to: BCC, ALCO, RC, the Management Board, and the Supervisory Board.

2.5.11 Management activities relating to credit risk

The objective of management activities is to shape and optimise the credit risk management system and the level of credit risk in the Bank's Group.

The credit risk management activities include particularly:
1) issuing internal regulations governing the credit risk management system in the Bank and the Bank's Group,
2) issuing recommendations, guidelines on conduct, clarifications and interpretations of the internal regulations of the Bank and the Bank's Group,
3) taking decisions regarding the acceptable level of credit risk, including in particular lending decisions,
4) designing and improving credit risk control tools and mechanisms which enable the credit risk level to be maintained within the limits accepted by the Bank and the Bank's Group,
5) designing, implementing, monitoring and amending the functioning of controls in credit risk management,
6) developing and improving credit risk assessment methods and models,
7) developing and improving IT tools used in credit risk management,
8) planning actions and issuing recommendations.

Collateral management policy plays a significant role in establishing minimum transaction terms. The objective of the collateral policy pursued by the Bank and the entities in the Bank's Group is to properly hedge the credit risk to which the Bank's Group is exposed, including, in the first place, to establish the most liquid collateral. Collateral may be considered liquid if it is possible to be sold without a significant decrease in its price and at a time which does not expose the Bank to a change in the collateral value due to price fluctuations typical of a given asset. The Bank's Group strives to diversify its collateral (both in terms of forms and the assets collateralised). The Bank's Group assesses collateral in terms of the actual possibility to use it as a potential source from which its claims may be satisfied.

2.5.12 Use of credit risk mitigation techniques

The main credit risk mitigating techniques include an adequate assessment of customer and transaction risk, a system of limits (as described in the sections above) and collateral for lending transactions.

The collateral policy of the PKO Bank Polski S.A. Group defines the rules for establishing and remeasuring collateral as well as the procedures for amending their value during the credit exposure's lifetime.

Market value is the basis for assessing the value of real estate, tangible collateral and rights. The market value of the subject of collateral is determined on the basis of an internal assessment or valuation prepared by an independent valuer, verified by specialised organisational units of the Bank.

In addition, when assessing collateral, the Group takes into account the following factors:
1) the economic, financial and economic or social and financial position of entities which provide personal guarantees,
2) the condition and market value of the assets accepted as collateral and their vulnerability to depreciation in the period of maintaining the collateral (the impact of the technological wear and tear of a collateralised asset on its value),
3) the condition and market value of real estate and data adequate to the type of real estate which make it possible to estimate the level of risk related to the portfolio of a given type of collateral effectively and to manage such risk,
4) the potential economic benefits arising from a specific method of securing receivables, including, in particular, the possibility to reduce impairment losses,

(IN PLN MILLION)

5) the method of establishing collateral, including the typical duration and complexity of formalities, as well as the necessary costs (the costs of holding collateral and enforcement against the collateral), using the internal regulations concerning the assessment of collateral,
6) complexity, duration as well as the economic and legal conditions for the effective enforcement against collateral, in the context of enforcement limitations and the existing rules of distribution of the amounts obtained from individual enforcement or in the course of bankruptcy proceedings, debt seniority.

Taking specific types of collateral is dependent on the product and the customer segment. If it is not possible to establish the target collateral promptly, a transitional security in other form may be accepted until it is effectively established (depending on the type of transaction and its amount).

When granting loans intended to finance housing and commercial funding properties, a mortgage is an obligatory type of collateral.

With regard to consumer loans, usually personal guarantees (a civil law surety/guarantee, a bill of exchange) are used or collateral is established on the customer's bank account, car or securities.

Collateral for loans for financing companies and enterprises as well as corporate customers is established, among other things, on business receivables, bank accounts, movables, real estate or securities or in the form of a guarantee (commonly used in the case of companies and enterprises).

In calculating the own funds requirement for credit risk, the Bank's Group, as at the end of 2022, does not use any credit derivatives as collateral for risk in accordance with the CRR (Article 453 d).

The State Treasury is the main type of guarantor and therefore, the source of concentration, accounting from more than 99% of all proceeds from guarantees. The value of financial collateral is determined using the financial collateral comprehensive method referred to in Article 223 of the CRR. The principles for recognising the provider and forms of collateral comply with Part Three, Title II, Chapter 4 of the CRR.

Table 2.7 CRM techniques overview: Disclosure of the use of credit risk mitigation techniques [Template EU CR3]

		31.12.2022				
		Unsecured carrying amount	Secured carrying amount			
				Of which secured by collateral	Of which secured by financial guarantees	
						Of which secured by credit derivatives
		a	b	c	d	e
1	Loans and advances*	96 053	163 822	163 328	494	-
2	Debt securities	132 817	-	-	-	
3	Total	228 870	163 822	163 328	494	-
4	*Of which non-performing exposures*	1 595	2 654	2 632	22	-
EU-5	*Of which defaulted*					

* The 'Total loans and advances' line shows all exposures less debt securities which are contained in a separate line.

2.5.13 Information on the use of standardised method

The use of external credit assessment institutions (ECAI)

In the process of calculating own funds requirements, the Bank uses the credit assessments assigned by the following external credit assessment institutions (ECAI):
1. Moody's Investors Service,
2. Standard and Poor's Ratings Services,
3. Fitch Ratings.

The Bank's Group does not use the assessments of export credit agencies in the process of calculating own funds requirements.

Credit assessments used to determine risk weights for exposures to counterparties in the following categories:
1) central governments or central banks,
2) institutions,
3) enterprises,
4) regional self-governments or local authorities.

The principles of applying external ratings and the process of applying an assessment of an issuer and the issues to the non-trading book items for the purposes of calculating own funds requirements is in line with the provisions of Part Three, Title II, Chapter 2 of the CRR and the regulation issued pursuant to Article 136 of the CRR on the mapping of credit assessments of external credit assessment institutions for credit risk (2016/1799).

(IN PLN MILLION)

Table 2.8 Credit risk exposure and CRM effects – standardised approach [Template EU CR4]

	Exposure classes	31.12.2022					
		Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density	
		On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet amount	RWEA	RWEA density (%)
		a	b	c	d	e	f
1	Central governments or central banks	115 017	0	135 488	34	8 394	6.2%
2	Regional government or local authorities	11 953	2 448	12 033	1 527	2 712	20.0%
3	Public sector entities	560	2 743	529	1 263	894	49.9%
4	Multilateral development banks	3 549	-	3 549	-	-	0.0%
5	International organisations	-	-	-	-	-	-
6	Institutions	8 486	8 684	8 487	4 621	3 508	26.8%
7	Corporates	70 771	49 659	53 276	12 091	62 952	96.3%
8	Retail	70 435	16 093	66 085	3 970	48 438	69.1%
9	Secured by mortgages on immovable property	98 971	1 879	98 773	450	45 018	45.4%
10	Exposures in default	4 300	602	4 136	146	5 473	127.8%
11	Exposures associated with particularly high risk	1 150	1 464	835	249	1 626	150.0%
12	Covered bonds	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
14	Collective investment undertakings	442	-	442	-	696	157.7%
15	Equity	114	-	114	-	254	222.6%
16	Other items	33 745	571	33 745	126	9 972	29.4%
17	TOTAL	419 493	84 143	417 490	24 477	189 937	43.0%

(IN PLN MILLION)

Table 2.9 Standardised approach [Template EU CR5]

	Exposure classes	31.12.2022																
		Risk weight															Total	Of which unrated
		0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Inne		
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
1	Central governments or central banks	131 456	-	-	-	576	-	-	-	-	1	444	3 045	-	-	-	135 521	-
2	Regional government or local authorities	-	-	-	-	13 560	-	-	-	-	-	-	-	-	-	-	13 560	13 197
3	Public sector entities	-	-	-	-	7	-	1 784	-	-	-	-	-	-	-	-	1 792	1 792
4	Multilateral development banks	3 549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 549	3 549
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	-	1 566	-	-	9 767	-	504	-	-	1 271	-	-	-	-	-	13 108	3 630
7	Corporates	-	-	-	-	120	-	748	-	-	64 500	0	-	-	-	-	65 368	62 405
8	Retail	-	-	-	-	-	-	-	-	70 055	-	-	-	-	-	-	70 055	70 055
9	Secured by mortgages on immovable property	-	-	-	-	-	77 422	6 074	-	7 533	4 771	3 423	-	-	-	-	99 223	99 223
10	Exposures in default	-	-	-	-	-	-	-	-	-	1 898	2 383	-	-	-	-	4 281	4 163
11	Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	1 084	-	-	-	-	1 084	1 084
12	Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Unit or shares in collective investment undertakings	-	-	-	-	-	-	-	-	-	2	405	35	-	-	-	442	442
15	Equity	-	-	-	-	-	-	-	-	-	21	-	93	-	-	-	114	114
16	Other items	22 317	-	-	-	2 150	-	-	-	-	9 310	-	93	-	-	-	33 870	33 870
17	TOTAL	157 322	1 566	-	-	26 180	77 422	9 110	-	77 588	81 773	7 740	3 266	-	-	-	441 967	293 524

The table above presents the total exposure amount of the on-balance sheet and off-balance sheet items of the Bank's Group of PLN 441,967 million, which represents the total exposure net of specific credit risk adjustments and impairment losses and after applying the relevant conversion factors for off-balance sheet exposures, i.e., after multiplying the exposure amounts of off-balance sheet items by the corresponding factors of 0%, 20%, 50% or 100%.

As at 31 December 2022, the Bank did not use on- and off-balance sheet netting pursuant to Article 205 of the CRR, therefore, Article 453(a) of the CRR, regarding the disclosure of information about the policies and processes for on- and off-balance sheet netting and the extent to which a given entity makes use of such netting is not applicable.

As at 31 December 2022, the Bank used the effect of contractual netting agreements for the purposes of determining the balance sheet equivalent for derivative transactions, in accordance with Article 298 of the CRR. Such agreements are concluded primarily with institutional counterparties. They enable the settlement, also in the event of the insolvency of one of the parties, of all transactions covered by a given agreement with one amount being the total of the market values of individual transactions. The contractual netting agreements used meet the requirements of Articles 295-297 of the CRR.

Exposures to the counterparty credit risk

On the wholesale market, PKO Bank Polski S.A. cooperates with financial institutions whose registered offices are located in 68 countries. The Bank may enter, within the set limits, into transactions with 385 counterparties, including domestic and foreign banks, insurance companies, pension funds, investment funds, and stock exchanges. Transactions include investment and deposit transactions, transactions in securities, foreign exchange transactions and derivative transactions.

The Bank has access to two clearing houses – CCP (in one clearing house – as an indirect participant, and in the other one – as a direct participant) through which it clears the interest rate derivative transactions specified in the EMIR,[6] concluded with selected domestic and foreign counterparties. In addition, the Bank plays the role of a clearing broker in one of the clearing houses – it acts as an intermediary in the central clearing of the aforementioned derivative transactions concluded by the Bank's customers. The Bank determines limits within which it manages exposures to central counterparties.

In order to limit the credit risk in respect of derivative transactions and securities transactions, the Bank concludes with its counterparties framework agreements (under the PBA, ISDA and ICMA standards). They enable the offsetting of the parties' mutual due obligations (a reduction in settlement risk) and undue obligations (a reduction in pre-settlement risk) arising from transactions, as well as the use of close-out netting at the time of termination of the framework agreement as a result of a breach or justification for the termination in relation to one or two parties to the agreement.

Moreover, the Bank concludes with its counterparties collateral agreements (CSA – *Credit Support Annex* under the ISDA standard, or a Collateral Agreement under the PBA standard), under which each party undertakes, upon meeting the premises stipulated therein, to establish appropriate collateral together with the right to offset. Exemptions include derivative transactions concluded between members of the Group: PKO Bank Polski S.A. and PKO Bank Hipoteczny S.A., which were exempted from obligations to exchange collateral pursuant to Article 4(2) of the EMIR Regulation. Under CSA collateral agreements, the Bank only accepts or provides solely cash and cash equivalents, which reduces its exposure to the risk of excessive or negative correlation with the counterparty's exposure or financial condition.

In connection with the entry into force of the obligation on 1 September 2022 for the Bank to exchange initial margin (IM) deposits with respect to derivative transactions not settled at a CCP, the Bank agreed with domestic and foreign counterparties (which were subject to this obligation) to meet the requirements of the EMIR Regulation. Some of the counterparties of the Bank agreed to an approach consisting of monitoring the utilisation of the threshold value of the so-called threshold, up to which IM is not required, while with the remaining ones, the Bank signs IM agreements according to the ISDA standard. The Bank uses the services of a single depositary, consisting of the storage and settlement of assets submitted under IM.

For lending transactions with financial institutions which have their registered offices outside the Republic of Poland, the international standards on loan agreements of the Loan Market Association are used.

Entering into a framework agreement with a counterparty forms the basis for verifying the internal limit per counterparty and the periods of the Bank's exposures to forward transactions or securities repurchase agreements.

The Bank monitors the financial standing of its counterparties on an ongoing basis and establishes exposure limits adequate to the risk incurred for pre-settlement and settlement exposures of individual counterparties. The Bank sets credit and settlement limits. A credit limit defines the Bank's maximum exposure to a specific counterparty or country in respect of wholesale market operations. A settlement limit defines the maximum acceptable amount of proceeds from a single counterparty or country within one day.

According to the methodology in place at the Bank, the amounts of limits for financial institutions are dependent on, among other things, a counterparty's rating and the level of own funds of the Bank and of the counterparty, and in the case of non-financial institutions also on a treasury survey which determines a customer's demand for hedging transactions and the expected gain or loss on a transaction.

The Bank manages the risk of adjustment to the valuation of derivatives for counterparty credit risk as part of credit risk management. The assessment of counterparty credit risk forms a basis for the estimation of CVA and DVA adjustments.

The amount of internal capital for the credit risk of the insolvency of counterparties which are a financial institution, a country or a central bank is determined on the basis of the balance-sheet equivalent of on-balance sheet and off-balance sheet transactions. Depending on the rating, exposures are included in the individual credit quality steps and assigned the relevant risk weight calculated using internal methods. Monitoring and reporting internal capital levels for counterparty risk constitutes one of the elements of managing that risk.

As at 31 December 2022, the Bank had CSA collateral agreements with its counterparties, in which the amount of collateral is linked to the Bank's rating. If the Bank's rating should be lowered below the level defined in a given agreement, the amount of the collateral posted by the Bank on a daily basis may be modified according to the methodology described in the agreement or additional initial margin collateral may be required. As at the date of this Report, the outflow in respect of posting additional collateral if the Bank's rating should be lowered by 3 notches would amount to approx. PLN 1,100 million.

As at 31 December 2022, the positive gross fair value of derivative instruments concluded with financial institutions amounted to PLN 3,619 million. This amount was calculated by adding up the positive market values for all open transactions. The net credit exposure, after taking into account the netting of transactions for counterparties with framework agreements, was PLN 1,847 million (excluding centrally cleared transactions). The benefits of the netting amounted to PLN 1,772 million. The value of the collateral taken from the counterparties under the CSA agreements and the PBA collateral agreements was PLN 1,491 million.

As at 31 December 2022, the Bank took into account adjustments for credit valuation in the valuation of derivative financial instruments. In the adjustment, the Bank took into account the market value of credit risk from the Bank's perspective. The analysis covered all exposures. In particular, the adjustment took into account the risk of non-performance of the agreements concluded with a counterparty based on, among other things, an analysis of the economic and financial standing of the entities, the probability of repayment of the individual contracts, and the recoverable amount of collateral.

The financial institutions with which the Bank enters into transactions on the interbank market have various external ratings between AAA and B (Table 2.10).

[6] EMIR (European Market Infrastructure Regulation) – Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012on OTC derivatives, central counterparties and trade repositories, which entered into force on 16 August 2012.

(IN PLN MILLION)

Table 2.10 Quality of exposures* to financial institutions

	PKO Bank Polski SA	
Rating	31.12.2022	31.12.2021
AAA	13.81%	25.7%
AA	11.45%	5.8%
A	72.52%	60.0%
BBB	1.05%	7.3%
BB	0.02%	0.0%
B	0.00%	0.0%
No rating	1.14%	1.1%
Total	100.00%	100.0%

* Exposure is the total exposure of the Bank to the non-wholesale and wholesale market, including exposures in respect of deposits, NOSTRO, LORO accounts and securities and the total valuations of derivative instruments after their netting for the counterparties with which there are effective framework netting agreements. The exposures in respect of derivative instruments presented in this table do not include the collateral posted by the counterparties, which reduce this exposure.

The above list is based on external ratings assigned by Moody's, Standard and Poor's Ratings Services and Fitch, mapped to a uniform rating scale.

The value of exposures to counterparty risk is calculated using the standardised method according to Part Three, Title II, Chapter 6, Section 3 of the CRR. In order to determine the current replacement cost of all contracts with positive values, the Bank attaches the current market values to the contracts.

As at the end of 2022, neither the Bank's Group nor the Bank held any credit derivatives used to reduce capital requirements. Consequently, table EU CCR6 has not been presented.

The table below presents the methods used to calculate the own funds requirement for counterparty credit risk (excluding exposures to central counterparties).

(IN PLN MILLION)

Table 2.11 Analysis of CCR exposure by approach [Template EU CCR1]

		31.12.2022							
		a	b	c	d	e	f	g	h
		Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWEA
EU1	EU - Original Exposure Method (for derivatives)	-	-		1.4	-	-	-	-
EU2	EU - Simplified SA-CCR (for derivatives)	-	-		1.4	-	-	-	-
1	SA-CCR (for derivatives)	2 130	3 350		1.4	9 756	7 671	7 064	4 981
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)					8	0	0	0
5	VaR for SFTs					-	-	-	-
6	Total					9 763	7 671	7 064	4 982

The table below presents the value and amount of exposure to the risk for transactions which are subject to the own fund requirement for credit valuation adjustment risk of derivative instruments in the counterparty credit risk.

Table 2.12 Transactions subject to own funds requirements for CVA risk [Template EU CCR2]

		31.12.2022	
		a	b
		Exposure value	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	3 545	464
EU4	Transactions subject to the Alternative approach (Based on the Original Exposure Method)	-	-
5	Total transactions subject to own funds requirements for CVA risk	3 545	464

(IN PLN MILLION)

The table below presents exposures to counterparty credit risk by exposure classes and risk weights applied to calculate the own fund requirement for counterparty credit risk using the standardised method.

Table 2.13 Standardised approach – CCR exposures by regulatory exposure class and risk weights [Template EU CCR3]

	Exposure classes	31.12.2022											
		Risk weight											
		a	b	c	d	e	f	g	h	i	j	k	l
		0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Inne	Total exposure value
1	Central governments or central banks	0	-	-	-	8	-	-	-	-	-	-	9
2	Regional government or local authorities	-	-	-	-	-	-	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	0	-	-	-	-	-	-	0
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	-	57	-	-	1 531	1 671	-	-	0	-	-	3 259
7	Corporates	-	-	-	-	-	31	-	-	3 823	0	-	3 854
8	Retail	-	-	-	-	-	-	-	-	-	-	-	-
9	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-	-	-	-	-	-
11	Total exposure value	0	57	-	-	1 539	1 702	-	-	3 823	0	-	7 122

Table 2.14 Composition of collateral for CCR exposures [Template EU CCR5]

	Collateral type	31.12.2022							
		a	b	c	d	e	f	g	h
		Collateral used in derivative transactions				Collateral used in SFTs			
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received		Fair value of posted collateral	
		Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated
1	Cash – domestic currency	-	31	5 377	39	-	-	-	-
2	Cash – other currencies	390	1 429	164	1 996	-	-	-	-
3	Domestic sovereign debt	-	-	-	-	-	-	-	-
4	Other sovereign debt	-	-	-	-	-	-	-	-
5	Government agency debt	-	-	-	-	-	-	-	-
6	Corporate bonds	-	-	-	-	-	-	-	-
7	Equity securities	-	-	-	-	-	-	-	-
8	Other collateral	-	-	-	-	-	-	-	-
9	Total	390	1 460	5 541	2 035	-	-	-	-

The table below presents an analysis of exposures to central counterparties used to calculate the own fund requirement for counterparty credit risk.

(IN PLN MILLION)

Table 2.15 Exposures of central counterparties (CCPs) [Template EU CCR8]

		31.12.2022	
		a	b
		Exposure value	RWEA
1	Exposures to QCCPs (total)		2
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	57	1
3	(i) OTC derivatives	48	1
4	(ii) Exchange-traded derivatives	9	0
5	(iii) SFTs	-	-
6	(iv) Netting sets where cross-product netting has been approved	-	-
7	Segregated initial margin	141	
8	Non-segregated initial margin	-	-
9	Prefunded default fund contributions	53	1
10	Unfunded default fund contributions	-	-
11	Exposures to non-QCCPs (total)		-
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	-	-

2.5.14 Non-performing and forborne exposures

The[7] Group's gross NPL ratio amounted to 3.80% as at 31.12.2022. Therefore, in accordance with Regulation 2021/637, the following tables: EU CR2a, EU CQ2, EU CQ6, EU CQ8, EU CQ4, EU CQ5 are not presented.

Tables below containing quantitative information on unsupported and restructured exposures are presented below.

[7] The NPL ratio is the ratio of gross carrying amount of loans and advances covered by the provisions of Article 47(a)(3) of EU Regulation no. 575/2013 to gross carrying amount of loans and advances covered by the provisions of Article 47(a)(1) of EU Regulation no. 575/2013.

(IN PLN MILLION)

Table 2.16 Credit quality of performing and non-performing exposures by past due days [Template EU CQ3]

		31.12.2022											
		a	b	c	d	e	f	g	h	i	j	k	l
		Gross carrying amount/nominal amount											
		Performing exposures			Non-performing exposures								
			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	Of which defaulted
005	Cash balances at central banks and other demand deposits	13 083	13 083	-	-	-	-	-	-	-	-	-	-
010	Loans and advances	247 136	246 398	739	9 421	3 973	623	805	739	1 401	864	1 016	9 184
020	*Central banks*	504	504	-	-	-	-	-	-	-	-	-	-
030	*General governments*	4 985	4 985	-	42	42	-	-	-	-	-	-	42
040	*Credit institutions*	14 387	14 387	-	-	-	-	-	-	-	-	-	-
050	*Other financial corporations*	2 744	2 743	1	23	19	0	1	1	2	1	0	23
060	*Non-financial corporations*	78 135	77 795	340	4 441	2 313	125	242	176	525	494	567	4 398
070	Of which SMEs	38 060	37 849	211	3 473	1 626	120	214	170	480	327	535	3 458
080	*Households*	146 381	145 983	398	4 916	1 599	498	563	563	874	370	449	4 721
090	Debt securities	132 489	132 489	-	419	419	-	-	-	-	-	-	419
100	*Central banks*	80	80	-	-	-	-	-	-	-	-	-	-
110	*General governments*	104 341	104 341	-	-	-	-	-	-	-	-	-	-
120	*Credit institutions*	7 103	7 103	-	-	-	-	-	-	-	-	-	-
130	*Other financial corporations*	18 083	18 083	-	-	-	-	-	-	-	-	-	-
140	*Non-financial corporations*	2 883	2 883	-	419	419	-	-	-	-	-	-	419
150	Off-balance-sheet exposures	84 862			822								814
160	*Central banks*	-			-								-
170	*General governments*	4 330			-								-
180	*Credit institutions*	8 739			-								-
190	*Other financial corporations*	1 408			-								-
200	*Non-financial corporations*	55 047			780								773
210	*Households*	15 338			42								40
220	Total	477 570	391 970	739	10 663	4 392	623	805	739	1 401	864	1 016	10 417

(IN PLN MILLION)

Table 2.17 Performing and non-performing exposures related provisions [Template EU CR1]

		31.12.2022														
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collaterals and financial guarantees received	
		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
			of which: stage 1	of which: stage 2		of which: stage 1	of which: stage 2		of which: stage 1	of which: stage 2		of which: stage 2	of which: stage 3			
005	Cash balances at central banks and other demand deposits	13 083	13 083	-	-	-	-	-	-	-	-	-	-	-	-	-
010	Loans and advances	247 136	210 062	33 639	9 421	189	8 886	-4 172	-960	-3 245	-5 594	-77	-5 496	-1 748	161 168	2 654
020	*Central banks*	504	504	-	-	-	-	-	-	-	-	-	-	-	-	-
030	*General governments*	4 985	4 230	714	42	-	42	-62	-17	-45	-1	-	-1	0	577	41
040	*Credit institutions*	14 387	14 387	-	-	-	-	-2	-2	-	-	-	-	0	-	-
050	*Other financial corporations*	2 744	2 699	45	23	0	23	-14	-13	-1	-12	0	-12	-1	1 989	9
060	*Non-financial corporations*	78 135	61 156	16 973	4 441	15	4 387	-1 875	-390	-1 485	-2 390	-1	-2 384	-627	46 199	1 798
070	*Of which: SMEs*	38 060	27 774	10 280	3 473	10	3 426	-1 125	-213	-913	-1 965	-1	-1 959	-560	25 822	1 306
080	*Households*	146 381	127 086	15 907	4 916	174	4 434	-2 220	-538	-1 713	-3 190	-76	-3 099	-1 120	112 403	806
090	Debt Securities	132 489	131 365	782	419	0	15	-94	-45	-49	2	0	0	-3	-	-
100	*Central banks*	80	80	-	-	-	-	0	0	-	-	-	-	-	-	-
110	*General governments*	104 341	103 574	446	-	-	-	-54	-29	-24	-	-	-	-	-	-
120	*Credit institutions*	7 103	7 103	-	-	-	-	-6	-6	-	-	-	-	-	-	-
130	*Other financial corporations*	18 083	18 083	-	-	-	-	-4	-4	-	-	-	-	-	-	-
140	*Non-financial corporations*	2 883	2 525	336	419	-	15	-30	-6	-24	2	-	-	-3	-	-
150	Off-balance sheet exposures	84 862	76 084	8 777	822	2	532	627	143	484	206	0	200		-	-
160	*Central banks*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
170	*General governments*	4 330	4 177	154	-	-	-	14	4	9	-	-	-		-	-
180	*Credit institutions*	8 739	8 739	-	-	-	-	0	0	-	-	-	-		-	-
190	*Other financial corporations*	1 408	1 394	14	-	-	-	1	0	0	-	-	-		-	-
200	*Non-financial corporations*	55 047	48 594	6 453	780	0	492	429	101	328	192	0	187		-	-
210	*Households*	15 338	13 180	2 157	42	2	39	183	37	146	14	0	13		-	-
220	Total	477 570	430 594	43 199	10 663	192	9 432	-3 639	-862	-2 810	-5 386	-77	-5 296	-1 751	161 168	2 654

(IN PLN MILLION)

Table 2.18 Changes in the stock of non-performing loans and advances [Template EU CR2]

		31.12.2022
		a
		Gross carrying amount
010	**Initial stock of non-performing loans and advances**	10 229
020	Inflows to non-performing portfolios	3 490
030	Outflows from non-performing portfolios	-3 969
040	Outflows due to write-offs	-834
050	Outflow due to other situations	-3 135
060	**Final stock of non-performing loans and advances**	9 750

Table 2.19 Credit quality of forborne exposures [Template EU CQ1]

		31.12.2022							
		a	b	c	d	e	f	g	h
		Gross carrying amount/ Nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collaterals received and financial guarantees received on forborne exposures	
		Performing forborne	Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which: Collateral and financial guarantees received on non-performing exposures with forbearance measures
				Of which defaulted	Of which impaired				
005	Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
010	Loans and advances	769	1 831	1 728	1 720	-57	-858	1 373	774
020	*Central banks*	-	-	-	-	-	-	-	-
030	*General governments*	-	1	1	1	0	-1	1	1
040	*Credit institutions*	-	-	-	-	-	-	-	-
050	*Other financial corporations*	0	0	0	0	0	0	0	-
060	*Non-financial corporations*	367	1 047	1 015	1 031	-24	-436	913	582
070	*Households*	402	783	711	687	-33	-422	459	191
080	Debt Securities	0	419	419	374	-	2	-	-
090	Loan commitments given	7	61	59	59	0	21	-	-
100	Total	776	2 311	2 207	2 154	-56	-835	1 373	774

(IN PLN MILLION)

Bank Polski

Table 2.20 Credit quality of loans and advances to non-financial corporations by industry [Template EU CQ5]

		31.12.2022					
		a	b	c	d	e	f
		Gross carrying amount				Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			of which: non-performing		of which: loans and advances subject to impairment		
				of which: defaulted			
010	Agriculture, forestry and fishing	1 904	89	89	1 904	-119	-
020	Mining and quarrying	1 133	15	15	1 133	-11	-
030	Manufacturing	22 111	1 012	1 012	22 108	-1 193	-2
040	Electricity, gas, steam and air conditioning supply	3 592	11	11	3 592	-66	-
050	Water supply	1 405	14	14	1 405	-18	-
060	Construction	3 970	513	513	3 969	-456	-
070	Wholesale and retail trade	15 077	837	837	15 075	-633	-
080	Transport and storage	9 084	345	345	9 083	-331	-
090	Accommodation and food service activities	1 915	621	620	1 915	-375	-
100	Information and communication	4 639	42	42	4 639	-42	-
110	Financial and insurance actvities	1 778	9	9	1 778	-15	-
120	Real estate activities	9 000	617	617	9 000	-686	-
130	Professional, scientific and technical activities	2 258	87	87	2 257	-73	-
140	Administrative and support service activities	2 538	85	85	2 537	-85	-
150	Public administration and defense, compulsory social security	23	-	-	23	0	-
160	Education	203	23	23	203	-18	-
170	Human health services and social work activities	1 303	53	53	1 303	-50	-
180	Arts, entertainment and recreation	445	21	21	445	-39	-
190	Other services	198	48	47	198	-51	-
200	Total	82 576	4 441	4 440	82 567	-4 262	-2

(IN PLN MILLION)

Table 2.21 Collateral obtained by taking possession and execution processes [Template EU CQ7]

		31.12.2022	
		a	b
		Collateral obtained by taking possession accumulated	
		Value at initial recognition	Accumulated negative changes
010	**Property Plant and Equipment (PP&E)**	-	-
020	**Other than Property Plant and Equipment**	34	-4
030	*Residential immovable property*	1	-
040	*Commercial Immovable property*	33	-4
050	*Movable property (auto, shipping, etc.)*	-	-
060	*Equity and debt instruments*	-	-
070	*Other*	-	-
080	Total	34	-4

2.5.15 Information on exposures subject to measures applied in response to the COVID-19 pandemic

The tables below present information on exposures subject to the EBA/GL/2020/07 Guidelines of 2 June 2020 on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis and on newly originated exposures subject to public guarantee schemes, in accordance with the templates set out in Annex 3 to these Guidelines.

For better data transparency, Table 2.22 Loans and advances subject to moratoria consistent with the EBA guidelines (statutory and non-statutory) [Template 1 COVID19] is divided into two tables: Table 2.22a (columns from a) to g)) and Table 2.22b (columns from h) to o)).

(IN PLN MILLION)

Table 2.22a Information on loans and advances subject to legislative and non-legislative moratoria (table columns a) – g)) [Template 1 COVID19]

		31.12.2022						
		a	b	c	d	e	f	g
		Gross carrying amount						
			Performing			Non performing		
				Of which: exposures with forbearance measures	Of which: Instruments with significant increase in credit risk since initial recognition but not credit-impaired (Stage 2)		Of which: exposures with forbearance measures	Of which: Unlikely to pay that are not past-due or past-due <= 90 days
1	**Loans and advances subject to moratorium of compliance with EBA requi**	538	435	48	363	103	46	54
2	of which: Households	240	197	33	164	43	28	15
3	of which: Collateralised by residential immovable property	73	66	5	62	7	4	3
4	of which: Non-financial corporations	298	238	15	198	60	19	39
5	of which: SMEs	111	94	9	70	17	8	9
6	of which: Collateralised by commercial immovable property	52	52	-	52	0	-	0

Table 2.22b Information on loans and advances subject to legislative and non-legislative moratoria (table columns h) -o)) [Template 1 COVID19

		31.12.2022							
		h	i	j	k	l	m	n	o
		Accumulated impairment, accumulated negative changes in fair value due to credit risk							Gross carrying amount
			Performing			Non performing			
				Of which: exposures with forbearance measures	Of which: Instruments with significant increase in credit risk since initial recognition but not credit-impaired (Stage 2)		Of which: exposures with forbearance measures	Of which: Unlikely to pay that are not past-due or past-due <= 90 days	Inflows to non-performing exposures
1	**Loans and advances subject to moratorium of compliance with EBA requi**	-135	-75	-16	-59	-60	-30	-27	-
2	of which: Households	-87	-61	-15	-46	-27	-19	-8	-
3	of which: Collateralised by residential immovable property	-23	-19	-2	-17	-3	-2	-1	-
4	of which: Non-financial corporations	-47	-14	-1	-13	-33	-11	-20	-
5	of which: SMEs	-16	-7	-1	-6	-8	-5	-3	-
6	of which: Collateralised by commercial immovable property	0	0	-	0	0	-	0	-

(IN PLN MILLION)

Table 2.23 Breakdown of loans and advances subject to legislative and non-legislative moratoria by residual maturity of moratoria [Template 2 COVID19]

		31.12.2022								
		a	b	c	d	e	f	g	h	i
		Number of obligors	Gross carrying amount							
				Of which: legislative moratoria	Of which: expired	Residual maturity of moratoria				
						<= 3 months	> 3 months <= 6 months	> 6 months <= 9 months	> 9 months <= 12 months	> 1 year
1	Loans and advances for which moratorium was offered	144 965	21 453							
2	Loans and advances subject to moratorium of compliance with EBA requirements (granted)	141 143	20 711	59	20 173	445	4	2	2	85
3	of which: Households		14 068	59	13 828	240	0	0	0	0
4	of which: Collateralised by residential immovable property		12 006	45	11 933	73	-	-	-	-
5	of which: Non-financial corporations		6 643	-	6 345	205	4	2	2	85
6	of which: SMEs		2 893	-	2 782	80	1	1	2	27
7	of which: Collateralised by commercial immovable property		3 717	-	3 665	0	-	0	-	52

Table 2.24 Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis [Template 3 COVID19]

		31.12.2022			
		a	b	c	d
		Gross carrying amount		Maximum amount of the guarantee that can be considered	Gross carrying amount
			of which: forborne	Public guarantees received	Inflows to non-performing exposures
1	Newly originated loans and advances subject to public guarantee schemes	7 954	-	6 333	6
2	of which: Households	-			-
3	of which: Collateralised by residential immovable property	-			-
4	of which: Non-financial corporations	7 954	-	6 333	6
5	of which: SMEs	6 411			1
6	of which: Collateralised by commercial immovable property	-			-

2.5.16 Exposure to securitisation positions

In September 2019, PKO Leasing SA carried out the largest asset securitisation transaction on the domestic market. The transaction consisted of selling a portfolio of high quality lease receivables totalling PLN 2.5 billion.

On 26 September 2019, PKO Leasing S.A. sold a portfolio of securitised lease receivables to a special purpose vehicle Polish Lease Prime 1 Designated Activity Company (Polish Lease Prime 1 DAC), with its registered office in Dublin (Ireland). According to IFRS 10, Polish Lease Prime 1 DAC meets the definition of a subsidiary of PKO Leasing S.A. and is subject to consolidation.

The receivables purchased by the special purpose vehicle were financed mainly with an issue of securities (bonds) conducted on 26 September 2019 with the redemption date falling on 28 December 2029 and with funds obtained within the PKO Leasing SA Group. Bonds with a nominal value of PLN 1,835 million were taken up by entities from outside the Bank's Group. The objective and benefit of selling these receivables to the SPV was to obtain and diversify sources of long-term financing.

The Group applies International Financial Reporting Standard 9 "Financial Instruments" in the context of excluding securitised assets of the Company and the requirements of the International Financial Reporting Standard 10 "Consolidated financial statements" in the context of exercising control over SPV and an obligation to consolidate it.

PKO Leasing S.A. consolidates securitisation SPVs because the risks and rewards of their operations remained at the side of the originator of the transaction, i.e., PKO Leasing S.A. In accordance with IFRS 10, PKO Leasing S.A. exercises control over securitisation SPVs despite the fact that it has no capital investment in these entities. The liabilities of SPVs (Polish Lease Prime 1 only as at 31.12.2022) to investors are treated as PKO Leasing S.A.

Securitised lease receivables are presented as PKO Leasing S.A.'s assets in separate financial statements because they do not meet derecognition criteria. Despite the fact that PKO Leasing S.A. is obliged to transfer amounts received from the portfolio of securitised lease contracts to Polish Lease Prime 1 DAC (benefits from the portfolio of lease contracts), the Company retained substantially all risks resulting from owning a portfolio of lease contracts due to the granting of a subordinated loan from which any potential losses on the portfolio of lease contract will be covered.

Securities from a senior tranche was purchased by several institutional investors, of which the European Investment Bank (EBI) took up the largest part amounting to PLN 900 million. Moreover, senior tranche securities totalling PLN 935 million were purchased by Citi Handlowy and European investors. The transaction structure also includes subordinated mezzanine bonds taken up by the EBI

amounting to PLN 640 million. The separation and sale of the subordinated mezzanine tranche, the credit risk was transferred to an investor (EBI), thus releasing regulatory capital at the level of the PKO Bank Polski Group. PKO Leasing retained a junior tranche of PLN 25 million and a reserve fund to cover any deficits generated by the liquidity, interest rate and operational risks.

The STS status granted to the transaction confirms that the issue meets transparency criteria set out in the EU securitisation regulation. High ratings, on the other hands, reflect a low risk associated with the bonds issued. Bonds in the senior tranche received the highest possible AAA rating from Scope rating agency and AA- rating from the ACR. The structure also includes subordinated bonds with BB- rating from Scope and BB+ from the ACR. All classes of bonds are redeemed gradually, in line with amortisation of the receivables portfolio (after a two-year revolving period). The expected final redemption period is 70 months of the issue date, and the weighted average maturity is 34 months.

The Bank's Group excludes securitised receivables from risk exposures and reduces own funds by the value of a junior tranche and a provision, taking into account specific risk adjustments for underlying exposures subject to securitisation, in accordance with the requirements of the CRR.

Detailed information on the securitisation is presented in the Consolidated Financial Statements of the Bank's Group as at and for the year ended 31 December 2022 (Note 62 Information on securitisation of the lease portfolio and package sale of receivables).

The Bank's Group has no securitisation items in the trading book and therefore does not present table EU SEC 2. PKO Leasing S.A., a subsidiary of PKO BP S.A., is a securitisation originator. Neither PKO Leasing S.A. nor any other entity in the Bank's Group is an investor in the securitisation process and consequently, the Bank's Group does not present table EU SEC 4.

(IN PLN MILLION)

Table 2.25 Securitisation exposures in the non-trading book [Template EU SEC1]

		31.12.2022														
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Institution acts as originator							Institution acts as sponsor				Institution acts as investor			
		Traditional				Synthetic		Sub-total	Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total
		STS		Non-STS					STS	Non-STS			STS	Non-STS		
			of which SRT		of which SRT		of which SRT									
1	**Total exposures**	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-
2	**Retail (total)**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	residential mortgage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	other retail exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	**Wholesale (total)**	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-
8	loans to corporates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	commercial mortgage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	lease and receivables	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-
11	other wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2.26 Securitisation exposures in the non-trading book and associated regulatory capital requirements – institution acting as originator or as sponsor [Template EU SEC3]

		31.12.2022																
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	EU-p	EU-q
		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWEA (by regulatory approach)				Capital charge after cap			
		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions
1	**Total exposures**	-	-	-	-	12	-	-	-	12	-	-	-	-12	-	-	-	-
2	**Traditional transactions**	-	-	-	-	12	-	-	-	12	-	-	-	-12	-	-	-	-
3	**Securitisation**	-	-	-	-	12	-	-	-	12	-	-	-	-12	-	-	-	-
4	**Retail underlying**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	**Wholesale**	-	-	-	-	12	-	-	-	12	-	-	-	-12	-	-	-	-
7	Of which STS	-	-	-	-	12	-	-	-	12	-	-	-	-12	-	-	-	-
8	**Re-securitisation**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	**Synthetic transactions**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	**Securitisation**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	**Retail underlying**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	**Wholesale**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	**Re-securitisation**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(IN PLN MILLION)

Table 2.27 Exposures securitised by the institution – Exposures in default and specific credit risk adjustments [Template EU SEC5]

		31.12.2022		
		a	b	c
		Exposures securitised by the institution - Institution acts as originator or as sponsor		
		Total outstanding nominal amount		Total amount of specific credit risk adjustments made during the period
			Of which exposures in default	
1	**Total exposures**	1 085	15	- 37
2	**Retail (total)**	-	-	-
3	residential mortgage	-	-	-
4	credit card	-	-	-
5	other retail exposures	-	-	-
6	re-securitisation	-	-	-
7	**Wholesale (total)**	1 085	15	- 37
8	loans to corporates	-	-	-
9	commercial mortgage	-	-	-
10	lease and receivables	1 085	15	- 37
11	other wholesale	-	-	-
12	re-securitisation	-	-	-

(IN PLN MILLION)

2.5.17 Exposures in non-trading book equity securities

PKO Bank Polski S.A. and its subsidiaries subject to prudential consolidation have equity exposures[8] in other entities which are classified in the non-trading book.

The exposures in the non-trading book as at 31 December 2022, due to the type of investment and the purpose of the acquisition, are broken down into the following groups:

1) investments in subsidiaries not subject to prudential consolidation – this group includes companies which complement the Bank's basic offer with insurance services, as well as closed-end investment funds set up to support entities (including start-ups) offering technological innovations mainly for the financial sector and to optimise management and sales activities related to supervised asset portfolios,
2) investments in associates and joint ventures – investments in companies which provide financial and technological services; this group includes, among others, System Ochrony Banków Komercyjnych S.A., which manages the protection system referred to in Chapter 10a of the Banking Law, and Centrum Elektronicznych Usług Płatniczych eService sp. z o.o., together with which PKO Bank Polski S.A. offers comprehensive services consisting of setting up POS terminals and accounting for transactions carried out with payment instruments, using these terminals,
3) other exposures, including:
   a) the Bank's investments in companies which provide financial services or which contribute to the development of financial markets, including those which create the infrastructure of financial markets,
   b) participation units investment certificates in investment funds – mainly the investments of PKO Towarzystwo Funduszy Inwestycyjnych S.A. (PKO TFI S.A.) in the participation units of the new investment funds it manages; the assets are acquired to provide the funds required to establish a fund,
   c) the Bank's investments and the investments of the subsidiaries subject to prudential consolidation, mostly held for sale; this group includes, among other things, shares acquired as part of forbearance of loan receivables, including repossessed collateral.

Table 2.28 Non-trading book equity exposures

	31.12.2022		31.12.2021	
	Carrying amount	Fair value*	Carrying amount	Fair value*
Investments valued under the equity method(equity investments in subsidiaries not subject to prudential consolidation, jointventures and associated entities)	1 504	1 524	1 383	1 401
Shares in other entities, this includes also equity investments in entities revealed as fixed assets items for sale	81	81	87	87
Equity securities	262	262	243	243
Shares in entities listed on regulated market	20	20	22	22
Shares in entities not listed on regulated market**	242	242	221	221
Participation units in PKO TFI SA investment funds	2	2	6	6
Total	1 848	1 868	1 719	1 737

* Estimated Fair Value, including for shares admitted to trading on a regulated market – market value.
** This item also includes shares not admitted to trading on the regulated market of public companies.

The equity exposures presented in the above table are subject to periodic valuation.

Investments in subsidiaries not subject to prudential consolidation, joint ventures and associates are measured using the equity method. The share of the Bank's Group in the financial results of the aforementioned entities as from the date of acquisition is recognised in profit or loss, whereas its share in changes in other comprehensive income as from the date of acquisition – in other comprehensive income. The carrying amount of the investments is adjusted for total changes in individual equity items as from the date of acquisition.

Each time, as at the end of a reporting period, it is assessed whether there are any indications that the investments in subsidiaries not subject to prudential consolidation, joint ventures and associates may be impaired. If such indications exist, the recoverable amount, i.e., the higher of the value in use of an investment or its fair value less costs to sell the asset, is estimated (an impairment test). If the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recognised in profit or loss. Value in use is determined on the basis of the estimated value of expected future cash flows from the continuing holding of shares, based on the entities' financial plans, using the discount rate determined for the Bank's equity exposures. The current bid price or the value estimated on the basis of valuation techniques commonly used by market participants is adopted as the fair value.

Shares in other companies are measured at fair value determined according to market value for companies for which there is an active market or based on internal valuation models for companies for which there is no active market. The effects of changes in the fair value of shares are recognised in profit or loss.

Participation units and investment certificates in investment funds are measured at fair value, with the effect being recognised in profit or loss.

The fair value of equity exposures, determined on the basis of internal valuation models, is described in the financial statements of the Bank and the Bank's Group for 2022, in the notes on the fair value hierarchy.

In 2022, the Bank's Group (according to prudential consolidation) realised an accumulated gross profit on the sale of securities constituting equity exposures in the non-trading book (calculated as the selling price minus acquisition price) of PLN 0.8 million. The unrealised gross gains of the Bank's Group on the revaluation of the equity exposures in the non-trading book totalled PLN 652.7 million as at the end of 2022. The aforementioned amount includes the unrealised gain of the Bank's Group of PLN 178.5 million on the remeasurement of the cost of purchase of shares in one of the companies to fair value.

[8] This information concerns equity exposures in the form of shares, participation units and investment certificates. The Bank classifies the following in the non-trading book under prudential consolidation: subsidiaries not subject to prudential consolidation, associates, joint ventures and the aforementioned securities and equity securities which constitute financial assets not held for trading.

(IN PLN MILLION)

In 2022, PKO Bank Polski S.A. received a gross dividend totalling PLN 94.7 million in respect of shares constituting equity exposures in the non-trading book.

PKO Bank Polski S.A. manages equity exposures in the non-trading book in accordance with the Investment Strategy and Investment Policy adopted by the Bank. The aforementioned regulations govern the objective and principles of the Bank's exposure to specific equity investments. The investment limits established limit the Bank's exposure to the appropriate level of risk accepted by the Bank. At least once a year, the Bank evaluates the adopted Investment Policy from the perspective of the investment method, effectiveness of the achievement of investment objectives and the correctness of the activities conducted.

Moreover, in order to reduce volatility of the results associated with VISA's C series preference shares, the Bank is using Total Return Swaps.

2.6 Interest rate risk

2.6.1 Introduction

Interest rate risk is a risk of losses being incurred on the Bank's Group's balance sheet and off-balance sheet items sensitive to interest rate fluctuations, as a result of changes in market interest rates.

The Bank categorises its portfolios from the perspective of interest rate risk management:
- the non-trading book – comprises balance sheet and off-balance sheet items not included in the trading book, in particular items resulting from the Bank's core activities, transactions concluded for investment and liquidity purposes and their hedging transactions,
- the trading book – comprises transactions concluded on financial instruments as part of activities conducted on own account and on behalf of the customers.

The Bank pro-actively manages the interest rate risk arising from items in both the trading and non-trading books.

The objective of management of interest rate risk is to reduce possible losses due to changes in market interest rates to the acceptable level by appropriate shaping of the structure of balance-sheet and off-balance sheet items. In particular, the Bank's Group aims to reduce the sensitivity of both sensitivity of interest income and sensitivity of economic value to an acceptable level, defined in the form of strategic tolerance limits (risk appetite).

2.6.2 Identification of interest rate risk

The identification of interest rate risk consists of identifying its current and potential sources and estimating the materiality of its potential impact on the activities of the Bank and the Bank's Group.

The process and the organisation of interest rate risk management in the Bank's Group are in compliance with the principles described in section 2.1.

2.6.3 Monitoring the interest rate risk

The Bank's interest rate risk is monitored on a daily basis, whereas that of the Bank's Group is monitored on a monthly basis. In 2022, the interest rate risk of the Bank's Group was determined mainly by the mismatch of the repricing dates of assets and liabilities.

2.6.3.1 Non-trading book

Table 2.29 Qualitative information on interest rate risk of non-trading book activities [Template EU IRRBBA]

Legal basis	Scope of information	Qualitative information
Article 448(1)(e)	A description of how the institution defines IRRBB for purposes of risk control and measurement	The interest rate risk of the non-trading book is a risk of losses being incurred on the Group's non-trading book balance sheet and off-balance sheet items sensitive to interest rate fluctuations, as a result of changes in market interest rates. The main interest rate risks identified by the Group are: a) the risk of revaluation date mismatch, b) the yield curve risk, c) the basis risk, d) the customer option risk; and e) credit spread risk in the non-trading book (CSRBB). The customer's option risk is monitored for products where this risk has been identified as significant, in particular for loans with periodic fixed interest rates, taking into account historical developments of the prepayment ratio. The Bank also analyses the impact of various behaviour of interest rate indices (base risk) on interest rate risk measures and, according to the latest analyses, it considers such impact to be immaterial. The control of the interest rate risk covers determining limits and thresholds concerning interest rate risk, in particular strategic limits of tolerance for interest rate risk, tailored to the scale and complexity of the activities of the Bank's Group.
Article 448(1)(f)	A description of the institution's overall IRRBB management and mitigation strategies	The interest rate risk management process is supervised by the Supervisory Board, which approves the risk management strategy, accepts the risk tolerance level (expressed in the form of strategic tolerance limits) and assesses the risk management process, including approving reports confirming compliance between the interest rate risk profile and the tolerance for interest rate risk determined at the level of the Bank and the Bank's Group. The Supervisory Board regularly receives

		information on the risk profile of the Bank and the Bank's Group as well as information on the key measures taken in the area of interest rate risk management. The Management Board is responsible for managing the Bank's interest rate risk, including ensuring compliance of the Bank's internal regulations with the risk management strategy, as well as supervising and monitoring the measures taken by the Bank to manage interest rate risk. The Management Board adopts internal regulations on interest rate risk management. The management of interest rate risk is supported by the Asset and Liability Management Committee, which, among others, issues recommendations and advice with regard to shaping the structure of balance sheet and off-balance sheet items, the risks generated and the management of financial risk, including interest rate risk in the non-trading book. The Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group defines an acceptable level of interest rate risk both in the Bank and the Bank's Group and lays down the principles for interest rate risk management in the Bank's Group. Additionally, the Strategy for managing interest rate risk in the non-trading book of PKO Bank Polski S.A. defines the approach to managing interest rate risk in this portfolio. The assignment of transactions to business models according to IFRS 9 and the division into the trading book and the non-trading book are determined by the Bank's Investment Policy relating to financial instruments. The Bank supervises the functioning of interest rate risk management in the individual subsidiaries in the Bank's Group. As part of the supervision, the Bank influences the interest rate risk management methods in these entities and supports their development. The Bank also takes into account the level of interest rate risk in the operations of the individual entities as part of the interest rate risk monitoring and reporting system at the Bank's Group level. The interest rate risk generated by the Bank's core activities is transferred using a transfer pricing system in order to manage this risk in a centralised manner. The Bank's business model assumes managing interest rate risk in an active manner by shaping its product mix appropriately and using the available financial instruments within the limits and thresholds for interest rate risk adopted at the Bank. In order to mitigate the interest rate risk of the non-trading book, the Bank's Gropup uses limits and thresholds, as well as risk mitigation transactions based on information on the level of risk (using a measure of sensitivity of interest income, a measure of sensitivity of economic value, shock analyses and repricing gap) and planned business development. In order to hedge the level of future cash flows and the volatility of fair value arising from interest rate risk, hedging strategies approved by the Bank's Management Board are applied using IRS/CIRS transactions. The Bank operates a Validation Department, which is responsible for periodical model validation in order to independently assess the degree of meeting the business needs through the model, and the Internal Audit Department, whose purpose is to assess the adequacy and effectiveness of the risk management system and the internal audit system. The frequency and method of conducting the validation and audits are determined by relevant internal regulations.
Article 448(1)(e)(i) and (v), Article 448(2)	The periodicity of the calculation of the institution's IRRBB measures, and a description of the specific measures that the institution uses to gauge its sensitivity to IRRBB	Risk measures used to measure the interest rate risk of the non-trading book in the Group are primarily: • The sensitivity of interest income to sudden shifts in the yield curve, which is determined by a potential financial effect of such a shift reflected in an estimated changed amount of interest income in a given time horizon. The change results from the mismatch between revaluation dates of assets, liabilities and off-balance sheet liabilities granted and received (in particular derivative instruments) sensitive to interest rate fluctuations. The Bank calculates the sensitivity of interest income on a daily basis. • The sensitivity of economic value of capital that reflects the net present value of balance sheet and off-balance sheet instruments as a result of the parallel shift of yield curves over the remaining life of interest rate sensitive instruments, i.e., until all positions mature. The Bank calculates the sensitivity of economic value of capital on a daily basis. • IR VaR, which determines the potential loss value that may occur in normal market conditions at a certain time (i.e., horizon), and with an assumed level of probability for changes in interest rate curves (taking into account unequal changes and correlations between interest rate volatility in the yield curves). For market risk management purposes, VaR is calculated with a 99% confidence level and 10-day position holding. Interest rate risk is managed using, among other things, VaR determined for individual financial instruments and for the Bank's portfolios, and by type of business activities of the Bank. The Bank calculates VaR on a daily basis. • Shock analyses (stress tests, crash tests) used to estimate potential losses resulting from the maintained structure of the balance sheet and off-balance sheet items, where a market situation occurs which is not described in a standard manner, using statistical measures. Additionally, the Bank uses shock analyses in the form of reverse stress tests of interest rate risk, the purpose of which is to determine the factor or set of risk activities whose change determines a specific level of loss. The Bank calculates the results of shock analyses with daily sensitivity (in the case of reverse stress tests on a monthly basis). • The repricing gap representing the difference between the value of assets and liabilities and active/past off-balance sheet items, whose revaluation dates fall within specified time intervals. The Bank calculates the interest rate gap on a daily basis.

(IN PLN MILLION)

Article 448(1)(e)(iii); Article 448(2)	A description of the interest rate shock and stress scenarios that the institution uses to estimate changes in the economic value and in net interest income (if applicable)	The Bank uses the following types of scenarios to estimate the sensitivity of economic value: • hypothetical stress tests – in which interest rate fluctuations are assumed arbitrarily: a parallel shift of the interest rate curves for the individual currencies by +/-50 bps, +/-100 bps, +/-200 bps, values over 200 bps and nonparallel deflection of yield curves scenarios, • historical stress tests – in which interest rate fluctuations are assumed on the basis of movements in interest rates observed in the past, including: the biggest historical change, deflection of the yield curve, taking into account portfolio positions, the biggest historical nonparallel shift of interest rate curves for securities and for derivatives hedging those securities, • crash tests – in which interest rate fluctuations are assumed on the basis of movements in interest rates observed in the past in such a manner as to maximise the Bank's potential loss, • reverse stress tests – which are aimed at finding such scenarios relating to: – the shift of yield curves, – a change in the average repricing date of individuals' current accounts, and – an increase in the frequency of termination of deposits bearing fixed interest rates subject to a strategy for hedging against interest rate fluctuations, which cause a certain change in the Bank's result, • Supervisory test according to the EBA Guidelines on IRRBB presented in table EU IRRBB1. Scenarios used to calculate the sensitivity of interest income measure include a change of rates by: +/-25 bp, +/-100 bp, +/-200 bp and +/-400 bp. Sensitivity of interest income is calculated in the following horizons: 1 year, 2 years and 3 years.
Article 448(1)(e)(ii); Article 448(2)	A description of the key modelling and parametric assumptions different from those used for disclosure of template EU IRRBB1 (if applicable)	As part of the calculation of the sensitivity of economic value measure, the Bank uses assumptions that were specified in the EBA Guidelines (EBA/GL/2018/02), whereas for internal scenarios of the Bank, no lower limits as to the level of interest rates are assumed. Such a restriction applies to EBA scenarios, the results of which are presented in table EU IRRBB1. The assumptions for the measurement for the calculation of the sensitivity of interest income are identical to the measure of the sensitivity of economic value, and it is assumed that current accounts of retail customers are not flexible and negative interest rates for retail customers cannot be drawn.
Article 448(1)(e)(iv); Article 448(2)	A high-level description of how the institution hedges its IRRBB, as well as the associated accounting treatment (if applicable)	Given the specific objective of interest rate risk management, the Bank's Group limits both the sensitivity of interest income and the sensitivity of economic value to an acceptable level, defined in the form of strategic tolerance limits (risk appetite). In order to secure itself against the interest rate risk of the non-trading book, the Bank regularly forecasts balance sheet and risk measures taking into account changes in the market and regulatory environment as well as the development of business activity. As part of the above process, IRS / CIRS hedging transactions are planned in accordance with the strategies approved by the Management Board of the Bank to hedge future cash flows or changes in fair value, taking into account the accepted risk appetite and the possible impact on individual result lines.
Article 448(1)(c); Article 448(2)	A description of key modelling and parametric assumptions used for the IRRBB measures in template EU IRRBB1 (if applicable)	As part of the calculation of the measures presented in Table EU IRRBB1, the Bank applies the assumptions specified in the EBA guidelines (EBA/GL/2018/02).
Article 448(1)(d)	Explanation of the significance of the IRRBB measures and of their significant variations since previous disclosures	The main application of estimated adverse changes in the sensitivity of economic value and the net interest income is the determination of the potential impact of interest rate changes on the Bank's capital and the realised interest income. The results of the said scenarios show that the Bank's interest income is sensitive to the drop of interest rates, while the economic value of capital would decrease, with the assumed increase in interest rates. At the end of 2022, the Group recorded a significantly lower sensitivity of economic value compared to the end of 2021. Lower sensitivity is primarily due to lower sensitivity of the debt portfolio portfolio due to the shortening of the term of this portfolio.
	Any other relevant information regarding the IRRBB measures disclosed in template EU IRRBB1 (optional)	N/A

Article 448(1)(g)	Disclosure of the average and longest repricing maturity assigned to non-maturity deposits	

Product	31.12.2022 Average maturity (in years)	Maximum maturity (in years)
Current accounts of retail customers	3,09	10
Saving accounts of retail customers	0,81	10
Current accounts of corporate clients	1,39	4
SME current accounts	0,35	3

Sensitivity of interest income in the non-trading book of the Bank's Group to the abrupt shift in the yield curve of 100 bp down in a one-year horizon in all currencies is shown in the table below:

Table 2.30 The sensitivity of interest income in the Group's non-trading book

MEASURE NAME	31.12.2022	31.12.2021
Sensitivity of interest income (PLN million)	-765	-864

Sensitivity of economic value reflects the fair value changes of items in the portfolio arising from the parallel shift of the yield curves by 100 bp up or down (the most unfavourable of the scenarios mentioned).

The table below presents the sensitivity of economic value measure (stress-test) of the non-trading book of the Bank's Group in all currencies as at 31 December 2022 and 31 December 2021:

Table 2.31 The sensitivity of economic value measure of the Bank's Group's non-trading book

MEASURE NAME	31.12.2022	31.12.2021
Sensitivity of economic value (in PLN million)	-893	-1 319

Table 2.32 Qualitative information on interest rate risk of non-trading book activities [Template EU IRRBB1]

Supervisory shock scenarios[1)]	31.12.2022	31.12.2021	31.12.2022	31.12.2021
	Changes of the economic value of equity		Changes of the net interest income	
Parallel up	-2 055	-3 000	927	951
Parallel down	1 048	1 762	-1 136	-1 523
Steepener	450	211		
Flattener	-1 307	-1 038		
Short rates up	-1 926	-2 040		
Short rates down'	977	1 047		

[1] Results of the stress-test analysis are presented only for currencies representing at least 5% of total financial assets in the non-trading book. Stress-tests are presented in accordance with the EBA guidelines on IRRBB.
[2] In case of the measure of sensitivity of interest income, the standard shock assuming an increase and decrease in interest rates by 200 bps.

2.6.3.2 Trading book

In order to monitor the interest rate risk in the trading book the Bank applies the value-at-risk (VaR) measure.

The IR VaR in the Bank's trading book is shown in the table below:

Table 2.33 VaR measure in the Bank's trading book

10-day VaR with a 99% confidence level (PLN million)[1]	31.12.2022	31.12.2021
Average value	37	17
Maximum value	86	34
Value at the end of the year	56	31

[1] Due to the nature of the activities of the Bank's Group companies, the value-at-risk measure is presented for the Bank's trading book.

2.6.4 Reporting of the interest rate risk

The Bank prepares daily, weekly, monthly and quarterly interest rate risk reports, with the monthly and quarterly reports concerning also the Bank's Group. The reports contain information on interest rate risk exposure and on the risk limits utilisation. The Bank's exposure to interest rate risk is measured on a daily basis and the scope of the reporting is adjusted to the frequency and recipients of the reports. The reports are addressed mainly to: ALCO, RC, the Management Board, the Risk Committee and the Supervisory Board.

2.6.5 Management activities related to interest rate risk

The main interest rate risk management tools used in the Bank's Group include:
1) interest rate risk management procedures,
2) currency risk limits and thresholds,
3) defining the characteristics and the level of exposure of individual products to interest rate risk,
4) defining the acceptable types of transactions based on interest rates.

The Bank's Group has established limits and thresholds for interest rate risk, among other things, for sensitivity of interest income, sensitivity of economic value as well as limits and thresholds for losses, and limits for instruments sensitive to interest rate fluctuations.

The methods of interest rate risk management in the entities in the Bank's Group are defined in the internal regulations implemented by those entities for which interest rate risk is material. Such regulations are developed after consulting the Bank and taking into account the Bank's recommendations.

The acceptable level of risk at the level of both the Bank and the Bank's Group is determined as part of the Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group.

At least once a year, the Bank reviews the risk management process in order to verify the consistency of the interest rate risk management process with the process of managing other risks, the regulatory requirements and the degree of alignment with the scale and complexity of the interest rate risk to which the Bank is exposed, which ensures the continued effectiveness of hedging instruments and risk mitigation measures. Additionally, the effectiveness of the risk management process is constantly monitored as part of the reports specified in this chapter

2.7 Foreign exchange risk

2.7.1 Introduction

Foreign exchange risk is the risk of incurring losses due to exchange rate fluctuations, generated by maintaining open currency positions.

The objective of foreign exchange risk management is to mitigate the risk of incurring potential losses arising from exchange rate fluctuations to an acceptable level by appropriate shaping the currency structure of balance-sheet and off-balance sheet items. The acceptable level of risk for both the Bank and the Bank's Group is determined as part of the Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group, implemented by the Management Board and approved by the Supervisory Board.

The overall structure of the management of risk, including foreign exchange risk, is contained in chapter 2.1 of this Report. According to the Foreign Exchange Risk Management Principles in place at the Bank, implemented by the Management Board, the currency position generated by banking operations (e.g., the repayment of a foreign currency loan in PLN by a customer, loan currency conversion) is transferred to the Treasury Department on a daily basis. This means that the Bank's currency position as at the end of a day may consist only of an open position in banking operations generated on that day and a limited currency position derived from trading activities, as a result of which the Bank's exposure to foreign exchange risk is low.

2.7.2 Identification, measurement and assessment of foreign exchange risk

The identification of foreign exchange risk consists of identifying its current and potential sources and estimating the materiality of its potential impact on the activities of the Bank and the Bank's Group.

The process and the organisation of foreign exchange risk management in the Bank's Group are in compliance with the principles described in chapter 2.1 of this Report.

The foreign exchange risk management process is supervised by the Supervisory Board which regularly receives information on the risk profile of the Bank and the Bank's Group as well as information on the key measures taken to manage that risk. The Supervisory Board also approves reports confirming the compatibility of the foreign exchange risk profile with the tolerance for foreign exchange risk specified at the level of the Bank and the Bank's Group. The Management Board is responsible for managing the Bank's foreign exchange risk, including supervising and monitoring the measures taken by the Bank to manage foreign exchange risk. The Management Board adopts internal regulations on foreign exchange risk management.

The Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group defines an acceptable level of foreign exchange risk both in the Bank and the Bank's Group and lays down the principles of foreign exchange risk management in the Bank's Group.

The Bank supervises the functioning of foreign exchange risk management in the individual subsidiaries in the Bank's Group. As part of the supervision, the Bank influences the foreign exchange risk management methods in these entities and supports their development. The Bank also takes into account the level of foreign exchange risk in the operations of the individual entities as part of the foreign exchange risk monitoring and reporting system at the Bank's Group level.

In order to determine the level of foreign exchange risk, the Bank uses the value-at-risk (VaR) model and shock analyses.

Shock analyses (stress tests and crash tests) for foreign exchange risk are used to estimate potential losses on the currency positions taken, where an extraordinary situation occurs on the foreign exchange market, which is not described in a standard manner, using statistical measures. Additionally, the Bank uses shock analyses in the form of a reverse stress test for foreign exchange risk.

The Bank carries out stress test analyses, crash test analyses and reverse stress test analyses, using the following scenarios relating to exchange rate fluctuations:
1) hypothetical scenarios – in which the hypothetical appreciation or depreciation of foreign exchange rates (10 percent for stress tests and 30 percent for crash tests) is assumed,
2) historical scenarios – based on the behaviour of FX rates observed in the past,
3) reverse stress tests – which examine potential exchange rate fluctuations resulting in the Bank's losses at the specified level of the Bank's own funds.

2.7.3 Control of the foreign exchange risk

The main tools for controlling foreign exchange risk at the level of both the Bank and the Bank's Group are the set strategic limits of tolerance for foreign exchange risk and the limits imposed by the ALCO, defining the acceptable exposure of the Bank's individual portfolios to foreign exchange risk.

The Bank's Group has established limits and thresholds for foreign exchange risk, among other things, for foreign currency positions, 10-day value-at-risk and losses on the foreign exchange market.

2.7.4 Monitoring the foreign exchange risk

In 2022, the foreign exchange risk of the Bank's Group was low because the Bank, as a rule, follows the policy of limiting its positions in the main currencies, i.e. EUR, USD, CHF, and GBP.

At the end of 2022, the Bank's Group recognised a significant currency position in CHF in the amount of approx. CHF 340 million. In connection with the recalibration of the model for legal risk write-downs enabling customers to enter into settlements for mortgage-backed loans in foreign currencies, an increase in the abovementioned write-downs for CHF loans was recorded in the Bank's books as at the end of December 2022, resulting in a short currency position. The Bank closed the currency position thus opened in January 2023, on the date of its recognition at the end of the year, with the use of spot transactions on the inter-bank market.

On 31 August 2022, the Bank obtained the consent of the PFSA to exclude the position under exposures in Kredobank SA maintained to hedge changes in the TCR ratio to changes in the UAH/PLN exchange rate from the determination of the currency position in UAH at the consolidated level.

The VaR and stress test analysis of the financial assets of the Bank and the Bank's Group (in total for all currencies) exposed to foreign exchange risk were as follows as at 31 December 2022 and as at 31 December 2021:

Table 2.34 Sensitivity of financial assets exposed to foreign exchange risk[1]

10-day VaR with a 99% confidence level (PLN million)[2]	31.12.2022	31.12.2021
Change in CHF/PLN exchange rate by 10% (stress-test)[3]	-162	-4
Change in EUR/PLN exchange rate by 10% (stress-test)[3]	12	-25
Change in all foreign exchange rates against PLN by 10% (stress test)	-104	-25

[1] The positions do not include structural positions in UAH (PLN 461.8 million), for which the Bank obtained approval from the PFSA to exclude them from the calculation of the currency positions, not affecting the Bank's profit or loss.
[2] Due to the nature of the activities of the Bank's Group companies, the value-at-risk measure is presented for the Bank.
[3] Stress test scenarios assume the appreciation or depreciation of PLN against individual foreign currencies; depending on which change generates a bigger loss.

As in the case of interest rate risk, given the nature of the activities of the other entities in the Bank's Group which generate a material foreign exchange risk and the specific nature of the market in which they operate, the Bank does not calculate a consolidated VaR sensitivity measure. These entities use their own risk measures to manage foreign exchange risk. A 10-day VaR measure is used by KREDOBANK S.A., it amounted to PLN 0.2 million as at 31 December 2022 and PLN 0.1 million as at 31 December 2021.

2.7.5 Foreign exchange risk reporting

The Bank prepares daily, weekly, monthly and quarterly foreign exchange risk reports, with the monthly and quarterly reports concerning also the Bank's Group. The reports gather the information on foreign exchange risk exposure and updates on the use of limits for that risk. The reports are addressed mainly to: ALCO, RC, the Management Board, the Risk Committee and the Supervisory Board.

2.7.6 Management activities related to foreign exchange risk

The main foreign exchange risk management tools used in the Bank's Group include:
1) currency risk management procedures,
2) currency risk limits and thresholds,
3) defining the acceptable types of foreign exchange transactions and the foreign exchange rates used in such transactions.

The methods of foreign exchange risk management in the entities in the Bank's Group are defined in the internal regulations implemented by those entities for which foreign exchange risk is material. Such regulations are developed after consulting the Bank and taking into account the Bank's recommendations.

The acceptable level of foreign exchange risk at the level of both the Bank and the Bank's Group is determined as part of the Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group.

At least once a year, the Bank reviews the risk management process in order to verify the consistency of the foreign exchange risk management process with the process of managing other risks, the regulatory requirements and the degree of alignment with the scale and complexity of the foreign exchange risk to which the Bank is exposed, which ensures the continued effectiveness of hedging instruments and risk mitigation measures. Additionally, the effectiveness of the risk management process is constantly monitored as part of the reports specified in chapter 2.7.5 of this Report

2.8 Liquidity risk including financing risk

2.8.1 Introduction

Liquidity risk is the risk of the inability to settle liabilities as they become due because of the absence of liquid assets. Lack of liquidity may arise from inappropriate structure of the statement of financial position, misfit of cash flows, not received payments from counterparties, sudden withdrawal of cash by customers or other market events.

The purpose of liquidity risk management is to ensure the necessary level of funds needed to settle current and future liabilities (also potential ones), taking into account the nature of the activities conducted and the needs which may arise due to changes in the market environment, by appropriately shaping the structure of the balance sheet and off-balance sheet liabilities.

As part of liquidity risk management, the Bank also manages:

1) financing risk which takes into account the risk of losing the existing sources of financing and inability to renew the required means of financing or the loss of access to new sources of financing.
2) product liquidity risk, for the estimation of which the cost of sale of liquid securities is assessed, which is then used in the main liquidity risk measures, stress testing and within the internal transfer pricing system in the Bank.

The process and the organisation of liquidity risk management in the Bank's Group are in compliance with the principles described in chapter 2.1 of this Report.

The liquidity risk management process is supervised by the Supervisory Board which regularly receives information on the risk profile of the Bank and the Bank's Group as well as information on the key measures taken to manage liquidity risk. The Supervisory Board also approves reports confirming the compatibility of the liquidity risk profile with the tolerance for liquidity risk defined at the level of the Bank and the Bank's Group. The Management Board is responsible for managing the Bank's liquidity risk, including supervising and monitoring the measures taken by the Bank to manage liquidity risk. The Management Board adopts internal regulations on liquidity risk management.

The Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group defines an acceptable level of liquidity risk both in the Bank and the Bank's Group and lays down the principles of liquidity risk management in the Bank's Group.

The Bank supervises the functioning of liquidity risk management in the individual subsidiaries in the Bank's Group. As part of the supervision, the Bank influences the liquidity risk management methods in these entities and supports their development. The Bank also takes into account the level of liquidity risk in the operations of the individual entities as part of the liquidity risk monitoring and reporting system at the Bank's Group level.

The Bank's treasury and liquidity risk management functions are segregated between the Strategic Customer and Investment Banking Area and the Risk Management Area, whereas within the individual entities in the Bank's Group they are centralised. The internal transfer of liquidity within the Bank's Group is restricted to the level of the financing needs being reported and the limits granted. The Bank also sells a selected part of its housing loan portfolio to PKO Bank Hipoteczny, as part of which PKO Bank Hipoteczny issues long-term mortgage covered bonds in PLN and EUR which are secured with the aforementioned receivables.

The Bank's Group has different types of long-term sources of external financing which include loans obtained from international financial institutions, bond issues under the Own Bond Issue Programme of PKO Bank Polski S.A. on the domestic market and the Euro Medium Term Notes (EMTN) programme on the foreign market, covered mortgage bond issues by PKO Bank Hipoteczny S.A., and the securitisation of assets by PKO Leasing S.A.

2.8.2 Identification, measurement and assessment of liquidity risk

The identification of liquidity risk consists of identifying its current and potential sources and estimating the materiality of its potential impact on the activities of the Bank and the Bank's Group.

The liquidity policy of the Bank's Group is based on maintaining an adequate level of a liquidity surplus as well as supervisory and internal measures of liquidity and financing risk, by increasing the liquid securities portfolio and stable sources of financing (in particular, a stable deposit base). In liquidity risk management money market instruments, including NBP open market operations are also used.

The Bank's Group uses, among other things, the following liquidity risk measures:
1) contractual liquidity gap – a listing of all balance sheet items by contractual maturity,
2) adjusted liquidity gap – a listing of individual balance sheet categories by adjusted maturity,
3) Liquidity Coverage Ratio (LCR) – a measure which defines the relationship of high quality liquid assets to net outflows in a 30-day horizon in stress conditions (a supervisory measure defined in the CRR),
4) Net Stable Funding Ratio (NSFR) – a measure which defines the relationship of items providing stable funding to items requiring stable funding,
5) liquidity surplus – a measure defining the Bank's ability to maintain liquidity on each day during the period called a "survival horizon", in stress conditions, taking into account scenarios of various severity and probability,
6) liquidity reserve – the difference between the most liquid assets and the expected and potential liabilities which mature in a given period,
7) stable financing to non-liquid assets ratio – the relationship of a stable deposit base, own funds and stable market sources of financing to loans, non-current assets and non-liquid securities,
8) concentration of long-term market sources of financing – the relationship of long-term sources of financing, grouped collectively according to a defined maturity, to a deposit base and all long-term sources of financing,
9) measures of stability of the deposit and loan portfolios,
10) early warning indicators – monitored in order to detect early unfavourable developments which may have a negative impact on the Bank's or the financial sector's liquidity position (when exceeded, early warning indicators trigger liquidity contingency plans).
11) liquidity stress tests.

The main objective of the stress tests performed as part of liquidity risk management is to identify and determine the factors constituting the greatest risk to the Bank's liquidity and to assess their impact on the Bank's liquidity, should they materialise.

The following types of scenarios are used to measure liquidity risk in the Bank:
1) scenario of the Bank's survival horizon in stress conditions,
2) scenarios of mass withdrawal of deposits by non-financial customers,
3) scenarios of sensitivity of in- and outflows to changing market conditions,
4) scenarios of the impact of stress market conditions on the expected losses on the housing loan portfolio,
5) scenarios of forecasted liquidity risk in shock conditions,
6) scenarios of additional collateral for derivative instruments concluded in the event of the Bank's credit rating being lowered,
7) stress tests for intraday liquidity,
8) reverse stress tests.

The results of stress tests are used, in particular, in:
1) monitoring the Bank's exposure to liquidity risk in stress conditions,
2) establishing limits and thresholds imposed on liquidity risk measures,
3) controlling the maintenance of a liquidity surplus on each day during the period called a "survival horizon",
4) the financial planning process at the Bank,
5) defining symptoms triggering liquidity contingency plans of the Bank,

(IN PLN MILLION)

6) defining the levels of ratios which will trigger the Recovery Plan.

2.8.3 Control of the liquidity risk

The control of the liquidity risk covers determining the strategic limits of tolerance for liquidity risk, limits and thresholds which define an acceptable level of the exposure of the entities in the Bank's Group to the risk of short-, mid- and long-term liquidity, tailored to the scale and complexity of the Bank and the Bank's Group.

2.8.4 Monitoring the liquidity risk

The adjusted liquidity gaps presented below include a list of maturing assets and liabilities and, in addition, they have been adjusted for certain on-balance sheet and off-balance sheet items to properly present the liquidity position of the Bank and the entities in the Bank's Group.

The key adjustments concern the following:

1) the core deposits (excluding the interbank market) and their maturities – customers' deposits (current accounts, savings accounts and fixed term deposits) have been classified into respective tenors according to their stability (the maintenance of an appropriate balance or revolving after the maturity date),
2) overdraft facilities and credit cards and their maturities – the expected cash flows relating to the repayment of overdraft facilities and credit card loans and the discharge of the off-balance sheet liabilities relating to these products have been classified into respective tenors, taking into account whether these loans are repayable and the possibility of their revolving,
3) instalment loans – expected cash flows due to loan prepayments were classified to appropriate time buckets,
4) liquid securities and their maturities – the expected cash flows have been classified into respective tenors, according to the possible dates of their liquidation (pledging, sale),
5) hedging transactions placed in connection with the performance of CSA agreements – the expected cash inflows or outflows have been classified into respective tenors, according to the estimated value of deposits to be placed by the Bank or deposits payable to the Bank,
6) market sources of financing – the expected cash flows have been classified into respective tenors, according to the planned revolving of the maturing market sources of financing,
7) off-balance sheet liabilities granted and received – the expected cash flows have been classified into respective tenors, according to the estimated dates and degrees of utilisation of off-balance sheet liabilities (in particular, loans granted).

The tables below present data concerning a periodic gap and a cumulative periodic gap of the Bank and the entities in the Bank's Group as at 31 December 2022 and 31 December 2021, respectively.

Table 2.35 Adjusted liquidity gap* – assets and liabilities

31.12.2022	a'vista	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	over 5 years
PKO Bank Polski SA								
Periodic gap	8 548	67 153	-10 815	-2 012	-350	24 862	23 609	-110 995
Cummulative gap	8 548	75 701	64 886	62 874	62 524	87 386	110 995	0
Bank subsidiaries								
Periodic gap	852	2 296	2 392	1 436	35	-4 106	1 438	-4 343
Cumulative gap	852	3 148	5 540	6 976	7 011	2 905	4 343	0
Total - Periodic gap	9 400	69 449	-8 423	-576	-316	20 756	25 047	-115 337
Total - Cumulative gap	9 400	78 849	70 426	69 850	69 534	90 291	115 337	0

31.12.2021	a'vista	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	over 5 years
PKO Bank Polski SA								
Periodic gap	9 604	84 503	-8 396	-3 436	-1 085	15 878	33 475	-130 543
Cummulative gap	9 604	94 107	85 712	82 275	81 190	97 069	130 543	0
Bank subsidiaries								
Periodic gap	448	3 838	977	-3 358	259	-481	-1 224	-459
Cumulative gap	448	4 287	5 263	1 906	2 165	1 683	459	0
Total - Periodic gap	10 053	88 341	-7 419	-6 794	-826	15 397	32 251	-131 003
Total - Cumulative gap	10 053	98 394	90 975	84 181	83 355	98 752	131 003	0

* Calculated as the total of the adjusted liquidity gap of PKO Bank Polski S.A., PKO Bank Hipoteczny, PKO Leasing S.A., PKO Życie Towarzystwo Ubezpieczeń S.A. and KREDOBANK and the contractual liquidity gap of the other companies in the Bank's Group.

In all tenors, the adjusted cumulative liquidity gap of the Bank's Group was positive. This means a cumulative surplus of the maturing assets over the maturing liabilities.

The table below presents the Bank's liquidity surplus as at 31 December 2022 and as at 31 December 2021.

Table 2.36 Bank's liquidity surplus

SENSITIVITY MEASURE	31.12.2022	31.12.2021
Liquidity surplus in 30-day horizon	26 157	14 656

(IN PLN MILLION)

The Bank maintains a high and safe level of high quality unencumbered liquid assets which constitute a hedge in case extreme liquidity scenarios (a liquidity surplus) materialise. Easily disposable assets include: cash (less the minimum balance maintained at the ATMs and in the Bank's branches), funds in the Bank's nostro accounts (excluding the average level of the mandatory reserve), interbank deposits placed with other banks and liquid securities.

Table 2.37 Liquidity surplus items related to liquid assets of the Bank

CATEGORY	31.12.2022	31.12.2021
Cash	3 934	3 139
Nostro accounts and deposits	5 483	2 434
Treasury bills and bonds	78 871	83 489
Monetary bills	0	0
Other liquid secur ities	27 408	26 182

The table below shows the supervisory liquidity measures of the Bank's Group as at 31 December 2022 and as at 31 December 2021.

Table 2.38 Supervisory liquidity measures

Measure	31.12.2022	31.12.2021
LCR	169%	193%
NSFR	132%	129%

In the period from 31 December 2021 to 31 December 2022, the values of the supervisory measures remained above the supervisory limits.

The structure of the Bank's sources of financing was described in the Bank's annual financial statements as at and for the year ended 31 December 2022 (Note 66. Liquidity risk management). The Bank follows a strategy which consists of using the stable part of the deposit base as the basic source of financing in all currencies. Issues of bonds denominated in EUR and PLN as well as mortgage covered bonds denominated in EUR and PLN also constitute a significant part of financing for the Bank and the Bank's Group (especially in the case of foreign currencies). Surplus funds obtained on the market in a given currency (issues of securities) are used to manage the Bank's foreign currency liquidity needs, using derivative transactions (mainly CIRS and FX swaps).

Table 2.39 Quantitative information of LCR [Template EU LIQ1]

		a	b	c	d	e	f	g	h
		Total unweighted value (avg)				Total weighted vaLue (avg)			
EU 1a	Quarter ending on (DD Month YYY)	31.12.2022	30.09.2022	30.06.2022	31.03.2022	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)					105 952	107 757	111 875	116 149
CASH - OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	228 793	223 865	221 718	219 463	17 136	16 416	15 976	15 595
3	Stable deposits	163 906	162 012	161 409	160 251	8 195	8 101	8 070	8 013
4	Less stable deposits	64 855	61 820	60 276	59 182	8 909	8 283	7 873	7 553
5	Unsecured wholesale funding	105 411	103 310	96 530	89 776	38 593	38 116	35 167	31 860
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	28 309	27 586	28 542	28 983	6 802	6 631	6 876	6 992
7	Non-operational deposits (all counterparties)	75 795	74 284	66 433	59 143	30 484	30 045	26 736	23 217
8	Unsecured debt	1 307	1 440	1 555	1 650	1 307	1 440	1 555	1 650
9	Secured wholesale funding					-	-	-	-
10	Additional requirements	75 419	73 975	70 992	67 775	16 011	15 615	14 277	12 831
11	Outflows related to derivative exposures and other collateral requirements	7 405	7 300	6 315	5 261	7 405	7 300	6 315	5 261
12	Outflows related to loss of funding on debt products	-	-	-	-	-	-	-	-
13	Credit and liquidity facilities	68 014	66 676	64 677	62 514	8 606	8 316	7 963	7 570
14	Other contractual funding obligations	7 203	7 202	5 548	3 764	5 707	5 651	4 252	2 935
15	Other contingent funding obligations	3 232	4 131	8 302	12 293	1 842	1 669	2 039	2 712
16	TOTAL CASH OUTFLOWS					79 289	77 469	71 712	65 932
CASH-INFLOWS									
17	Secured lending (e.g. reverse repos)	297	625	639	830	6	11	11	13
18	Inflows from fully performing exposures	10 390	8 999	7 721	7 565	8 928	7 407	5 940	5 525
19	Other cash inflows	4 035	4 555	4 208	3 396	4 035	4 511	4 043	3 113
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	14 722	14 180	12 568	11 790	12 969	11 928	9 994	8 650
EU-20a	Fully exempt inflows	-	-	-	-	-	-	-	-
EU-20b	Inflows subject to 90% cap	-	-	-	-	-	-	-	-
EU-20c	Inflows subject to 75% cap	14 722	14 180	12 568	11 790	12 969	11 928	9 994	8 650
TOTAL ADJUSTED VALUE									
EU-21	LIQUIDITY BUFFER					105 952	107 757	111 875	116 149
22	TOTAL NET CASH OUTFLOWS					66 320	65 541	61 718	57 282
23	LIQUIDITY COVERAGE RATIO					161%	166%	184%	206%

(IN PLN MILLION)

A liquidity coverage ratio is determined individually by each entity in the Bank's Group which is required to determine this ratio and on a consolidated basis for the Bank's Group as a whole.

As at 31 December 2022, the LCR has remained significantly above the supervisory limit and internal limits and thresholds. Compared with 31 December 2021, the ratio fell by 24 p.p., mainly due to an increase in the mandatory reserve rate required by the NBP, a decrease in the valuation of liquid securities, an increase in the cost of selling corporate and municipal bonds and an increase in outflows in the scenario of the impact of unfavourable market conditions on derivatives, financing transactions and other agreements, with a simultaneous increase in the deposit base, including mainly retail deposits. During this period, the Group's liquid assets decreased by ca. PLN 2 billion.

The Bank maintains a high and safe level of high quality unencumbered liquid assets which constitute a hedge in case extreme liquidity scenarios (a liquidity surplus) materialise. Easily disposable assets include: cash (less the minimum balance maintained at the ATMs and in the Bank's branches), funds in the Bank's nostro accounts (excluding the average level of the mandatory reserve), interbank deposits placed with other banks and liquid securities.

As at the end of December 2022, the outflows in respect of derivative instruments calculated in accordance with the CRR amounted to approx. PLN 2.0 billion, whereas the impact of the unfavourable market conditions scenario on derivative instruments, financing transactions and other agreements accounted for approx. 1.0% of the total unweighted outflows recognised in the liquidity coverage ratio.

As at the end of December 2022, the Bank's Group had 2 currencies for which the ratio of the value of liabilities in a given currency to the total value of liabilities in all currencies amounted to at least 5%: PLN and EUR. The Bank's Group had an LCR above 100% for all currencies in total and for PLN.

Table 2.40 Net Stable Funding Ratio [Template EU LIQ2]

	(in currency amount)	31.12.2022				
		a	b	c	d	e
		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	
Available stable funding (ASF) Items						
1	Capital items and instruments	45 555	-	-	2 584	48 139
2	*Own funds*	45 555	-	-	2 584	48 139
3	*Other capital instruments*		-	-	-	-
4	Retail deposits		246 474	-	-	230 438
5	*Stable deposits*		172 220	-	-	163 609
6	*Less stable deposits*		74 255	-	-	66 829
7	Wholesale funding:		100 432	822	10 533	56 899
8	*Operational deposits*		30 393	-	-	15 196
9	*Other wholesale funding*		70 039	822	10 533	41 702
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	-	12 039	2 245	4 901	6 024
12	*NSFR derivative liabilities*	-				
13	*All other liabilities and capital instruments not included in the above categories*		12 039	2 245	4 901	6 024
14	**Total available stable funding (ASF)**					341 500
Required stable funding (RSF) Items						
15	Total high-quality liquid assets (HQLA)					1 497
EU-15a	Assets encumbered for more than 12m in cover pool		189	139	9 332	8 211
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		23 440	13 637	212 181	206 465
18	*Performing securities financing transactions with financial customerscollateralised by Level 1 HQLA subject to 0% haircut*		-	-	-	-
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		7 067	1	1 733	2 440
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		13 209	9 757	108 952	114 458
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		605	373	13 061	10 186
22	*Performing residential mortgages, of which:*		3 067	2 662	87 295	74 734
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		955	690	48 851	36 146
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*		97	1 217	14 201	14 833
25	Interdependent assets		-	-	-	-
26	Other assets:					
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	1 287	1 094
29	*NSFR derivative assets*		3			3
30	*NSFR derivative liabilities before deduction of variation margin posted*		11 728			586
31	*All other assets not included in the above categories*		12 667	399	31 271	36 332
32	Off-balance sheet items		16 306	18 121	59 336	5 489
33	**Total RSF**					259 678
34	**Net Stable Funding Ratio (%)**					131.5%

2.8.5 Liquidity risk reporting

The Bank prepares daily, weekly, monthly and quarterly liquidity risk reports, with the monthly and quarterly reports concerning also the Bank's Group. The reports gather the information on liquidity risk exposure and updates on the use of limits for that risk. The reports are addressed mainly to: ALCO, RC, the Management Board, the Risk Committee and the Supervisory Board

2.8.6 Management activities related to liquidity risk

The main liquidity risk management tools used in the Bank's Group include:
1) procedures for liquidity risk management, in particular contingency plans,

2) limits and thresholds to mitigate the liquidity risk,
3) deposit, investment and derivative transactions, including structured foreign exchange transactions, and the purchase and sale of securities,
4) transactions ensuring long-term financing of the lending activities.

The methods of liquidity risk management in the entities in the Bank's Group are defined in the internal regulations implemented by those entities for which liquidity risk is material. Such regulations are developed after consulting the Bank and taking into account the Bank's recommendations.

The acceptable level of risk at the level of both the Bank and the Bank's Group is determined as part of the Risk Management Strategy of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group.

At least once a year, the Bank reviews the risk management process (taking into account the ILAAP guidelines) in order to verify whether the liquidity risk management process is adequate to the scale and complexity of the liquidity risk to which the Bank is exposed and consistent with the process of managing other risks and the regulatory requirements. This activity ensures the continued effectiveness of hedging instruments and risk mitigation measures. Additionally, the effectiveness of the risk management process is constantly monitored as part of the reports specified in chapter 2.8.5 of this Report.

2.9 Operational risk

2.9.1 Introduction

Operational risk is understood as the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events. Operational risk does not include reputation risk or business risk, but does include legal risk and cybersecurity risk:

- legal risk – the risk of incurring a loss due to ignorance, misunderstanding and non-application of legal norms and accounting standards, the inability to enforce contractual provisions, unfavourable interpretations or decisions of courts or public administration bodies,
- cyber security risk – the degree of exposure by potential negative cyber security risk factors, related to information and communication technologies, which may cause financial damage to the organisation by compromising the availability, integrity, confidentiality or accountability of information processed in SIB resources.

In accordance with the operational risk management strategy, the objective of operational risk management is to ensure the operating and cost effectiveness as well as security of the activities by reducing the occurrence of operational events and their negative consequences.

Operational risk management in the Bank and at the Bank's Group's level follows the best practices for managing the risk in banks and is in line with the generally applicable provisions of the law.

The entities in the Bank's Group manage operational risk in accordance with the principles for managing this risk in the Bank, taking into account the scope and type of the relationships between the entities in the Bank's Group, the specific nature and scale of the operations of the individual entities.

The operational risk profile of the Bank and the Bank's Group is understood as the scale and structure of the exposure to operational risk, it is defined by strategic limits of tolerance for operational risk. The Management Board defines the levels of utilisation of strategic limits of tolerance for operational risk which, when exceeded, serve as a signal for undertaking management activities to mitigate operational risk.

Operational risk is managed at the level of the entire Bank and at the levels of the individual areas of systemic operational risk management. The Bank's internal regulations clearly define organisation, segregation of competences and tasks in the area of operational risk management.

Current operational risk management is carried out by each employee of the Bank's Group as part of their duties and obligations and consists of preventing operational events arising in servicing products, services, conducting processes and using applications from materialising and of responding to the occurrence of operational events. Such responding includes:
1) identifying events and explaining the reasons for their occurrence,
2) defining the consequences of operational events,
3) recording data on operational events and their consequences,
4) monitoring information on operational events and their consequences,
5) eliminating negative consequences of operational events,
6) implementing recovery and prevention activities.

Systemic operational risk management consists of developing solutions used to control the operational risk level, enabling the Bank's objectives to be achieved. The main areas of systemic operational risk management are:
1) security and cyber security,
2) information technology,
3) settlements,
4) human resources,
5) business activity,
6) administration,
7) legal,
8) support (in particular insurance management, outsourcing, building and implementing an internal operational risk measurement model and systems of identification, assessment, monitoring and limiting of operational risk, etc.).

As part of operational risk management, the Supervisory Board supervises the operational risk management process, including:
1) approving strategic limits of tolerance for operational risk of the Bank and the Bank's Group,
2) approving the operational risk management strategy,
3) evaluating the operational risk management process, in particular on the basis of cyclical operational risk reports taking into account annual assessment of the adequacy and effectiveness of the operational risk management system and information on the implementation of the operational risk management strategy and conclusions of stress tests, and, if necessary, ordering the review of the operational risk management process.

As part of operational risk management, the Management Board determines the operational risk management process, in particular:
1) it sets the objective of the operational risk management,
2) it defines the operational risk management strategy,
3) it adopts resolutions on the operational risk management principles, strategic limits of tolerance for operational risk, and significant changes and extensions of the AMA,

4) it accepts the value of the management adjustment to the own funds requirement for operational risk according to the AMA,
5) it accepts reports and information on operational risk.

The correctness of the operational risk management process is regularly verified as part of:
1) review of the operational risk management strategy and processes aimed at assessing the adequacy and effectiveness of the operational risk management system,
2) self-assessment of maintenance of compliance with the AMA requirements,
3) validation of the AMA,
4) internal audit.

2.9.2 Identification, measurement and assessment of operational risk

2.9.2.1 Identification, method of measurement and assessment of operational risk

For the purposes of operational risk management, the Bank collects internal and external data on operational events as well as the reasons for them and the consequences of their occurrence, data on business environment factors, the results of operational risk self-assessment, data on the values of operational risk indicators, and data on the quality of the internal audit system.

The operational risk self-assessment comprises the identification and assessment of operational risk for the Bank's products, services, processes and applications as well as organisational changes and it is conducted cyclically and before implementing new or changed Bank products, services, processes and applications, using the data gathered on operational events and information obtained during the measurement, monitoring, cooperation with the Bank's Group's entities and operational risk reporting, including internal audits and security audits.

In 2022, PKO Bank Polski S.A. and the PKO Leasing S.A. Group had a decisive impact on the operational risk profile of the Bank's Group.

The measurement of operational risk in the Bank is aimed at determining the scale of the threats related to the occurrence of operational risk, using defined risk measures. The measurement of operational risk comprises:
1) calculating operational risk indicators: *KRI* and *RI*,
2) calculating the own funds requirement for operational risk under the AMA (for the Bank, including the branches in Germany and the Czech Republic) and BIA (for the branch in the Czech Republic and the entities in the Bank's Group, subject to prudential consolidation),
3) stress-tests,
4) calculating the internal capital for the Bank's Group.

The BIA requirement regarding the Bank's operations subject to the BIA is calculated in accordance with the CRR (Part Three, Title III) and applies to the part of the Bank's operations for which the Bank has the PFSA's permission obtained in connection with combining the BIA and AMA approaches to calculating the own funds requirement for operational risk.

The AMA requirement is calculated in accordance with the CRR and taking into account the requirements included in the RTS AMA Regulation. The approach is subject to independent reviews and is verified each year as part of the self-assessment of the compliance with AMA requirements in accordance with the guidelines of the Polish Financial Supervision Authority on supervisory validation of statistical methods of capital requirements' calculation, which are treated by the Bank and a supplementary document representing the best practices in the application of the advanced approach to operational risk management.

The Bank complies with the standards relating to external and internal data referred to in Article 322(3) and (4) of the CRR.

In the measurement of the operational risk, the Bank takes into account internal operational incidents where the loss level has exceeded the adopted threshold and covers the following period:
a) for modelling severity – from 1 January 2005 until the date at which the measurement is performed,
b) for modelling frequency distribution: – from 1 May 2007 until the date at which the measurement is performed.

It is the full scope of the Bank's data, consistent with the consent granted by the PFSA for using the Advanced Measurement Approach (AMA).

The Bank is mapping internal historical data on losses to business lines determined in Article 317 of the CRR and to loss event types defined in Article 324 of the CRR. Further levels of event type categorisation were introduced for the Bank's purposes to collect data at a higher level of detail. Moreover, segmentation which takes into account the said categorisation was implemented for the purposes of measuring operational risk using AMA.

All operational events of the Bank, including those relating to credit and market risks, are collected in the operational events database. Losses due to both operational and credit risk which are taken into account when calculating the own funds requirement for credit risk pursuant to Article 322(3)(b) of the CRR are identified and excluded from the operational risk modelling in order to exclude the possibility of double-counting of the same risks. The legal risk costs of the CHF mortgage loans portfolio are an exception, since a part of their value accounted for as at 30 September 2020 is taken into account in AMA measurement as a conservative buffer. Losses associated with the market risk are taken into account in the operational risk measurement.

The Bank's internal regulations governing the procedure for collecting the operational event data make it obligatory to report all losses due to operational risk which exceed the threshold for all units of the Bank, irrespective of the systems and geographical locations to which the loss related. The value of a threshold for internal events was established taking into account the economic cost of collecting information on operational events and their added value in operational risk measurement.

As part of the information on operational events, the Bank collects:
a) descriptive information on loss event factors or reasons,
b) gross losses and amounts recovered from gross losses,
c) start and disclosure dates of events, and recognition dates understood as the date of the first recognition of the amount of loss resulting from operational events in the profit and loss account.

The method of allocating losses resulting from loss events in the Bank's units determines the business line to which the event should be allocated depending on the product to which it relates or the Bank's unit affected by the financial effect. Allocation to a business line is based on:
a) the banking product to which the loss relates,
b) the Bank's unit to which the loss relates, if not related to a banking product.

Losses arising from events occurring over time but related to one another and those arising at different times but resulting from the same event are reported as individual events with several financial outcomes allocated to them. In the case of events related to one another, the sum of losses arising from these events is aggregated to a single observation relative to the aggregating event. Any exceptions from the adopted aggregation method must be justified and it must be verified that they do not contribute to unduly reducing the AMA requirement. The following dates are adopted as observation dates taken into account in the measurement:

1) for events not related to the legal risk – the date of disclosing the operational event,
2) for events related to the legal risk – the date of recognition, and if no date of recognition is assigned to the observation – the earliest date of loss occurrence.

Additionally, the operational risk measurement takes into account macroeconomic data and data illustrating the scale of the Bank's operating and business activities, in accordance with Article 322(6) of the CRR. The business environment factors are used to scale the severity and frequency of losses in LDA measurement, and external control factors are taken into account in the adjustment for changes in the quality of control.

Pursuant to the requirements of Article 322(4) of the CRR, the Bank uses external data when calculating LDA for selected modelled risk categories of the AMA and as an information base for analyses in the scenario analysis. The external data complement the internal data as part of operational risk measurement and are derived from, among other things, a system of exchange of information on events in the operational risk area (the ZORO) maintained by the Polish Bank Association. The Bank regularly reviews the conditions for using external data in AMA measurement.

The own funds requirement for operational risk according to the AMA corresponds to value at risk in respect of operational risk plus the result of a scenario analysis and adjusted for the value of the adjustment for changes in the quality of internal audit and a management adjustment, in accordance with the following formula:

$AMA = (LDA + AS) * (1 + KW) + KK$

where:

AMA - own funds requirement for operational risk (the AMA requirement),
LDA - value at risk,
AS - result of the scenario analysis,
KW - adjustment for changes in the quality of control,
KK - management adjustment.

The AMA measure captures potentially severe tail events, achieving a soundness standard comparable to a 99.9 % confidence interval over a one year period, in accordance with Article 322(2)(a) of the CRR.

Value at risk is calculated using a loss distribution approach (LDA). Under this approach, based on historical internal and external data on operational events and on the operational environment, a potential loss is measured which, with 99.9% probability, will not be exceeded in the coming year.

The objective of the scenario analysis is to extend the AMA requirement to capture the operational risk relating to the types of operational events which have not been covered with the LDA approach. In accordance with Article 322(5) of the CRR, the scenario analysis results are based on expert opinions, information on the losses which occurred in other institutions and the profile of these institutions, and on supplementing information on the profile of the Bank's operations.

The adjustment for changes in the quality of control makes it possible to take into account the possibility of deterioration in the quality of control in the Bank's which would result in an increase in the frequency or severity of operational events. Applied assessments of the adequacy and effectiveness of key control mechanisms are prospective and reflect potential sources of operational risk – the assessments reflect the state of functioning of the Bank's processes, including control mechanisms, and identified issues, until they are eliminated, may cause financial losses and changes in the Bank's – risk profile (in accordance with Article 322 (6) of the CRR and Article 27 of the RTS AMA Regulation).

The objective of the management adjustment is to include extraordinary events which, due to their specific nature, were not included in the AMA requirement under the LDA approach or in the scenario analysis, in the calculation of the AMA requirement.

In accordance with the requirements of Article 322(5) of the CRR and Article 26 of the RTS AMA Regulation, risk measurement includes conducting stress tests related to the possible consequences of materialisation of extremely unfavourable, yet possible, scenarios. This is aimed at defining the sensitivity of the Bank's results to the materialisation of a test scenario and at determining whether the AMA requirement covers the total losses resulting from the materialisation of such scenarios. The previous results of stress tests do not challenge the sufficient conservatism of the AMA requirement. Additionally, the Bank performs the backtesting of the correctness of the AMA requirement calculated. Backtesting results confirm the sufficient conservatism of the AMA requirement

The Validation Department, as an independent unit of the Bank, regularly validates the AMA approach used in accordance with the requirements laid down in Article 321(f) of the CRR and Articles 16 and 17 of the RTS AMA Regulation. The objective of validation of the AMA approach is an independent assessment of the extent to which the model meets the business needs known at the time of the validation. Independence of the validation process is ensured by the placement of the validation unit in the Bank's organisational structure under the direct supervision of the Vice-President of the Management Board responsible for the Risk Management Area in matters relating to model validation.

The Internal Audit Department is responsible for conducting internal audits of the internal operational risk management system. Operational risk measurement systems and the assessment of the quality of sources and data used for operational risk measurement and management are important elements which are subject to audit in accordance with the guidelines of Article 16 of the AMA RTS Regulation.

2.9.2.2 The Bank's insurance policy

To minimise the negative financial implications of operational events, the Bank follows an insurance policy which consists of ensuring continuing and effective insurance cover in return for an acceptable cost. PKO Bank Polski S.A. strives to apply uniform insurance principles for the entire Bank's Group so as to optimise the scope and costs of the insurance cover by using the effects of scale.

The Bank's insurance programme is monitored on an ongoing basis in order to identify the needs for the necessary changes.

2.9.2.3 Impact of insurance

In calculating the own funds requirement for operational risk, the Bank takes into account the impact of insurance.

The insurance policies used by the Bank to reduce the own funds requirement for operational risk meet the criteria defined in Article 323 of the CRR and Articles 36-44 of the RTS AMA Regulation and are in compliance with the Bank's internal regulations regarding the calculation of reductions in the own funds requirement for insurance. The Bank's insurance policies primarily relate to crime and professional indemnity insurance, directors and officers liability insurance, the Bank's third party liability and all-risk property insurance. In calculating reductions in respect of insurances held, the Bank takes into account deductibles and franchises.

Pursuant to Article 323 of the CRR, the reduction in own funds requirements from the recognition of insurances and other risk transfer mechanisms shall not exceed 20% of the own funds requirement for operational risk before the recognition of risk mitigation techniques.

2.9.3 Control of the operational risk

The objective of operational risk management is to strive to maintain the level of operational risk of the Bank and the Bank's Group at a fixed level.

The control of the operational risk includes determining risk control mechanisms in the form of operational risk limits, in particular strategic limits of tolerance for operational risk, loss limits and operational risk indicators, including thresholds and critical values, tailored to the scale and complexity of the activities of the Bank and the Bank's Group.

Strategic limits of tolerance for operational risk are defined by the Management Board and approved by the Supervisory Board. Additionally, the Management Board defines the levels of utilisation of the strategic limits of tolerance for operational risk for the Bank and the Bank's Group, which, when exceeded, serve as a signal for undertaking management activities to mitigate operational risk.

The Bank has a system of loss limits allocated to the Bank's individual units or functional divisions managing the operational risk relating to the individual areas of systemic operational risk management, which is aimed at defining the maximum acceptable level of operational risk for the Bank's individual units or functional divisions, ensuring that the strategic limits of tolerance for operational risk are not exceeded.

2.9.4 Monitoring the operational risk

The objective of monitoring the operational risk is to observe deviations from the benchmarks assumed (in particular limits, thresholds, prior period measurements, recommendations and guidance) in order to diagnose areas requiring management activities.

The Bank regularly monitors, in particular:
1) the degree of utilisation of strategic tolerance limits for the Bank and the Bank's Group and loss limits for operational risk for the Bank,
2) operational events and their consequences,
3) results of the operational risk self-assessment,
4) the own funds requirement for operational risk under the BIA with regard to the activities of the branch in the Czech Republic and under the AMA with regard to the Bank's other activities, and under the BIA for the entities in the Bank's Group subject to prudential consolidation,
5) the results of stress tests, including reverse stress tests,
6) operational risk indicator values in relation to thresholds and critical values,
7) the level of risk for the Bank and the Bank's Group, areas and tools for managing operational risk in the Bank such as self-assessment, operational risk indicators, loss limits,
8) the effectiveness and timeliness of management activities undertaken to reduce or transfer operational risk,
9) management activities relating to the presence of elevated or high levels of operational risk and their effectiveness in reducing the level of operational risk.

2.9.5 Reporting operational risk

Information relating to operational risk is reported for the purpose of senior management, the ORC, the RC, the Management Board and the Supervisory Board in monthly and quarterly cycles. The scope of the information is tailored to the scope of responsibility of the individual users of the information.

The users of monthly information include the ORC, senior management, and the Bank's units responsible for systemic operational risk management. Monthly information includes, in particular, information on:
1) the number and consequences of operational events,
2) the structure of operational events,
3) the values of selected operational risk indicators,
4) the operational risk level for strategic limits of operational risk tolerance, loss limits and self-assessment of operational risk.

The reports are addressed to the ORC, the RC, the Management Board and the Supervisory Board. Quarterly reports include, in particular, information on:
1) the Bank's operational risk profile resulting from the process of identification and assessment of threats to the Bank's products, services, processes and applications, and the LDA measurement,
2) the operational risk level for the Bank, areas and tools for managing operational risk, such as self-assessment, operational risk indicators, loss limits,
3) the results of operational risk measurement and monitoring,
4) the activities undertaken to mitigate operational risk and the assessment of the effectiveness of the activities undertaken to reduce the level of operational risk.

2.9.6 Management activities related to operational risk

Management activities are taken in the following cases:
1) on an initiative of ORC or the Management Board,
2) on the initiative of the Bank's organisational units managing operational risk,
3) when operational risk has exceeded the levels determined by Management Board or ORC.

In particular, if operational risk has reached an increased or high level, the Bank uses the following approaches and operational risk management tools:
1) risk reduction – mitigating the impact of risk factors or the consequences of their occurrence by introducing or strengthening various types of instruments for managing operational risk such as:

(IN PLN MILLION)

a) control instruments (including approval, internal audit, segregation of duties),
b) human resources management instruments (selection of staff, increasing the qualifications of employees, incentive systems),
c) determination or verification of threshold values and critical operational risk indicators,
d) determination or verification of operational risk limits,
e) contingency plans,

2) risk transfer – transfer of responsibility for covering potential losses on a third-party:
a) insurance,
b) outsourcing,

3) risk avoidance – resignation from the risk-generating activity or eliminating the probability of the risk factor's occurrence.

2.9.7 Losses incurred and management activities mitigating operational risk

In 2022, operational risk events were disclosed in the Bank, excluding losses related to the lending process, which comprised the losses presented in Table 2.41 totalling PLN 16.67 million, net (PLN 43.67 million, gross).

The most important operational events were disclosed in the category of External fraud, concerning the execution of unauthorised transfers as a result of using false links for payments received from third parties by the Bank's customers. The Bank takes actions to block the above-mentioned transactions or to recover funds.

Table 2.41 Losses* related to disclosed events

PKO BANK POLSKI SA		31.12.2022	
General category	**Specific category**	**Gross losses****	**Net losses*****
Internal frauds	Non-legitimated activities	0,15	0,13
	Thefts and frauds	0,97	0,76
Regulations of employment and work safety	Labour issues	1,59	1,24
Client, products and operational practises	Customer service, disclosure of information about clients, responsibilities to clients	0,09	0,07
	Improper business or market practices	0,33	0,03
	Products malfunctions	1,90	1,84
	Customer classification and exposures	0,21	0,11
Disruption od bank operations and system failures	Systems	2,47	2,43
Making transactions, providing and managing operational processes	Recording in the system, making, calculating and servicing transactions	3,76	3,27
	Inflow and registering clients	0,10	0,10
	Managing client's bank accounts	0,50	0,19
	Counterparties other than bank customers (e.g. clearing houses)	0,01	0,01
	Sellers and suppliers	0,28	0,21
Losses related to fixed assets	Natural disasters and other events	1,64	0,16
External frauds	Thefts and frauds	29,67	6,11
	Systems security	0,01	0,01
Total		**43,67**	**16,67**

* The losses do not include losses from operational risk related to credit risk, which are recognised as losses from credit risk and are used to calculate minimum requirements for own funds.
** According to Recommendation M of the PFSA, as at 31.12.2022 gross losses include realised losses (e.g., provisions, allowances, expenses) and unrealised losses (potential losses); however, they do not include direct recoveries or recoveries from the risk transfer mechanism.
*** As at 31.12.2022, net losses include realised losses (e.g., provisions, allowances, expenses)

To mitigate losses from operational risk, the Bank undertakes both ad hoc and systemic management activities. Ad hoc activities include a direct response to the sources of risk identified, eliminating reversible irregularities and recovering lost funds. Systemic activities comprise, among other things, securing IT systems, improving transaction authorisation methods, developing identification processes and blocking transfers to accounts identified as accounts associated with criminal activities, developing an anti-fraud system, developing and optimising a system for combating money laundering and financing of terrorism (AML), processes improvement, internal audit optimisation, training, risk transfer (insurance, outsourcing).

The Bank constantly is constantly increasing the level of security of IT systems, in particular in the area of applications used by the Bank's customers – this includes, among other things, active combating of phishing websites impersonating the Bank's transactional systems, identifying the intentions and capabilities of criminals including tactics, techniques and procedures, keeping track of the development of malware which attacks the Bank's customers, developing mechanisms of detecting infected computers of the customers, as well as improving the rules and extending the scope of electronic transaction monitoring.

Changes implemented in 2021, consisting of the optimisation of processes in the area of cybersecurity and the preparation of a strategy for the provision of services for the Companies of the Bank's Group, as well as the implementation of SOAR (Security Orchestration, Automation And Response) system enabling automation of handling security incidents have translated into significant improvements in the handling of alerts and incidents, which allowed to shorten the response process and influenced the mitigation of threats (by 95% in some cases). In 2022, the PKO BP CERT team notified and blocked, in cooperation with CERT Polska and CERT Orange, more than 2,700 fake pages – these frauds concerned mainly electronic services and the Bank's customers.

The Bank operates an internal cell (RedTeam), which simulates potential attacks in a controlled manner, in order to identify weaknesses before their use by criminals. In 2022, information within the scope of Threat Intelligence (i.e., collecting information about current and potential cyber threats) was widely analysed as regards activities carried out in cyberspace related to the war in Ukraine with simultaneous imposition of threats that may materialise in the Bank. Great emphasis was placed on removing vulnerabilities, which resulted in the lowest number of vulnerabilities in the Bank's history.

Moreover, the Bank educates its employees regularly in ICT environment security and the security of information processed in that environment. New e-learning training courses were provided to employees in 2022 regarding the threats related to:
- using mobile devices,
- using personal IT equipment for professional purposes and using the Bank's equipment for private purposes,
- publication of information concerning the Bank by employees in the Internet (especially in the social media),
- social engineering attacks.

Training is mandatory for all employees. Its provision is monitored by the Bank on an ongoing and periodic basis as part of independent monitoring of controls.

In accordance with the Bank's policy, the principles of cybersecurity must be complied with not only by the employees but also by third parties (contractors). The Bank sets security requirements for IT service providers with regard to the protection of the Bank's information, access to the Bank's buildings and rooms, protection of the Bank's information system.

A specialist CERT unit operating within the Bank pursues a strategy for ensuring IT security of the services provided by the Bank. CERT PKO BP is a member of an international forum which brings together response teams – FIRST and belongs to the working group of European response teams – TERENA TF-CSIRT and the Trusted Introducer organisation which operates with it.

Joining international organisations allows the CERT PKO BP's team to respond more effectively and quickly to cyber security threats through operational cooperation and sharing experience and knowledge with similar entities around the world. The membership of the Bank, which is an organisation that meets the highest national and international standards in the field of cyber security, in the aforementioned organisations is confirmation of the high level of services provided and recognition of the Bank's professionalism and skills in ensuring IT security. The CERT PKO BP team operates on a 24/7/365 basis, and as part of its activities it pro-actively fights Internet threats, in particular those related to online and mobile banking.

The Bank's representatives become involved in the work carried out as part of the Banking Cybersecurity Centre (BCC) operating as part of the Polish Bank Association. The purpose of the BCC is to take comprehensive and long-term actions on several levels: intrasectoral, intersectoral (including cooperation with telecommunication, transport or power sector institutions), nationwide (cooperation with the state administration or law enforcement) and international, which are aimed at improving the safety of mobile and electronic banking and preparing crisis management tools (structures, procedures, information exchange mechanisms) in the event of, e.g., a massive attack of cybercriminals on the banking sector.

The Bank has an anti-fraud system in place to comprehensively detect fraud attempts to the detriment of the Bank and its customers. Anti-fraud analytics is based on decision engines operating in the NRT (near real time) mode for lending processes and in real time for transaction processes. Fraud detection algorithms use advanced statistical methods for rare event detection, both in key customer credit areas in the Bank's branches and agencies as well as in remote channels and transaction streams. Anti-fraud models analyse both unauthorised activity by Bank employees and detect accounts potentially operated to transfer fraudulent funds.

As regards the physical security of facilities, the monetary assets they hold and the information they process, technical safeguards and remote protection in the form of monitoring of alarm signals with the guaranteed arrival of intervention teams are used. Additionally, on-site protection is provided in selected branches and key facilities. Physical protection management, monitoring of alarm signals and work on securing the facilities are aimed at minimising risks related to storing substantial amounts of cash, such as robberies, burglaries and other risks to physical security, such as fires, property damage, vandalism, aggressive customers, and terrorism. In addition, innovative activities are implemented to correlate data with the technical security systems and the transaction system that seek to detect persons in a self-service annex who do not make ATM transactions. The scope of physical protection services in facilities is adjusted to organisational changes in the branch network and current needs (e.g., for selected branches which, in 2022, implemented hryvnia purchases from Ukrainian citizens) and selected branches located near the border with Ukraine. In addition, an analysis of the hazards to self-service devices is carried out to identify the need for additional protection against increased attack on the devices using explosives. In connection with the update of the law, the process of retrofitting self-service devices with banknote neutralisation systems has been prepared.

The technical safeguards and physical protection also serve the purpose of securing the Bank's ICT infrastructure, the information processed at the Bank, which constitutes banking secrecy, and personal data by ensuring a level of security required by law, adequate to the assessment of operational risk and optimal in terms of costs. IT system security is ensured by physical restraints as well as by the use of constantly upgraded alarm, access control, CCTV and fire protection systems.

In order to counteract terrorism financing and to minimise the operational risk, the Bank applies specific restrictive measures consisting of freezing property values, as well as benefits derived from these assets and not making these values available to persons or entities. Moreover, in the case of risk of money laundering or terrorist financing, at the request of the General Inspector of Financial Information or the prosecutor, and in cases where financial security measures cannot be applied, the Bank suspends the transaction or blocks the account in accordance with the provisions of the Act on counteracting money laundering.

In 2022 in the field of security:
1) a project comprising modernisation of fire protection systems of selected facilities has started;
2) new mechanisms were implemented to tighten up the process of monitoring in electronic, card and mobile banking. In addition, work on tightening the cash lending process was continued;
3) the systems for detecting incidents, anomalies and advanced types of malware were enhanced, and the handling of incidents was automated;
4) the Security Awareness training (simulation of a phishing attack) covered all employees of the Bank (over 20,000 people), as well as a dedicated training for the Bank's Management Board;
5) a biometry project aiming to develop a system which enables safe and effective verification of a person in a stationary or remote channel based on their unique physical or behavioural features, using an innovative biometric technology, has been continued;
6) in order to counter the blackbox attacks (consisting of the criminals connecting of an external device directly to the cabling of an ATM and stealing cash deposited at the ATM), a way to respond to situations giving rise to suspicions has been in development;
7) in order to reduce the risk of blackbox attacks, tests were carried out to use surveillance television for this purpose in terms of anti-masking (obscuring he camera) and imaging analytics (introduction to a specific zone).

2.10 Business risk

2.10.1 Introduction

Business (strategic) risk is the risk of failing to achieve the assumed financial goals, including incurring losses, due to adverse changes taking place in the business environment, making bad decisions, incorrect implementation of the decisions made or failing to take appropriate action in response to changes taking place in the business environment.

The objective of business risk management is to maintain the potential negative financial consequences resulting from adverse changes taking place in the business environment, making bad decisions, incorrect implementation of the decisions made or failing to take appropriate action in response to changes taking place in the business environment at an acceptable level.

2.10.2 Identification, measurement and assessment of business risk

The identification of business risk consists of recognising and determining factors, both current and potential ones which arise from current and planned activities of the Bank's Group and which may significantly affect the financial position of the Bank's Group, generating revenue and expenses of the Bank's Group or a change in their amounts. Business risk is identified by making a qualitative assessment of business risk and by identifying and analysing the factors which contributed to significant deviations of the actual amounts of revenue and expenses from their forecasted amounts.

The measurement of business risk is aimed at defining the scale of threats related to the existence of business risk using the adopted risk measures. The measurement of business risk includes:
1) the calculation of internal capital,
2) stress tests,
3) reverse stress tests,
4) utilisation of the strategic limit of tolerance.

The level of business risk is assessed on a quarterly basis, based on the risk level resulting from:
1) the level of strategic tolerance limits calculated,
2) qualitative business risk assessment,
3) an indicator based on the deviation of the actual business revenue and costs from their forecast values and the level of internal capital.

2.10.3 Control of the business risk

The objective of the control of business risk is to strive to maintain the level of business risk of the Bank's Group at an acceptable level.

The control of the business risk includes determining and reviewing risk controls in the form of limits of tolerance for business risk along with its thresholds and critical values, adequate to the scale and complexity of the activities of the Bank's Group, on a regular basis.

2.10.4 Monitoring the business risk

Business risk is monitored to identify areas which require management activities to be undertaken. Monitoring the business risk includes, in particular:
1) strategic limits of business risk tolerance,
2) the results of stress tests (the scenarios include the following types of events: increase in costs without a simultaneous change in revenue, intensification of the phenomenon of failure to achieve the forecast result, accumulation of losses, increased scale of losses),
3) results of reverse stress tests,
4) internal capital level,
5) deviations from the business risk implementation from the forecast,
6) results of qualitative business risk assessment.

2.10.5 Reporting business risk

Reporting of business risk of the Bank's Group is performed quarterly. The users of business risk reports include the BCC, ALCO, RC, the Management Board, and the Supervisory Board. The reports include, among other things, the results of business risk measurement, in particular internal capital, the degree of utilisation of the strategic limit of tolerance for business risk, results of a qualitative assessment of business risk, a forecast for internal capital to cover business risk, reverse stress tests of the forecast, and the results of monitoring the amounts of the Bank's revenue and expenses, results of stress tests and reverse stress tests, results of an annual assessment of the adequacy and effectiveness of risk management, including a business risk management process review, information on the business risk in the entities in the Bank's Group, in particular internal capital and the degree of utilisation of the strategic limit of tolerance for business risk.

2.10.6 Management activities related to business risk

The management activities consist of, in particular:
1) verifying and updating quarterly financial forecasts, including activities aimed at reducing the level of business risk,
2) monitoring the level of the strategic limit of tolerance to business risk.

2.11 Model risk

2.11.1 Introduction

Model risk is the risk of incurring losses as a result of making wrong business decisions on the basis of the models in place. The model risk in the Bank's Group is managed both at the level of a given entity in the Bank's Group (the owner of a model) and at the level of the Bank as the parent company in the Bank's Group.

The objective of model risk management is to mitigate the risk of incurring losses as a result of making wrong business decisions on the basis of the models in place through a properly defined and implemented model management process.

All the models significant to the Bank and the models of the entities in the Bank's Group, significant to the Bank's Group, are subject to an independent validation carried out by the validation unit of PKO Bank Polski S.A.

2.11.2 Identification, measurement and assessment of model risk

The identification of model risk consists of, in particular:
1) collecting information on the models in place and models planned to be implemented,
2) determining the significance of the models.

The model risk evaluation is aimed at determining the scale of threats associated with the occurrence of the model risk. The assessment makes it possible to determine the risk profile and to identify the models which generate the highest risk, exposing the Bank's Group to potential losses. Model risk is assessed at the level of each model and in aggregate, at the level of each entity in the Bank's Group

2.11.3 Control of the business risk

The objective of the control of model risk is to maintain an aggregated assessment of model risk at a level which is accepted by the Bank's Group. The control of the model risk consists of determining the mechanisms used to diagnose the model risk level and tools for reducing the level of this risk. The tools used to diagnose model risk include a strategic limit of tolerance for model risk and model risk thresholds.

2.11.4 Monitoring and reporting the model risk

The objective of monitoring model risk is to diagnose the areas which require management activities. Monitoring the model risk includes:
1) updating the model risk level,
2) evaluating the utilisation of the strategic limit of tolerance to the model risk and the thresholds of the model risk,
3) verifying the stage of implementation and evaluating the effectiveness of the implementation of actions intended to mitigate the model risk.

The monitoring results are presented regularly in reports intended for the RC, the Management Board and the Supervisory Board, and they contain a comprehensive assessment of model risk, in particular:
1) information on the degree of utilisation of the strategic limit of tolerance for model risk,
2) information on the level of model risk (on a separate and consolidated basis),
3) model risk map,
4) assessment of the effectiveness of the recommendations made to reduce the level of model risk,
5) suggested new management activities (if any) to mitigate model risk.

2.11.5 Management activities related to model risk

The objective of management activities is to shape the process of management of model risk and the level of such risk by setting acceptable risk levels and making decisions to use tools which support model risk management.

2.12 Macroeconomic risk

2.12.1 Introduction

Macroeconomic risk is the risk of deterioration in the financial position of the Bank's Group as a result of an adverse impact of changes in macroeconomic conditions.

The objective of macroeconomic risk management is to identify macroeconomic factors which have a significant impact on the activities of the Bank's Group and to take action to mitigate the adverse impact of potential changes in the macroeconomic situation on the financial position of the Bank's Group.

2.12.2 Identification, measurement and assessment of macroeconomic risk

The identification of macroeconomic risk consists of determining the scenarios of potential macroeconomic changes and risk factors having the greatest impact on the financial position of the Bank's Group. Macroeconomic risk results from the interaction of factors dependent on the activities of the Bank's Group (in particular, the balance sheet structure and response plans developed for stress scenario purposes) and factors independent thereof (macroeconomic factors). The Bank's Group identifies factors affecting the level of macroeconomic risk in the course of comprehensive stress tests.

The measurement of macroeconomic risk is aimed at defining the scale of threats related to the existence of macroeconomic risk and includes:
1) determining, as part of comprehensive stress tests, the financial result (based on systemic scenarios – assuming a liquidity shock for the domestic economy caused by the tightening of the energy crisis and the outflow of capital from the region, mixed – additionally assuming that with the increase in energy prices and growing demand for them, a significant increase in the Bank's financing of strategic customers) together with its components and risk measures,
2) conducting reverse stress tests,
3) the calculation of internal capital;

The level of macroeconomic risk is assessed annually, based on the results of periodical comprehensive stress tests (scenarios for assessing macroeconomic risk). The level of macroeconomic risk is assessed as moderate, increased or high.

2.12.3 Control of the macroeconomic risk

The objective of the control of macroeconomic risk is to strive to mitigate the adverse impact of potential changes in the macroeconomic situation on the financial position of the Bank's Group.

The control of the macroeconomic risk consists of determining an acceptable level of macroeconomic risk tailored to the scale of the activities of the Bank's Group and its impact on the operations and financial position of the Bank's Group. An acceptable level of macroeconomic risk is a situation in which the results of comprehensive stress tests do not indicate the need to take any remedial measures or the remedial measures which must be taken will be sufficient to improve the financial position of the Bank's Group.

2.12.4 Monitoring the macroeconomic risk

Monitoring the macroeconomic risk consists of analysing the macroeconomic situation, the macroeconomic factors to which the Bank's Group is sensitive, the level of macroeconomic risk and the results of comprehensive stress tests.

2.12.5 Reporting macroeconomic risk

Macroeconomic risk is reported quarterly in the form of a report submitted to the ALCO, RC, the Management Board, the Risk Committee of the Supervisory Board, and the Supervisory Board.

In particular, the following is reported:
1) results of the measurement of macroeconomic risk, in particular internal capital,
2) macroeconomic risk level,
3) results of comprehensive stress tests,
4) results of reverse stress tests;

2.12.6 Management activities related to macroeconomic

The management activities consist of, in particular:
1) determining acceptable levels of risk,
2) taking measures to reduce the risk level in the event of an increased or high level of macroeconomic risk.

2.13 Risk management at PKO Bank Hipoteczny S.A.

The risk management system in place at PKO Bank Hipoteczny S.A. is consistent with the one in place in the Bank's Group.

Due to the specialist nature of the mortgage bank:
1) credit risk management relates mainly to competences in the mortgage loan segment, the assessment of the credit standing of retail customers, and the assessment of the mortgage lending value (MLV) of real estate,
2) the main source of financing is the issue of long-term mortgage covered bonds, liquidity management competences are focused on issuing instruments on the domestic and foreign secured debt markets.

PKO Bank Hipoteczny S.A. builds its mortgage loan portfolio by way of agency sales and purchasing receivables from the parent company. The mortgage loan portfolio forms the basis of a collateral pool securing the issue of mortgage covered bonds.

The mortgage lending value of real estate is a value determined by PKO Bank Hipoteczny S.A. which, in the bank's opinion, reflects the level of the risk relating to the real estate as collateral for loans granted and is used to determine the amount up to which a loan secured with a mortgage on given real estate may be granted or to decide whether the receivable secured with the said real estate may be purchased by the bank.

PKO Bank Hipoteczny S.A. determines the MLV based on an appraisal of the mortgage lending value of real estate, which is carried out with due diligence and prudence, taking into account only those features of the real estate and the expenditure necessary to build it that will be durable and, assuming the reasonable operation thereof, will be possible to obtain by each owner of the real estate. In the appraisal, which is prepared for a specific date, the assumptions and parameters adopted for the analysis, the MLV determination process and the resultant proposed MLV are documented. The appraisal takes into account the analyses and forecasts concerning the parameters specific to given real estate, which affect the assessment of credit risk, as well as general factors, e.g., population growth, the unemployment rate, local land development plans.

A mortgage covered bond is a registered or bearer debt security issued by mortgage banks on the basis of a pool of receivables secured with a mortgage. Mortgage covered bonds are mainly issued for longer terms, therefore, they constitute a source of long-term financing for the Bank's Group.

PKO Bank Hipoteczny S.A.'s business model assumes a large percentage of mortgage covered bonds in the financing structure. A mortgage covered bond is a stable source of financing, but due to the balloon nature of its redemption in most cases, at the time of redemption, such financing has to be replaced with more issues or an alternative source of financing. In managing liquidity, PKO Bank Hipoteczny S.A. pays special attention to matching cash flow dates and the opportunities to renew its sources of financing at the time of maturity of significant liabilities (the redemption of mortgage covered bonds).

The risk management system and quantitative information on disclosures can be found in the Financial Statements of PKO Bank Hipoteczny S.A. as at and for the year ended 31 December 2022 and in the Directors' Report of PKO Bank Hipoteczny S.A. as at and for the year ended 31 December 2022.

3 CAPITAL ADEQUACY

Capital adequacy is a process aimed at ensuring that the level of the risk which the Bank and the Bank's Group take on in connection with the development of their business activities may be covered with the available capital, taking into account a specific risk tolerance level and time horizon. The process of managing capital adequacy comprises, in particular, compliance with the applicable regulations of the supervisory and control authorities, as well as the risk tolerance level determined within the Bank and the Bank's Group and the capital planning process, including the policy concerning the sources of acquisition of capital.

Major regulations applicable in the capital adequacy assessment process include:
1) the Polish Banking Law,
2) the CRR,
3) the Act on macro-prudential supervision,
4) the Regulation of the Minister of finance, funds and regional policy of 8 June 2021 on the risk management and internal audit systems and remuneration policy in banks,
5) the Regulation of the Minister of finance, funds and regional policy of 27 July 2021 on the detailed method of estimating internal capital and conducting reviews of estimation strategies and procedures and maintaining a permanent level of internal capital by banks,
6) the Act of 10 June 2016 on the Bank Guarantee Fund, Deposit Guarantee Scheme and Resolution (as amended).

The objective of capital adequacy management is to maintain a level of own funds which is adequate to the scale and risk profile of the activities of the Bank and the Bank's Group on an ongoing basis.

Managing the capital adequacy of the Bank's Group includes:
1) identifying and monitoring significant types of risk,
2) measuring or estimating internal capital to cover individual risk types of risk and total internal capital,
3) determining threshold values for capital adequacy measures,
4) forecasting, monitoring and reporting the level and structure of own funds,
5) managing the structure of the balance sheet to optimise the quality of the Bank's own funds,
6) emergency measures with regard to capital,
7) stress-tests,
8) forecasting requirements for own funds and internal capital,
9) assessing the profitability of individual business areas and customer segments.

Capital adequacy measures include:
1) total capital ratio (TCR),
2) Tier 1 capital ratio (T1),
3) Tier 1 core capital ratio (CET1),
4) the ratio of own funds to internal capital,
5) leverage ratio,
6) MREL ratio – TREA,
7) MREL ratio – TEM.

The objective of monitoring the level of capital adequacy measures is to determine the degree of compliance with supervisory requirements and to identify cases which require initiating capital emergency measures or a capital protection plan.

Pursuant to Article 92 of the CRR, the minimum capital ratio levels maintained by the Bank's Group are::
1) total capital ratio (TCR) – 8.0%,
2) Tier 1 capital ratio (T1) – 6.0%,
3) Tier 1 core capital ratio (CET1) – 4.5%.

Pursuant to the CRR and the Act on macroprudential supervision, the Bank's Group is required to maintain a combined buffer requirement which is the total of the applicable buffers. Detailed information on capital buffers is presented in chapter 3.3 of this Report.

(IN PLN MILLION)

Table 3.1 Key metrics [Template EU KM1]

		a	b	c	d	e
		31.12.2022	30.09.2022	30.06.2022	31.03.2022	31.12.2021
Available own funds (amounts)						
1	Common Equity Tier 1 (CET1) capital	38 139	37 579	36 403	36 644	38 524
2	Tier 1 capital	38 139	37 579	36 403	36 644	38 524
3	Total capital	40 723	40 216	39 103	39 344	41 224
Risk-weighted exposure amounts						
4	Total risk-weighted exposure amount	229 095	234 653	226 000	224 487	226 166
Capital ratios (as a percentage of risk-weighted exposure amount)						
5	Common Equity Tier 1 ratio (%)	16.65%	16.01%	16.11%	16.32%	17.03%
6	Tier 1 ratio (%)	16.65%	16.01%	16.11%	16.32%	17.03%
7	Total capital ratio (%)	17.78%	17.14%	17.30%	17.53%	18.23%
Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)						
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	0.00%	0.11%	0.11%	0.11%	0.11%
EU 7b	of which: to be made up of CET1 capital (percentage points)	0.00%	0.06%	0.06%	0.06%	0.06%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	0.00%	0.08%	0.08%	0.08%	0.08%
EU 7d	Total SREP own funds requirements (%)	8.00%	8.11%	8.11%	8.11%	8.11%
Combined buffer requirement (as a percentage of risk-weighted exposure amount)						
8	Capital conservation buffer (%)	2.50%	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 (%)	0.00%	0.00%	0.00%	0.00%	0.00%
9	Institution specific countercyclical capital buffer (%)	0.02%	0.01%	0.01%	0.01%	0.01%
EU 9a	Systemic risk buffer (%)	0.00%	0.00%	0.00%	0.00%	0.00%
10	Global Systemically Important Institution buffer (%)	0.00%	0.00%	0.00%	0.00%	0.00%
EU 10a	Other Systemically Important Institution buffer	2.00%	1.00%	1.00%	1.00%	1.00%
11	Combined buffer requirement (%)	4.52%	3.51%	3.51%	3.51%	3.50%
EU 11a	Overall capital requirements (%)	12.52%	11.62%	11.62%	11.62%	11.61%
12	CET1 available after meeting the total SREP own funds requirements (%)	9.78%	9.04%	9.19%	9.42%	10.12%
Leverage ratio						
13	Leverage ratio total exposure measure	454 373	461 082	450 922	444 043	439 933
14	Leverage ratio	8.39%	8.15%	8.07%	8.25%	8.76%
Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount)						
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)	0.00%	0.00%	0.00%	0.00%	0.00%
EU 14b	of which: to be made up of CET1 capital (percentage points)	0.00%	0.00%	0.00%	0.00%	0.00%
EU 14c	Total SREP leverage ratio requirements (%)	3.00%	3.00%	3.00%	3.00%	3.00%
Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)						
EU 14d	Leverage ratio buffer requirement (%)	0.00%	0.00%	0.00%	0.00%	0.00%
EU 14e	Overall leverage ratio requirement (%)	3.00%	3.00%	3.00%	3.00%	3.00%
Liquidity Coverage Ratio						
15	Total high-quality liquid assets (HQLA) (Weighted value - average)	105 952	107 757	111 875	116 149	117 683
EU 16a	Cash outflows - Total weighted value	79 289	77 469	71 712	65 932	60 602
EU 16b	Cash inflows - Total weighted value	12 969	11 928	9 994	8 650	7 270
16	Total net cash outflows (adjusted value)	66 320	65 541	61 718	57 282	53 332
17	Liquidity coverage ratio (%)	161.0%	166.4%	184.3%	205.8%	222.0%
Net Stable Funding Ratio						
18	Total available stable funding	341 500	339 087	325 389	320 550	319 317
19	Total required stable funding	259 678	263 805	255 474	249 944	247 567
20	NSFR ratio (%)	131.5%	128.5%	127.4%	128.2%	129.0%

* the change in relation to published data concerns exclusion from Tier 2 instruments of bonds held by PKO Towarzystwo Ubezpieczeń SA and PKO Życie Towarzystwo Ubezpieczeń SA

On 2 December 2022, PKO Bank Polski S.A. received a letter from the Bank Guarantee Fund (BGF) on the minimum requirement for own funds and eligible liabilities (MREL). The BGF has set a target MREL requirement for the Bank based on consolidated data at 15.36% of the total "TREA" risk exposure and 5.91% of the total "TEM" exposure measure, which must be met by 31 December 2023.

Table 3.2 MREL levels

In %	31.12.2022	31.12.2023
MREL (TREA)	11.68	15.36
MREL (TEM)	4.46	5.91

In 2022, the values of capital adequacy measures remained above the internal and external limits.

3.1 Own funds

For capital adequacy purposes, own funds are calculated in accordance with the provisions of the Banking Law, Part Two of the CRR and the secondary legislation for the CRR.

The own funds of the Bank's Group include Common Equity Tier 1 capital and Tier 2 capital. No elements of Additional Tier 1 capital are identified in the Bank's Group.

Common Equity Tier 1 capital includes:
1) share capital presented in accordance with the Articles of Association and the entry in the Commercial Register, at nominal value,
2) supplementary capital created as a result of the annual appropriation of net profit and earmarked for offsetting accounting losses which may arise in connection with the Group's operations,
3) reserve capital created independently of the supplementary capital as a result of the annual appropriation of net profit, in an amount determined in a resolution adopted by the General Meeting (hereinafter called the "GSM") and earmarked solely for offsetting possible accounting losses,
4) other cumulative comprehensive income (excluding gains and losses relating to cash flow hedges),
5) general risk reserve created by appropriating net profit, in an amount determined in a resolution adopted by the GSM and earmarked for unidentified banking risks,
6) retained earnings (unappropriated profit from previous years),
7) the net profit (loss) in the course of being approved and the net profit (loss) for the current reporting period, calculated in accordance with the applicable accounting policies, less any expected charges and dividends, in amounts no higher than the profit amounts verified by a registered auditor; a net profit (loss) may be recognised in own funds on condition that it is approved by the GSM or, before being approved by the GSM, the PFSA's consent to its recognition in own funds is obtained. Once the aforementioned formal requirements have been met, the Bank makes retrospective adjustments to own funds[9].

The Common Equity Tier 1 capital is reduced by:
1) losses for the current financial year,
2) intangible assets stated at their carrying amounts, net of the related deferred income tax provision, the amount being deducted includes goodwill taken into account in the valuation of the Bank's significant investments, software assets subject to prudential valuation are not deducted[10],
3) additional adjustments to assets measured at fair value, which result from compliance with the requirements for prudential valuation,
4) additional adjustments to the valuation of derivative instruments, reflecting the Bank's own credit risk,
5) deferred income tax assets based on future profitability and not resulting from temporary differences,
6) deferred income tax assets based on future profitability and resulting from temporary differences, which exceed 10% of the Common Equity Tier 1 capital of the Bank's Group (calculated without taking into account deductions in respect of equity exposures and deferred tax assets)[11],
7) direct and indirect equity exposures to financial sector entities if the Bank's Group has not made significant investments in these entities, in the form of shares held or other Common Equity Tier 1 instruments of these entities, the total of which exceeds 10% of the Common Equity Tier 1 capital of the Bank's Group (without taking into account deductions in respect of equity exposures and deferred tax assets),
8) direct and indirect equity exposures to financial sector entities if the Bank's Group has made significant investments in these entities, in the form of shares held or other Common Equity Tier 1 instruments of these entities, the total of which exceeds 10% of the Common Equity Tier 1 capital of the Bank's Group (without taking into account deductions in respect of equity exposures and deferred tax assets),
9) the amount by which the total of:
   a) deferred income tax assets based on future profitability and resulting from temporary differences, up to 10% of the Common Equity Tier 1 capital of the Bank's Group (calculated without taking into account deductions in respect of equity exposures and deferred tax assets) and
   b) direct and indirect equity exposures to financial sector entities if the Bank's Group has made significant investments in these entities, in the form of shares held or Common Equity Tier 1 instruments of these entities, up to 10% of the Common Equity Tier 1 capital of the Bank's Group (calculated without taking into account deductions in respect of equity exposures and deferred tax assets)

   exceeds an equivalent of 17.65% of the Common Equity Tier 1 capital of the Bank's Group (calculated taking into account all the deductions specified in sections 1-6 and the full total of the items specified in sections 9 a-b, without using a threshold representing 17.65% of the share capital. An amount below the threshold (17.65%) is recognised in risk-weighted assets.
10) The applicable amount of insufficient coverage for non-performing exposures, calculated in accordance with Article 47c of the CRR, except for the amount of insufficient coverage relating to exposures which arose before 26 April 2019, provided that the conditions of these exposures have not been changed in a manner that increases the Bank's exposure to a debtor,
11) Securitisation items – as an alternative to applying the 1,250% risk weight, exposures held by the Group (junior tranche and cash reserve to cover liquidity risk, less specific risk adjustments for the underlying exposures) reduce own funds.

Tier 2 capital includes, once the Bank has obtained the PFSA's consent, subordinated liabilities understood as liabilities in respect of funds acquired by the Bank, in the amount and in accordance with the rules laid down in the PFSA's decision issued at the Bank's request, which meet the conditions set out in Article 63 of the CRR, which are not held by the Bank, its subsidiaries or enterprises in which the Bank has a participation in the form of ownership, direct or by way of control, of 20% or more of the voting rights or capital of that undertaking. Subordinated liabilities included in Tier 2 capital shall be treated as the full value of instruments with a residual maturity of more than five years. During the last five years to maturity in Tier 2 capital, the amortised value of the liabilities calculated by multiplying the carrying amount of the instruments on the first day of the last five-year contractual maturity of the instruments is taken into account by the number of days in that period divided by the number of remaining contractual days of the instrument's maturity.

Tier 2 capital is reduced by:
1) direct and indirect equity exposures to financial sector entities in the form of Tier 2 capital instruments of these entities if an institution has made significant investments in these entities,

[9] In May 2020, the European Banking Authority (EBA) published, in a single rulebook Q&A, its position regarding the moment of recognition of annual and interim profits in the capital adequacy data (Q&A 2018_3822 and Q&A 2018_4085). According to this position, once the Bank or the Bank's Group have formally met the criteria for including their profit for a given period in the Tier 1 capital, this profit should be included retrospectively (as at the date of the profit, and not the date of meeting the criteria), and own funds should be adjusted accordingly as at the date of the profit.

[10] As regards software, the amount deductible from own funds is determined on the basis of accumulated prudential amortisation of software, calculated as from the date on which software assets are available for use and begin to be amortised for accounting purposes. The remaining amount of software is included in risk-weighted assets with a weighting of 100%.

[11] The Group uses the option indicated in the European Banking Authority's guidance set out in the Single Rulebook Q&A No. 2015_1887. According to the EBA's response, deferred tax assets related to gains or losses on cash flow hedges (which are not included in own funds according to Article 33 of the CRR) do not have to be included either in deferred tax assets included in deductions from own funds according to Articles 36 and 48 of the CRR.

2) direct and indirect equity exposures to financial sector entities if an institution has not made significant investments in these entities, in the form of shares held or other Tier 2 capital instruments, if the total amount of these exposures exceeds 10% of the Bank's Common Equity Tier 1 capital.

If the value of the deductions referred to in sections 1 and 2 should reduce the value of Tier 2 capital to less than zero, the excess of these deductions over the value of Tier 2 capital is deducted from Common Equity Tier 1 capital.

Pursuant to Regulation 2021/637, Table 3.1 presents information on the nature and amounts of individual own fund items used to calculate a Total Capital ratio as at 31 December 2022. Only the rows with values equal to 0 were omitted.

(IN PLN MILLION)

Table 3.3 Composition of regulatory own funds [Template EU CC1]

		31.12.2022	
		(a)	(b)
		Amounts	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	1 250	note 50.
	of which: Series A - ordinary registered shares	313	note 50.
	of which: Series A - ordinary bearer shares	198	note 50.
	of which: Series B - ordinary bearer shares	105	note 50.
	of which: Series C - ordinary bearer shares	385	note 50.
	of which: Series D - ordinary bearer shares	250	note 50.
2	Retained earnings	9 163	
3	Accumulated other comprehensive income (and other reserves)	20 887	
EU-3a	Funds for general banking risk	1 070	
4	Amount of qualifying items referred to in Article 484 (3) 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	946	
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	33 315	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	-380	
8	Intangible assets (net of related tax liability) (negative amount)	-2 469	
9	Empty set in the EU	N/A	
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) are met) (negative amount)	-	
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	5 220	
12	Negative amounts resulting from the calculation of expected loss amounts	-	
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	-	
15	Defined-benefit pension fund assets (negative amount)	-	
16	Direct and indirect 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)	-	
20	Empty set in the EU	-	
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-12	
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)	-	
EU-20c	of which: securitisation positions (negative amount)	-12	
EU-20d	of which: free deliveries (negative amount)	-	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-200	
22	Amount exceeding the 17,65% threshold (negative amount)	-	
23	of which: 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	-	
24	Empty set in the EU	-	
25	of which: 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)	-	
26	Empty set in the EU	-	
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
27a	Other regulatory adjusments (including IFRS 9 transitional adjustments when relevant)	2 665	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	4 824	
29	**Common Equity Tier 1 (CET1) capital**	38 139	note 69.
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	-	
31	of which: classified as equity under applicable accounting standards	-	
32	of which: classified as liabilities under applicable accounting standards	-	
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1 as described in Article 486(3) of CRR	-	
EU-33a	Amount of qualifying items referred to in Article 494a(1) subject to phase out from AT1	-	
EU-33b	Amount of qualifying items referred to in Article 494b(1) 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	of which: instruments issued by subsidiaries subject to phase out	-	
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	-	

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Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct and indirect 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	-	
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**	-	
44	**Additional Tier 1 (AT1) capital**	-	
45	**Tier 1 capital (T1 = Common Equity Tier 1 (CET1) capital and Additional Tier 1 (AT1) capital)**	38 139	note 69.
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	2 584	
47	Amount of qualifying items referred to in Article 484 (5) 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) subject to phase out from T2	-	
EU-47b	Amount of qualifying items referred to in Article 494b (2) 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	of which: instruments issued by subsidiaries subject to phase out	-	
50	Credit risk adjustments	-	
51	**Tier 2 (T2) capital before regulatory adjustments**	2 584	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct and indirect 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 and indirect 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)	-	
54a	Empty set in the EU	-	
55	Direct and indirect 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)	-	
56	Empty set in the EU	-	
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
56b	Other regulatory adjusments to T2 capital	-	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	-	
58	**Tier 2 (T2) capital**	2 584	note 69.
59	**Total capital (TC = T1 + T2)**	40 723	note 69.
60	**Total risk exposure amount**	229 095	
Capital ratios and buffers			
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	16.65%	note 69.
62	Tier 1 (as a percentage of total risk exposure amount)	16.65%	note 69.
63	Total capital (as a percentage of total risk exposure amount)	17.78%	note 69.
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)	9.02%	
65	of which: capital conservation buffer requirement	2.50%	note 69.
66	of which: countercyclical buffer requirement	0.02%	note 69.
67	of which: systemic risk buffer requirement	0.00%	note 69.
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	2.00%	note 69.
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	0.00%	
68	**Common Equity Tier 1 available to meet buffer (as a percentage of risk exposure amount)**	9.78%	
National minima (if different from Basel III)			
69	Not applicable	N/A	
70	Not applicable	N/A	
71	Not applicable	N/A	
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)	258	
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)	1 006	
74	not applicable	not applicable	
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) are met)	3 834	

(IN PLN MILLION)

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	-	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-	
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)	-	

* Column (b) shows note numbers from the Consolidated Financial Statements of PKO Bank Polski S.A. Group as at 31 December 2022.

(IN PLN MILLION)

Pursuant to Regulation 2021/637, Table 3.4 presents the reconciliation of the items in the statement of financial position used to calculate own funds to regulatory own funds as at 31 December 2022.

Table 3.4 Reconciliation of regulatory own funds to balance sheet in the audited financial statements [Template EU CC2]

	31.12.2022		
	a)	b)	c)
	Balance sheet as in published financial statements	Under regulatory scope of consolidation	Reference*
	As at period end	As at period end	
ASSETS - Breakdown by asset clases according to the balance sheet in the published financial statements			
Cash and balances with the Central Bank	15 917	15 917	note 31.
Amounts due from banks	16 101	15 965	note 32.
Hedging derivatives	1 042	1 042	note 33.1
Other derivative instruments	13 162	13 162	note 33.2.
Securities	135 632	133 324	note 34.
Reverse repo transactions	7	7	note 35.
Loans and advances to customers	231 721	231 871	note 36.
Receivables in respect of insurance activities	555	-	note 40.
Property, plant and equipment transferred under operating lease	1 764	1 764	note 75.4
Property, plant and equipment	2 917	2 741	note 42.
Non-current assets held for sale	10	10	note 43.
Intangible assets	3 527	3 325	note 41.
Investments in associates and joint ventures	285	1 504	note 44.
Current income tax receivables	52	52	note 29.
Deferred income tax assets	5 187	5 140	note 29.
Other assets	2 804	2 742	note 45.
TOTAL ASSETS	430 683	428 566	

(IN PLN MILLION)

LIABILITIES - Breakdown by liability clases according to the balance sheet in the published financial statements			
Amounts due to the Central Bank	9	9	
Amounts due to banks	3 011	3 011	note 37.
Hedging derivatives	7 469	7 469	note 33.1
Other derivative instruments	12 978	12 978	note 33.2
Amounts due to customers	339 582	338 866	note 38.
Repo transactions	-	-	
Liabilities in respect of insurance activities	1 732	-	note 40.
Loans and advances received	2 294	2 293	note 39.1.
Debt securities in issue	15 510	15 774	note 39.1.
Subordinated liabilities	2 781	2 781	note 39.1.
Other liabilities	7 014	6 910	note 46.
Current income tax liabilities	765	725	note 29.
Deferred income tax provision	13	7	note 29.
Provisions	2 090	2 083	note 47.
TOTAL LIABILITIES	**395 248**	**392 906**	
EQIUTY			
Share capital	1 250	1 250	note 50.
Other capital and reserves	22 215	21 957	note 50.
Retained earnings	8 651	9 163	note 50.
Net profit or loss for the year	3 333	3 290	note 50.
Capital and reserves attributable to equity holders of the parent	35 449	35 660	note 50.
Non-controlling interests	-14	0	note 50.
TOTAL EQUITY	**35 435**	**35 660**	

* Column (c) shows note numbers from the Consolidated Financial Statements of PKO Bank Polski S.A. Group for the six months ended 31 December 2022. As at 31 December 2022, pursuant to Article 48 of the CRR the individual equity exposures to financial sector entities in consolidated terms did not exceed 10% of Common Equity Tier 1 capital, therefore, they do not constitute a deduction from the Bank's Group's own funds and they have been recognised in risk-weighted assets. The Group's funds were reduced by the value of the excess of deferred tax assets above the threshold of 10% of Tier 1 capital.

A description of the main features of the instruments issued by the Bank and recognised in Common Equity Tier 1 capital and Tier 2 instruments is presented in Table 3.5. (the data is presented in PLN). The rows in the table are omitted only if they do not apply to the Bank's Group.

Table 3.5 Main features of regulatory own funds instruments and eligible liabilities instruments [Template EU CCA] (in PLN)

		Name I	Name II	Name III	Name IV	Name V	Name VI	Name VII
1	Issuer	PKO BP	PKO BP	PKO BP	PKO BP	PKO BP	PKO BP	PKO BP
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	PLPKO0000016	PLPKO0000016	PLPKO0000016	PLPKO0000016	PLPKO0000016	PLPKO0000099	PLPKO0000107
3	Governing law(s) of the instrument	Polish law	Polish law	Polish law	Polish law	Polish law	Polish law	Polish law
4	Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier I	Common Equity Tier I	Common Equity Tier I	Common Equity Tier I	Common Equity Tier I	Tier 2	Tier 2
5	Post-transitional CRR rules	Common Equity Tier I	Common Equity Tier I	Common Equity Tier I	Common Equity Tier I	Common Equity Tier I	Tier 2	Tier 2
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated
7	Instrument type (types to be specified by each jurisdiction)	common stock	common stock	common stock	common stock	common stock	bonds	bonds
8	Amount recognised in regulatory capital or eligible liabilities (Currency in million, as of most recent reporting date)	312 500 000	197 500 000	105 000 000	385 000 000	250 000 000	1 700 000 000	1 000 000 000
9	Nominal amount of instrument	312 500 000	197 500 000	105 000 000	385 000 000	250 000 000	1 700 000 000	1 000 000 000
EU-9a	Issue price	312 500 000	197 500 000	105 000 000	385 000 000	250 000 000	-	-
12	Perpetual or dated	perpetual	perpetual	perpetual	perpetual	perpetual	dated	dated
13	Original maturity date	no maturity	no maturity	no maturity	no maturity	no maturity	28.08.2027	06.03.2028
17	Fixed or floating dividend/coupon	Floating dividend	Floating dividend	Floating dividend	Floating dividend	Floating dividend	Floating coupon	Floating coupon
30	Write-down features	No	No	No	No	No	No	No
36	Non-compliant transitioned features	No	No	No	No	No	No	No

As at 31 December 2022, the Group's own funds calculated for capital adequacy purposes included the results of the prudentially consolidated Group for the first half of 2022, net of expected charges (in the amount of PLN 946 million), the inclusion of which was duly approved by the PFSA. The Bank's retained earnings for the previous years of PLN 7,808 million remained unappropriated.

3.2 Own funds requirements and risk-weighted exposure amounts

Pursuant to the CRR, the Bank's Group calculates own funds requirements for the following types of risk:
1) credit risk – under the standardised approach (pursuant to Part III, Title II, Chapter 2 of the CRR),
2) operational risk:
   a) a) under the AMA approach – in respect of the Bank's operations, including the operations of the foreign branch in Germany and the foreign branch in the Czech Republic,
   b) under the BIA (pursuant to Part III, Title III of the CRR) – in respect of the operations of the foreign branch in Slovakia and in respect of the operations of the entities in the Bank's Group, subject to prudential consolidation,
3) market risk (pursuant to Part III, Title IV, Chapters 2-4 of the CRR):
   a) currency risk – calculated under the core approach,
   b) commodity risk – calculated under the simplified approach,
   c) equity instruments risk – calculated under the simplified approach,
   d) specific debt instrument risk – calculated under the basic approach,
   e) general debt instrument risk – calculated under the duration-based approach,
   f) other risks other than delta risk (non-delta risk) – calculated under the scenario approach for options for which the Bank uses its own valuation models, and under the delta plus approach for other options,
4) other risks:
   a) a) settlement/delivery risk – calculated under the approach specified in Title V, Part III of the CRR,
   b) counterparty credit risk, including the exposures to the central counterparty – calculated under the standard method specified in Chapter 6, Title II, Part III of the CRR,
   c) credit valuation adjustment risk (CVA) – calculated under the approach specified in Title VI, Part III of the CRR,
   d) exceeding large exposures limit – calculated under the approach specified in Part IV of the CRR.

The total own funds requirement for the Bank's Group is the sum of the aforementioned own funds requirements for individual types or risk.
In calculating the own funds requirement for counterparty credit risk, the Bank uses contractual netting pursuant to the CRR (Articles 295–298).
Information on the own funds requirements for the Bank's Group is presented in Table 4.1.

(IN PLN MILLION)

Table 3.6 Overview of total risk exposure amounts [Template EU OV1]

		Total risk exposure amounts (TREA)		Total own funds requirements
		a	b	c
		31.12.2022	30.09.2022	31.12.2022
1	Credit risk (excluding CCR)	189 937	195 330	15 195
2	Of which the standardised approach	189 937	195 330	15 195
3	Of which the Foundation IRB (F-IRB) approach	-	-	-
4	Of which: slotting approach	-	-	-
EU-4a	Of which: equities under the simple riskweighted approach	-	-	-
5	Of which the Advanced IRB (A-IRB) approach	-	-	-
6	Counterparty credit risk - CCR	5 448	10 529	436
7	Of which the standardised approach	4 981	10 015	399
8	Of which internal model method (IMM)	-	-	-
EU-8a	Of which exposures to a CCP	2	2	0
EU-8b	Of which credit valuation adjustment - CVA	464	511	37
9	Of which other CCR	0	-	0
10	Not applicable	Not applicable	Not applicable	Not applicable
11	Not applicable	Not applicable	Not applicable	Not applicable
12	Not applicable	Not applicable	Not applicable	Not applicable
13	Not applicable	Not applicable	Not applicable	Not applicable
14	Not applicable	Not applicable	Not applicable	Not applicable
15	Settlement risk	-	-	-
16	Securitisation exposures in the non-trading book (after the cap)	-	-	-
17	Of which SEC-IRBA approach	-	-	-
18	Of which SEC-ERBA (including IAA)	-	-	-
19	Of which SEC-SA approach	-	-	-
EU-19a	Of which 1 250 %	12	24	-
20	Position, foreign exchange and commodities risks (Market risk)	4 238	1 339	339
21	Of which the standardised approach	4 238	1 339	339
22	Of which IMA	-	-	-
EU-22a	Large exposures	-	-	-
23	Operational risk	29 471	27 454	2 358
EU-23a	Of which basic indicator approach	3 944	3 943	316
EU-23b	Of which standardised approach	-	-	-
EU-23c	Of which advanced measurement approach	25 527	23 511	2 042
24	Amounts below the thresholds for deduction (subject to 250% risk weight) (For information)	12 099	11 855	968
25	Not applicable	Not applicable	Not applicable	Not applicable
26	Not applicable	Not applicable	Not applicable	Not applicable
27	Not applicable	Not applicable	Not applicable	Not applicable
28	Not applicable	Not applicable	Not applicable	Not applicable
29	**Total**	**229 095**	**234 653**	**18 328**

* In row EU-19a the own funds requirement for securitisation exposures in the non-trading book is presented with application of own funds deduction according to Part III, Title II, Chapter V of CRR. The amount of the requirement reduces the Bank's funds, hence it does not generate exposure to (RWA) with a risk weight of 1,250%.

The Bank's Group includes the insurance companies PKO Życie Towarzystwo Ubezpieczeń SA and PKO Towarzystwo Ubezpieczeń SA which are excluded from prudential consolidation as financial entities subject to separate supervision by the PFSA which also includes the assessment of compliance with the capital requirements for insurance companies.

As at 31 December 2022, the Group included its holdings in insurance companies in the calculation of deductions from own funds in accordance with the CRR. All capital exposures in the financial sector entities up to the values of the thresholds specified in Article 48 of the CRR are included in risk-weighted assets with a risk weight of 250%.

The largest share of the own funds requirement for market risk in the Bank's Group in 2022 was for the capital requirement relating to interest rate risk (specific and general – 45.5%) (table 3.7.).

(IN PLN MILLION)

Table 3.7 The Bank's Group's Market risk under the standardised approach

		31.12.2022
		a
Outright products		RWEAs
1	Interest rate risk (general and specific)	1 927
2	Equity risk (general and specific)	10
3	Foreign exchange risk	1 685
4	Commodity risk	-
Options		
5	Simplified approach	-
6	Delta-plus approach	1
7	Scenario approach	615
8	**Securitisation (specific risk)**	-
9	**Total**	**4 238**

As at the end of 2022, the Bank's Group did not have an open position for commodities risk.

The foreign currency position did not exceed the threshold of 2% of own funds, therefore, the respective own funds requirement was zero.

Due the fact that the Bank's Group does not use any internal models for calculating own funds requirements for market risk, Article 455 of the CRR "Use of Internal Market Risk Models" does not apply.

The division of the own funds requirement for operational risk according to the calculation method used is presented in Table 3.8.

Table 3.8 Operational risk own funds requirements and risk-weighted exposure amounts [Template EU OR1]

Banking activities		31.12.2022				
		a	b	c	d	e
		Relevant indicator			Own funds requirements	Risk weighted exposure amount
		Year-3	Year-2	Last year		
1	Banking activities subject to basic indicator approach (BIA)	2 212	1 895	2 203	316	3 944
2	Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	-	-	-	-	-
3	*Subject to TSA:*	-	-	-		
4	*Subject to ASA:*	-	-	-		
5	Banking activities subject to advanced measurement approaches AMA	12 532	12 425	12 891	2 042	25 527

3.3 Capital buffers

Pursuant to the CRR and the Act on macro-prudential supervision, financial institutions are required to maintain a combined buffer requirement above the minimum levels set out in the CRR for:
1) total capital ratio (TCR),
2) Tier 1 (T1) capital ratio,
3) Common Equity Tier 1 (CET1) capital ratio.

The combined buffer requirement is the total of all the applicable buffers, i.e., the capital conservation buffer, countercyclical buffer, systemic risk buffer, and Other Systemically Important Institution (O-SII) buffer. These buffers must be covered with Common Equity Tier 1 capital.

The capital conservation buffer is applicable to all banks.

The countercyclical buffer is imposed to mitigate the systemic risk arising from the lending cycle. It is introduced by the minister responsible for financial institutions during periods of an excessive increase in lending activities and lifted when they slow down. As at 31 December 2022, the countercyclical buffer rate was 0% for credit exposures in Poland.

Additionally, the Bank's Group calculates a countercyclical buffer rate specific to a given institution, taking into account the value of all credit exposures in other countries and the respective value of the countercyclical buffer for those countries in its calculations. As at 31 December 2022, the countercyclical buffer specific to the Bank's Group was 0.02%.

Table 3.9 and table 3.10 present information on the geographical distribution of the relevant credit exposures and the amount of the countercyclical buffer specific to the Bank's Group.

(IN PLN MILLION)

Table 3.9 Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer [Template EU CCyB1]

Breakdown by country:	31.12.2022												
	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	Own fund requirements				Risk-weighted exposure amounts	Own fund requirements weights (%)	Countercyclical buffer rate (%)
	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			
Poland	267 817	-	298	-	-	268 115	13 488	17	-	13 505	168 814	94.58%	0.00%
Ukraine	2 002	-	-	-	-	2 002	123	-	-	123	1 533	0.86%	0.00%
Luxembourg	1 502	-	-	-	-	1 502	120	-	-	120	1 502	0.84%	0.50%
Germany	859	-	-	-	-	859	69	-	-	69	858	0.48%	0.00%
Dutch	669	-	-	-	-	669	51	-	-	51	633	0.35%	0.00%
Spain	621	-	-	-	-	621	50	-	-	50	621	0.35%	0.00%
Austria	527	-	-	-	-	527	42	-	-	42	527	0.30%	0.00%
Ireland	514	-	-	-	-	514	41	-	-	41	514	0.29%	0.00%
Czech Republic	500	-	-	-	-	500	40	-	-	40	496	0.28%	1.50%
Great Britain	435	-	-	-	-	435	34	-	-	34	425	0.24%	1.00%
France total	377	-	-	-	-	377	30	-	-	30	379	0.21%	0.00%
Malta	323	-	-	-	-	323	26	-	-	26	324	0.18%	0.00%
United States of America	313	-	-	-	-	313	11	-	-	11	143	0.08%	0.00%
Denmark	291	-	-	-	-	291	16	-	-	16	205	0.11%	2.00%
Hungary	278	-	-	-	-	278	22	-	-	22	278	0.16%	0.00%
Cyprus	275	-	-	-	-	275	22	-	-	22	276	0.15%	0.00%
Norway	264	-	-	-	-	264	21	-	-	21	264	0.15%	2.00%
Lithuania	191	-	-	-	-	191	15	-	-	15	191	0.11%	0.00%
Bahamas	187	-	-	-	-	187	14	-	-	14	175	0.10%	0.00%
Singapore	187	-	-	-	-	187	15	-	-	15	187	0.10%	0.00%
Switzerland	43	-	-	-	-	43	3	-	-	3	42	0.02%	0.00%
Japan	40	-	-	-	-	40	2	-	-	2	20	0.01%	0.00%
Finland	35	-	-	-	-	35	3	-	-	3	35	0.02%	0.00%
Slovakia	15	-	-	-	-	15	1	-	-	1	15	0.01%	1.00%
Sweden	14	-	-	-	-	14	1	-	-	1	15	0.01%	1.00%
Belgium	2	-	-	-	-	2	0	-	-	0	2	0.00%	0.00%
Georgia	1	-	-	-	-	1	0	-	-	0	1	0.00%	0.00%
Belarus	1	-	-	-	-	1	0	-	-	0	1	0.00%	0.00%
Italy	1	-	-	-	-	1	0	-	-	0	1	0.00%	0.00%
Ecuador	1	-	-	-	-	1	0	-	-	0	1	0.00%	0.00%
Australia	1	-	-	-	-	1	0	-	-	0	1	0.00%	0.00%
South Korea	1	-	-	-	-	1	0	-	-	0	0	0.00%	0.00%
Other	4	-	-	-	-	4	0	-	-	0	4	0.00%	-
Total	**278 291**	**-**	**298**	**-**	**-**	**278 589**	**14 261**	**17**	**-**	**14 279**	**178 482**	**-**	

(IN PLN MILLION)

Table 3.10 Amount of institution-specific countercyclical capital buffer [Template EU CCyB2]

		31.12.2022
		a
1	Total risk exposure amount	229 095
2	Institution specific countercyclical capital buffer rate	0.02%
3	Institution specific countercyclical capital buffer requirement	37

The Other Systemically Important Institution (O-SII) buffer is an additional requirement for institutions which may generate systemic risk. The Bank was identified as other systemically important institution based on the PFSA's decision of 10 October 2016. According to the PFSA's decision of 20 December 2022, the Bank is obliged to maintain the level of the Other Systemically Important Institution (O-SII) buffer in the amount equal to 2.00% of the total risk exposure amount, calculated in accordance with Article 92(3) of the CRR. The existing buffer amounted to 1.00% of the total risk exposure amount. The buffer must be maintained both on an individual and consolidated basis.

On 7 November 2022, the Bank received a decision of the Polish Financial Supervision Authority, in which the PFSA indicated the expiry of a decision on recommending the Bank to comply with an additional requirement concerning own funds to cover additional capital requirement, in order to secure the risk resulting from the FX mortgage loans for households.

On 24 November 2022, the Bank received a decision of the Polish Financial Supervision Authority, where the PFSA indicated the expiry of the decision on recommending the Bank, at the consolidated level, to comply with an additional capital requirement in order to secure the risk resulting from the secured by foreign currency mortgages of loans and advances to households above the value resulting from the requirements calculated in accordance with the relevant provisions of law.

Therefore, as at 31.12.2022 the capital ratios should be no lower than:
1) TCR – 12.52% for the Bank and the Bank's Group,
2) T1 – 10.52% for the Bank and the Bank's Group,
3) CET1 – 9.02% for the Bank and Bank's Group.

In a letter dated 23 December 2022, PFSA advised the Bank to mitigate the risks inherent in the Bank's operations by maintaining own funds to cover an additional capital add-on as Pillar 2 to absorb potential losses resulting from a stress event, in the amount of 0.72 p.p. at the individual level and 0.66 p.p. at the consolidated level over the value of the total capital ratio.

3.4 Impact of transitional arrangements on capital adequacy

The PKO Bank Polski S.A. Group applies the following transitional solutions in the calculation of own funds:
- transitional adjustment to minimise the impact of implementing IFRS 9 on own funds, in accordance with Article 473 a of the CRR,
- provisional treatment of unrealised gains and losses on securities measured at fair value through OCI in connection with the COVID-19 pandemic (according to Art. 468 of the CRR)

3.4.1 Transitional adjustment to minimise the impact of implementing IFRS 9 on own funds

On 1 January 2018, IFRS 9 "Financial Instruments", which replaced IAS 39 "Financial Instruments", entered into force. Changes were made to the classification and measurement of financial instruments, recognition and calculation of their impairment, and hedge accounting.

The impact of the implementation of IFRS 9 on own funds and capital adequacy measures is governed in Regulation 2017/2395 of the European Parliament and of the Council[12]. According to this regulation, banks may apply transitional provisions as regards own funds and increase Common Equity Tier 1 capital related to the implementation of the new impairment model over the next 5 years as from 1 January 2018, with the scaling factor decreasing from period to period.

Moreover, on 27 June 2020, Regulation 2020/873 of the European Parliament and of the Council came into effect[13]. This provision allows to mitigate the impact on the write-offs recorded as of 1 January 2020 on Tier 1 capital. Such arrangement may be used until 2024 inclusive, with the scaling factor assigned to this value decreasing from period to period.

The Bank decided that in the light of Art. 473a (7a) of the CRR implemented by the aforesaid Regulation, it would apply an option according to which the adjustment mitigating the impact of the introduction of IFRS 9 on own funds would receive a risk weight equal to 100% and the resulting value would be added to the total exposure.

The Bank's Group decided to apply the transitional provisions in full and to spread the impact of the adjustments for the implementation of IFRS 9 on own funds and capital adequacy measures over time.

3.4.2 Provisional treatment of unrealised gains and losses on securities measured at fair value through OCI

According to Article 468 of the CRR (as amended by the aforementioned Regulation 2020/873), banks may apply the provisional treatment of unrealised gains and losses measured at fair value through other comprehensive income in connection with the COVID-19 pandemic. This approach enables excluding from the calculation of the Bank's common equity position the portion of the unrealised gains and losses accumulated from 31 December 2019 included in the balance sheet under "changes in fair value of debt instruments measured at fair value through OCI", corresponding to exposures to central governments, regional governments or local authorities, and to public sector entities, excluding those financial assets that are impaired due to credit risk. The Bank's Group has decided to apply the above provisional treatment from December 2021 data onwards and has notified the Polish Financial Supervision Authority about its decision.

[12] Regulation (EU) 2017/2395 of the European Parliament and of the Council of 12 December 2017 amending Regulation (EU) No 575/2013 as regards transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds and for the large exposures treatment of certain public sector exposures denominated in the domestic currency of any Member State.
[13] Regulation 2020/873 of the European Parliament and of the Council of 24 June 2020 amending Regulations (EU) No 575/2013 and (EU) 2019/876 as regards certain adjustments in response to the COVID-19 pandemic.

(IN PLN MILLION)

Table 3.11 Comparison of the institution's own funds and capital ratio and leverage ratio with and without the application of IFRS 9 transitional arrangements or expected credit loss, as well as with and without provisional treatment under Article 468 of CRR [Template IFRS 9]

		31.12.2022	30.09.2022*	30.06.2022	31.03.2022
Available capital (amounts)					
1	Common Equity Tier 1 capital (CET1)	38 139	37 579	36 403	36 644
2	Common Equity Tier 1 (CET1) capital if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	36 414	35 989	35 098	35 573
2a	Common Equity Tier 1 capital (CET1) if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive according to Article 468 of the CRR	36 661	36 030	34 610	35 273
3	Tier 1 capital (T1)	38 139	37 579	36 403	36 644
4	Tier 1 capital if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	36 414	35 989	35 098	35 573
4a	Tier 1 capital if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income according to Article 468 of the CRR	36 661	36 030	34 610	35 273
5	Total capital	40 723	40 216	39 103	39 344
6	Total capital, if the IFRS 9 transitional or similar expected loan losses were not applied	38 998	38 626	37 798	38 273
6a	Total capital, if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income according to Article 468 of the CRR	39 245	38 667	37 310	37 973
RWAs (amounts)					
7	Total RWAs	229 095	234 653	226 000	224 487
8	Total RWAs if the IFRS 9 transitional or similar expected credit losses were not applied	227 037	232 587	224 518	223 274
Capital ratios					
9	Common Equity Tier 1 capital (as a percentage of the risk exposure amount)	16.65%	16.01%	16.11%	16.32%
10	Common Equity Tier 1 capital (as a percentage of the risk exposure amount) if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	16.04%	15.47%	15.63%	15.93%
10a	Common Equity Tier 1 capital (as a percentage of the risk exposure amount) if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Art. 468 of the CRR	16.03%	15.38%	15.34%	15.73%
11	Tier 1 capital (as a percentage of the risk exposure amount)	16.65%	16.01%	16.11%	16.32%
12	Tier 1 capital (as a percentage of the risk exposure amount) if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	16.04%	15.47%	15.63%	15.93%
12a	Tier 1 capital (as a percentage of the risk exposure amount) if there was no provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Article 468 of the CRR	16.03%	15.38%	15.34%	15.73%
13	Total capital (as a percentage of the risk exposure amount)	17.78%	17.14%	17.30%	17.53%
14	Total capital (as a percentage of the risk exposure amount) if the IFRS 9 transitional or similar expected credit losses were not applied	17.18%	16.61%	16.84%	17.14%
14a	Total capital (as a percentage of the risk exposure amount), if there was no provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Article 468 of the CRR	17.16%	16.51%	16.54%	16.94%
Leverage ratio					
15	The leverage ratio total exposure measure	454 373	461 082	450 922	444 043
16	Leverage ratio	8.39%	8.15%	8.07%	8.25%
17	The leverage ratio if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	8.05%	7.84%	7.81%	8.03%
17a	The leverage ratio if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Article 468 of the CRR	8.07%	7.82%	7.68%	7.95%

* the change in relation to published data concerns exclusion from Tier 2 instruments of bonds held by PKO Towarzystwo Ubezpieczeń SA and PKO Życie Towarzystwo Ubezpieczeń SA

3.5 Internal capital (Pillar 2)

In 2022, the Bank's Group determined the internal capital in accordance with:
1) the CRR,
2) the Polish Banking Law,
3) the Regulation of the Minister of finance, funds and regional policy of 27 July 2021 on the detailed method of estimating internal capital and conducting reviews of estimation strategies and procedures and maintaining a permanent level of internal capital by banks,
4) the Act on macro-prudential supervision,

and the internal regulations of the Bank and the Bank's Group.

Internal capital is the amount of capital required to cover all the identified material types of risk which occur in the business activities of the Bank and the Bank's Group and the effect of changes in the business environment, taking into account the expected risk level.

The objective of estimating internal capital is to maintain own funds at the level specified in the Strategy, ensuring the safety of the activities, taking into account changes in the profile and scale of the activities and unfavourable stress conditions and to enable more effective management of the Bank and the Bank's Group oriented towards improving the profitability of the operations and the return on capital invested.

For each risk considered material, the Bank's Group develops and uses appropriate methods for its assessment and measurement. The Bank monitors the materiality of individual risk types related to the business activities of the Bank and the Bank's Group on a regular basis. The internal capital to cover individual risk types is determined in accordance with the methods specified in the internal regulations.

The total internal capital of the Bank's Group is the total of the internal capital required to cover all the material risk types to which the Bank and the Bank's Group, including the entities subject to prudential consolidation, are exposed (assuming no correlation between the individual risks)

The internal capital to cover the Bank's credit default risk is determined as the value of the own funds requirement for credit risk estimated using the IRB approach, the standardised approach to calculating the capital requirement for credit risk, set out in the CRR, and the internal method. Internal capital for credit risk of a CCP's central counterparty is estimated in accordance with the approach described in the CRR for calculating the capital requirement for exposures to an eligible central counterparty, including the preferential risk weighting. In the case of non-standard credit risk exposures of financial institutions and countries in the Bank's portfolio, for which internal capital assessment is required, the solutions described in the CRR apply. The internal capital to cover the Bank's credit default risk is determined for on-balance and off-balance sheet exposures subject to credit risk. The entities in the Bank's Group in which credit risk is material determine the internal capital for credit risk on the basis of the value of the own funds requirement for credit risk. The total internal capital to cover credit default risk is the total of the internal capital determined for separate exposure portfolios and the entities in the Bank's Group in which the internal capital for credit risk is estimated.

Internal capital to cover the risk of foreign currency mortgage loans is estimated based on the value of projected losses from customer litigation resolutions less losses from disputes and settlements already included in the Bank's results, and reduced by the estimated value of internal capital for operational risk in respect of the cost of legal risk of the portfolio of CHF currency loans related to credit risk.

Internal capital for market risk comprises internal capital amounts for interest rate risk in the non-trading book, interest rate risk in the trading book and foreign exchange risk.

The calculation of internal capital for interest rate risk in the non-trading book uses measures of sensitivity of interest income, measures of sensitivity of economic value and the results of stress tests on the sensitivity of credit spreads from activities included in the non-trading book (CSRBB).

The VaR method is used to calculate internal capital for interest rate risk in the trading book, taking into account the of stress tests

The internal capital for foreign exchange risk is calculated using the Value-at-Risk method, taking into account the results of stress tests.

The internal capital to cover the interest rate risk and foreign exchange risk of the Bank's Group is calculated using a method similar to that used for the Bank, taking into account the specific nature of the entities for which the internal capital is calculated.

The internal capital to cover liquidity risk includes the total estimated cost of liquidating a portfolio of securities quickly in order to cover stress-test outflows and the cost of obtaining additional funds to finance the amount of liquid assets necessary to meet the level of liquid assets required at the Bank. The total internal capital for the liquidity risk of the Bank's Group is the total of the internal capital of the Bank and the entities in the Bank's Group for which liquidity risk was considered material. The internal capital for the entities in the Bank's Group is calculated using a method similar to that used for the Bank, taking into account their specific nature.

The internal capital to cover the Bank's operational risk is equal to the level of the Bank's operational risk calculated using the AMA and the BIA. The internal capital to cover the operational risk of the entities in the Bank's Group is adopted for the entities in the Bank's Group subject to prudential consolidation, which assessed operational risk as being material – at the amount of the capital estimated by those entities.

The internal capital to cover the Bank's business risk is determined on the basis of the analysis of the historical volatility of deviations of the actual net business revenue from the forecast amounts, in accordance with the Earnings at Risk concept, and the results of a scenario analysis.

The internal capital to cover the business risk of the entities in the Bank's Group is adopted for the entities in the Bank's Group which assessed business risk as being material. The internal capital to cover the business risk of the Bank's Group is determined as the total of the Bank's internal capital and the internal capitals of the entities in the Bank's Group.

The Bank and Group entities where the risk of macroeconomic changes is significant, shall determine the internal capital to cover the risk of macroeconomic changes on the basis of the results of comprehensive stress tests. The internal capital is equal to the arithmetic mean of the amounts of the total own funds requirement in the shock scenario, which cause the total capital ratio TCR to fall below the level resulting from the base scenario, calculated for four consecutive quarters.

The internal capital to cover the model risk of the Bank and the entities in the Bank's Group is determined on the basis of a ratio specifying the amount of the internal capital to cover model risk, depending on the model risk level.

Capital adequacy from an internal capital perspective is determined in relation to own funds. The current own funds of the Bank and the Bank's Group cover these requirements with a significant safety margin.

(IN PLN MILLION)

3.6 Leverage

The Bank's Group calculates the leverage ratio as one of the capital adequacy measures.

The objective of leverage risk management is to ensure a proper relationship between the amount of Tier 1 capital and the total balance sheet assets and off-balance sheet liabilities granted of the Bank and the Bank's Group. The method of leverage risk management is governed in the Bank's internal regulations. The Banking Risk Division (the Capital Adequacy and Operational Risk Department) and the Accounting and Reporting Department are responsible for assessing leverage risk.

The identification of leverage risk consists of recognising the current and potential risk sources and factors and determining its potential impact on the activities of the Bank and the Bank's Group. For the purpose of measuring the risk of excessive financial leverage, a leverage ratio is calculated as a measure of Tier 1 capital divided by the measure of total exposure and is expressed as a percentage rate. As at 31 December 2022, the leverage ratio was calculated with reference to the transitional definition of Tier 1 capital (within the meaning of the transitional arrangements regarding the mitigation of the impact of introducing IFRS 9 on own funds and the transitional treatment of unrealised gains and losses for securities at fair value through other comprehensive income in accordance with Article 468 of the CRR). The Group also discloses (in chapter 3.4 of this Report) the value the leverage ratio would have if the transitional arrangements regarding IFRS 9 were not applied.

In order to maintain the leverage ratio at an acceptable level, a strategic tolerance limit and a threshold are set, whose levels are regularly monitored and verified at least once a year. Leverage risk is considered low, when the leverage ratio is equal to or higher than the threshold, it is considered increased, when the leverage ratio is below the threshold and is equal to or higher than the strategic tolerance limit, and it is considered high, when the leverage ratio is below the strategic tolerance limit.

The leverage ratio is calculated and reported on a regular basis. In the event of a high or increased leverage risk, management activities are suggested, taking into account the current macroeconomic situation, the costs related to the activities suggested and their impact on the level of increased leverage risk. The leverage ratio is forecast during the financial planning process and takes into account the planned changes in the activities of the Bank and the Bank's Group as well as the impact of the asset structure on its level. The Bank has a list of potential tools to be used in case it needs to increase Tier 1 capital or to adjust the structure of on-balance sheet and off-balance exposures (the denominator of the leverage ratio).

In 2022, the leverage ratio remained above the internal and external limits as well as above the minimum levels recommended by the PFSA.

Table 3.12 . Summary reconciliation of accounting assets and leverage ratio exposures [Template EU LR1 – LRSum]

		31.12.2022
		a
		Applicable amount
1	Total assets as per published financial statements	430 853
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-2 155
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))	-
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 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	-973
9	Adjustment for securities financing transactions (SFTs)	-
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	25 885
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	0
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	763
13	**Leverage ratio total exposure measure**	454 373

(IN PLN MILLION)

Table 3.13 Leverage ratio common disclosure under the CRR [Template EU LR2 – LRCom]

		CRR leverage ratio exposures	
		31.12.2022	30.06.2022
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	423 373	416 377
2	Ubruttowienie przekazanego zabezpieczenia instrumentów pochodnych, jeżeli odliczono je od aktywów bilansowych zgodnie z mającymi zastosowanie standardami rachunkowości	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)*	-1 003	-875
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)	-3 405	-3 236
7	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	418 965	412 266
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	2 751	6 248
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	6 764	6 712
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)	-	0
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**	9 515	12 959
Securities financing transaction (SFT) exposures			
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	7	40
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	0	0
16	Counterparty credit risk exposure for SFT assets	0	0
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**	7	40
Other off-balance sheet exposures			
19	Off-balance sheet exposures at gross notional amount	84 765	79 778
20	Off-balance sheet exposures at gross notional amount	-58 880	-54 122
21	(General provisions deducted in determining Tier 1 capital and specific provisions associated associated with off-balance sheet exposures)	-	-
22	Off-balance sheet exposures	25 885	25 657
Excluded exposures			
EU-22k	Total exempted exposures)	-	-
Capital and total exposure measure			
23	Tier 1 capital	38 139	36 404
24	Total exposure measure	454 373	450 922
Leverage ratio			
25	Leverage ratio (%)	8.39%	8.07%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	8.39%	8.07%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	8.39%	8.07%
26	Regulatory minimum leverage ratio requirement (%)	3.00%	3.00%
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%)	Not applicable	Not applicable
EU-26b	of which: to be made up of CET1 capital	Not applicable	Not applicable
27	Leverage ratio buffer requirement (%)	Not applicable	Not applicable
EU-27a	Overall leverage ratio requirement (%)	3.00%	3.00%
Choice on transitional arrangements and relevant exposures			
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Transitional	Transitional
Disclosure of mean values			
28	Mean value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	181	65
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	7	40
30	Total exposure measure (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)	454 546	450 947
30a	Total exposure measure (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)	454 546	450 947
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)	8.39%	8.07%
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)	8.39%	8.07%

(IN PLN MILLION)

Table 3.14 Split-up of on balance sheet exposures* (excluding derivatives, SFTs and exempted exposures) [Template EU LR3 – LRSpl]

		31.12.2022
		a
		CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	423 373
EU-2	Trading book exposures	3 880
EU-3	Banking book exposures, of which:	419 493
EU-4	Covered bonds	-
EU-5	Exposures treated as sovereigns	118 566
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	12 513
EU-7	Institutions	8 486
EU-8	Secured by mortgages of immovable properties	98 971
EU-9	Retail exposures	70 435
EU-10	Corporate	70 771
EU-11	Exposures in default	4 300
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	35 451

* Balance sheet exposures for the calculation of the leverage ratio as defined in the CRR (excluding derivatives and securities financing transactions)

In 2022, strategic decisions had an indirect impact on the leverage ratio.

The factors affecting the leverage ratio:
1) an increase in exposure as a result of:
   a) an increase in the value of loans and advances to customers,
   b) changes in the value of Treasury bonds,
2) changes in the amount of own funds as a result of including the Group's profit for the first half of 2022 in the funds and applying transitional solutions regarding unrealised gains and losses measured at fair value through accumulated comprehensive income.

3.7 Retrospective inclusion of the profit (loss) for 2022

Pursuant to Article 26(2) of the CRR, an institution may include interim or year-end profits in Common Equity Tier 1 capital after the Bank's Group has taken a formal decision confirming the final profit (loss) of the Bank's Group in a given year or before it has taken the formal decision, only with the competent authority's prior permission. In May 2020, the European Banking Authority (EBA) published, in a single rulebook Q&A, its position regarding the moment of recognition of annual and interim profits in the capital adequacy data (Q&A 2018_3822 and Q&A 2018_4085). According to this position, once the Bank's Group have formally met the criteria for including their profit for a given period in the Tier 1 capital, this profit should be included retrospectively (as at the date of the profit, and not the date of meeting the criteria), and own funds should be adjusted accordingly as at the date of the profit.

In view of the above, the restated data concerning the value of own funds, capital requirements and capital ratios for the periods ended 30.06.2022, 31.03.2022, and 31.12.2021 were presented below.

The transformed data presented values with consideration of the Bank's Group's profit for 2021 (reduced by the planned dividends) in the amount of PLN 2,575 million, which was included in the equity funds (in accordance with Resolution No 8/2022 of the Ordinary General Meeting of the Bank on 12 May 2022 regarding the distribution of the profit earned by PKO Bank Polski S.A. in 2021, in which the OGSM decided to retain approximately 50% of the profit for 2021 in the Bank's capital funds, and resolutions of the OGSMs of subsidiaries regarding profit distribution). Part of this amount (PLN 1,975 million) had already been included in the data published as of 31.12.2021, and as of 31.03.2022, due to the Bank's Group obtaining approval to include a portion of the profit for H1 2021 in the equity funds after reducing it by expected charges. Additionally, the Funds for 30.06.2022 include the amount of the Group's result for H1 2022 recognised retrospectively, less the expected charges, after obtaining an appropriate consent of the PFSA, in the amount of PLN 946 million.

Due to the change in the date of allocation of profit as own funds in these periods, the amounts of insufficient coverage of the write-downs of non-performing exposures (NPE) and the temporary adjustment related to the impact of IFRS 9 on own funds were recorded in the periods. The thresholds under Article 48 of the CRR and the related amount of deferred tax assets reducing own funds have also changed.

Additionally, as a result of applying the above EBA guidelines as at 30.06.2022, 31.03.2022 and 31.12.2021, there was a decrease in the value of the capital requirement for credit risk by PLN 38 million at the end of June, PLN 95 million at the end of March, and PLN 103 million at the end of December, which consequently increased the total capital ratio by 0.72 p.p. at the end of June, by 0.46 p.p. as at the end of March and 0.5 p.p. as at the end of December and of the Tier 1 capital ratio by 0.73 p.p., 0.45 p.p., and 0.49 p.p, respectively.

(IN PLN MILLION)

Table 3.15 Key capital ratios including the retrospective inclusion of the result for 2021 in the data as 31.03.2022 and 31.12.2021 as well as the result for H1 2022 in the data as of 30.06.2022

		31.12.2022	30.09.2022*	30.06.2022	31.03.2022	31.12.2021
Available capital (amounts)						
1	Common Equity Tier 1 capital (CET1)	38 139	37 579	37 977	37 457	39 412
2	Common Equity Tier 1 (CET1) capital if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	36 414	35 989	36 161	36 236	37 649
2a	Common Equity Tier 1 capital (CET1) if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive according to Article 468 of the CRR	36 661	36 030	36 184	36 167	38 174
3	Tier 1 capital (T1)	38 139	37 579	37 977	37 457	39 412
4	Tier 1 capital if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	36 414	35 989	36 161	36 236	37 649
4a	Tier 1 capital if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income according to Article 468 of the CRR	36 661	36 030	36 184	36 167	38 174
5	Total capital	40 723	40 216	40 644	40 157	42 112
6	Total capital, if the IFRS 9 transitional or similar expected loan losses were not applied	38 998	38 626	38 828	38 936	40 349
6a	Total capital, if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income according to Article 468 of the CRR	39 245	38 667	38 851	38 867	40 874
RWAs (amounts)						
7	Total RWAs	229 095	234 653	225 525	223 300	224 875
8	Total RWAs if the IFRS 9 transitional or similar expected credit losses were not applied	227 037	232 587	223 462	222 026	223 112
Capital ratios						
9	Common Equity Tier 1 capital (as a percentage of the risk exposure amount)	16.65%	16.01%	16.84%	16.77%	17.53%
10	Common Equity Tier 1 capital (as a percentage of the risk exposure amount) if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	16.04%	15.47%	16.18%	16.32%	16.87%
10a	Common Equity Tier 1 capital (as a percentage of the risk exposure amount) if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Art. 468 of the CRR	16.03%	15.38%	16.07%	16.20%	16.98%
11	Tier 1 capital (as a percentage of the risk exposure amount)	16.65%	16.01%	16.84%	16.77%	17.53%
12	Tier 1 capital (as a percentage of the risk exposure amount) if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	16.04%	15.47%	16.18%	16.32%	16.87%
12a	Tier 1 capital (as a percentage of the risk exposure amount) if there was no provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Article 468 of the CRR	16.03%	15.38%	16.07%	16.20%	16.98%
13	Total capital (as a percentage of the risk exposure amount)	17.78%	17.14%	18.02%	17.98%	18.73%
14	Total capital (as a percentage of the risk exposure amount) if the IFRS 9 transitional or similar expected credit losses were not applied	17.18%	16.61%	17.38%	17.54%	18.08%
14a	Total capital (as a percentage of the risk exposure amount), if there was no provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Article 468 of the CRR	17.16%	16.51%	17.26%	17.41%	18.18%
Leverage ratio						
15	The leverage ratio total exposure measure	454 373	461 082	450 162	442 969	436 860
16	Leverage ratio	8.39%	8.15%	8.44%	8.46%	9.02%
17	The leverage ratio if the IFRS 9 transitional arrangements or similar expected credit losses were not applied	8.05%	7.84%	8.07%	8.20%	8.65%
17a	The leverage ratio if the provisional treatment of unrealized gains and losses measured at fair value through other comprehensive income, according to Article 468 of the CRR	8.07%	7.82%	8.04%	8.17%	8.74%

* the change in relation to published data concerns exclusion from Tier 2 instruments of bonds held by PKO Towarzystwo Ubezpieczeń SA and PKO Życie Towarzystwo Ubezpieczeń SA

4 ENCUMBERED AND UNENCUMBERED ASSETS

A given asset is considered encumbered if it has been pledged or is subject to any form of arrangements aimed at securing or supporting the credit rating of any on-balance sheet or off-balance sheet transaction from which it may not be withdrawn freely (e.g., in order to be pledged for financing purposes).

The Group does not apply the difference in approach between the scope of regulatory consolidation used for asset encumbrance disclosures and the scope of application for applying liquidity requirements on a consolidated basis as defined in Part Two, Chapter 2, Title I of the CRR.

The Group does not apply differences in approach between, on the one hand, assets pledged and transferred in accordance with the applicable accounting standards and their application by the institution and, on the other hand, encumbered assets and the treatment of transactions.

The exposure values used for disclosure purposes shall be derived from the quarterly average end-of-quarter reporting for the preceding twelve months.

Based on the average balances for the 4 quarters of 2022, the Bank's Group had encumbered assets:
1) in respect of sell-buy-back transactions (repos),
2) Treasury bonds entered in the register of mortgage covered bonds pursuant to Article 18(3a) of the Act on mortgage covered bonds and mortgage banks,
3) own issued mortgage covered bonds and secured bonds.

Repos and sell-buy-back transactions are conditional transactions which result in encumbering assets transferred to counterparties as collateral for loans. Such transactions are normally used by the Bank under the business model used for managing liquidity on the financial markets and for servicing the transactional needs of the financial institutions which are the Bank's counterparties. The collateral transferred in respect of the current valuations contained in derivative transactions constitutes a standard mechanism for securing the Bank's credit exposure resulting from the collateral agreements concluded and, as such, forms part of the Bank's business model related to transactional activity on the financial markets. Additional information is included in notes 66.2 and 62 of the consolidated financial statements of the PKO Bank Polski S.A. Group for the year ended 31 December 2022.

In addition, the Bank's Group held debt securities in the form of mortgage covered bonds and notes issued by PKO Bank Hipoteczny S.A., which are secured by mortgage loans with an average value, as at the end of the previous two semi-annual periods, of PLN 19,220 million, and bonds with an average value, as at the end of the previous two semi-annual periods, of PLN 1,307 million, issued by PKO Leasing S.A., secured by receivables under lease agreements with an average value, as at the end of the previous two semi-annual periods, of PLN 1,307 million.

Information on overcollateralisation, in particular in relation to secured bonds and securitisation, and the impact of this overcollateralisation on encumbrance levels is presented in notes 66.2 and 62 of the PKO Bank Polski S.A. Group's Consolidated Financial Statements for the year ended 31 December 2022.

All encumbrances on assets, collateral and off-balance sheet items and sources of encumbrance are in PLN with the exception of Kredobank S.A., which operates in UAH.

A general description of the part of the items shown as carrying amount of unencumbered assets that the Bank's Group would not consider as items that may be encumbered in the normal course of business is included in the relevant notes to the Consolidated Financial Statements of PKO Bank Polski S.A. Group for the year ended 31 December 2022.

Mortgage loans in PLN are the underlying assets of the mortgage covered bonds and notes issued by PKO Bank Hipoteczny S.A.

The underlying assets of the notes issued by PKO Leasing SA are mainly: new and used cars, trucks, truck tractors and semi-trailers, various types of machinery and equipment.

The carrying amount of selected financial liabilities consists mainly of: deposits related to repurchase agreements, debt securities issued, charges related to the bank deposit guarantee scheme.

Information on the encumbered and unencumbered assets of the Bank's Group is presented in the tables below.

(IN PLN MILLION)

Table 4.1 Encumbered and unencumbered assets [Template EU AE1]

		31.12.2022							
		Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
			of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
		010	030	040	050	060	080	090	100
010	**Assets of the reporting institution**	23 830	2 548			403 990	114 223		
030	Equity instruments	-	-	-	-	552	-	549	-
040	Debt securities	2 707	2 548	514	514	126 560	114 223	59 296	52 002
050	of which: covered bonds	-	-	-	-	-	-	-	-
060	of which: securitisations	-	-	-	-	-	-	-	-
070	of which: issued by general governments	2 707	2 548	514	514	97 983	89 381	46 226	40 707
080	of which: issued by financial corporations	-	-	-	-	25 035	24 822	11 642	11 275
090	of which: issued by non-financial corporations	-	-	-	-	3 522	-	1 408	-
120	Other assets	21 123	-			276 878	0		

(IN PLN MILLION)

Table 4.2 Collateral received and own debt securities issued [Template EU AE2]

		31.12.2022			
				Unencumbered	
		Fair value of encumbered collateral received or own debt securities issued		Fair value of collateral received or own debt securities issued available for encumbrance	
			of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA
		010	030	040	060
130	Collateral received by the reporting institution	-	-	-	-
140	Loans on demand	-	-	-	-
150	Equity instruments	-	-	-	-
160	Debt securities	-	-	-	-
170	of which: covered bonds	-	-	-	-
180	of which: securitisations	-	-	-	-
190	of which: issued by general governments	-	-	-	-
200	of which: issued by financial corporations	-	-	-	-
210	of which: 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	-	-	-	-
241	Own covered bonds and asset-backed securities issued and not yet pledged			-	-
250	TOTAL ASSETS, COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED	23 830	2 548		

Table 4.3 . Sources of encumbrance [Template EU AE3]

		31.12.2022	
		Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and securitisations encumbered
		010	030
010	Carrying amount of selected financial liabilities	13 442	21 581

5 DISCLOSURE OF RISKS IN THE FIELD OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG RISK)

The PKO Bank Polski S.A. Group is subject to obligation to disclose information on environmental, social and governance risks (ESG risk) under Article 449a of CRR.

On 30 November 2022, the European Commission adopted Implementing Regulation 2022/2453 amending the implementing technical standards laid down in Implementing Regulation (EU) 2021/637 as regards the disclosure of environmental, social and governance risks.

The newly adopted Implementing Regulation adds to existing disclosure formats additional uniform ESG risk disclosure formats.

In accordance with the CRR, prudential consolidation is applied for the purpose of Pillar 3 disclosures in respect of ESG risks.

The gross carrying amount of the exposure is expressed in EUR million at the average NBP exchange rate of PLN 4.6899, as of 31.12.2022.

5.1 Qualitative information on environmental, social and governance risks

5.1.1 Qualitative information on environmental risks

5.1.1.1 Business strategy and processes

In December 2022, the Bank's Management Board adopted the “Strategy of PKO Bank Polski for the years 2023-2025 – “Ready for the challenges, focused on the future”

One of the goals of the new strategy is to seize the position of the leader of the ESG transformation in the Polish banking sector, both in aspects related to sustainable financing and reducing own emissions.

PKO Bank Polski intends to implement unique solutions for financing the energy transition to support the competitiveness of Polish companies in view of high energy prices, as well as business and regulatory requirements.

Moreover, the Bank plans to:
1) achieve climate neutrality in Scope 1 and 2 by 2030,
2) limit own CO_2 emissions of the Bank through modernisation of branches and office buildings, and electrification of fleets – modernisation of 70 branches per year
3) begin calculating Scope 3 emissions as part of the preparation of the trajectory of a scientific reduction.
4) identify priority sectors and customers to support decarbonisation

In addition, the Bank’s Group plans to implement projects related to investment objectives aimed at environmental objectives and further actions in the scope of adapting to the EU Taxonomy, including:
1) energy transformation financing,
2) issue of green bonds,
3) adjustment of the portfolio of products supporting sustainable development.

At the same time, the Bank’s Group is preparing for the possibility of issuing own bonds in green format based on the Climate Bond Standard, “CBS”, developed by the Climate Bond Initiative (CBI).

PKO Bank Hipoteczny plans to issue green covered bonds on the basis of Green Covered Bond Framework, taking into account the standards developed by CBI for residential real estate.

In the area of risk, the Bank plans to:
1) develop methods of assessing ESG factors at the stage of granting credit and monitoring – initially qualitative/scenarios, and then analytical methods,
2) implement the Taxonomy criteria and indication in this respect of the entire credit portfolio of business entities
3) build an internal knowledge centre in terms of new green technologies and financing in accordance with the principles of sustainable development, including building data acquisition and analytics mechanisms of the Bank's customers in the ESG
4) conduct climate stress tests based on the collected data on climate risk impact (transition risk and physical risk) for customers in the Bank's portfolio and translate the results into the Bank's credit policy.

Lending policies are one of the environmental risk management tools within the credit risk framework for selected industries/sectors. The Bank has the following policies: Renewable Energy Sources, Carbon-Intensive Energy Sector Chemistry-Oil-Gas, Revenue Real Estate, Construction and building materials, Chemistry-Oil-Gas, Car Dealers and CFM companies, Public Healthcare, Trade, LGU (adopted and implemented in 2022).

Apart from the aforementioned policies, the Bank (in the corporate segment) monitors changes and market trends in various industries/sectors on an ongoing basis, publishes internal materials (e.g., industry leaflets identifying current market trends) and organises industry meetings. The purpose of these activities is to gradually change the structure of the loan portfolio by reducing the exposure to high-emission entities and to develop the green loan portfolio that is as close to sustainable financing and meeting environmental objectives as possible. The policy assumptions are described in the Statement on non-financial information, which is a part of the Report on activities of the PKO Bank Polski Group”.

5.1.1.2 Corporate governance

The Management Board of the Bank defines the risk framework, oversees the implementation of the set objectives, strategies and policies and defines the principles of their management in the context of the risk management in the field of environmental protection. In accordance with their powers, units are responsible for the coordination and management of individual ESG risk factors and their impact on the Bank's operational risk. The committees functioning in the Bank, within the scope of their tasks and powers, consider studies and opinions on activities related to ESG risk in their decision-making.

The Bank manages ESG risk at three independent, mutually complementary levels:
1) the first level relates to the identification of ESG risk at an early stage, conducting an ESG risk assessment while establishing customer relationships or during periodic review, conducting a dialogue with the customer to discuss ESG risk-related topics, assessing the customer's risk mitigation measures and strategies, and creating and implementing ESG risk mitigation products,
2) the second level relates to the independent and expert assessment of the area in which the ESG risk credit policies have been developed and tasks performed at the first level of the ESG risk associated with transactions are actively supported. The Bank plans to develop tools for the identification and assessment of ESG risk, development of possibilities of climate stress tests, and seeking integration with other regulatory processes, e.g., ICAAP,
3) the third level refers to independent assessments of the Bank's activities, including the management of ESG risks, performed by the internal audit unit. The internal audit plan includes audits which cover their scope, including, among others, verification of the Bank's fulfilment of obligations arising from the ESG regulations in the areas of: granting loans, implementation of disclosures arising from the CRR, remuneration policy or security of key IT infrastructure. Information concerning the identified irregularities, the scores assigned and the results of monitoring the actions taken to eliminate them is presented to the Management Board and the Supervisory Board.

Environmental impact issues are monitored on an ongoing basis and are disclosed semi-annually in this report and on an annual basis in the Statement on non-financial information, which is part of the Report on activities of PKO Bank Polski Group.

The remuneration policy ensures a coherent remuneration system, including compliance with the strategy regarding environmental, social, and governance risks. However, environmental protection objectives for individual members of the Management Board (which determine the variable remuneration of members of the Management Board) have not yet been established. The Bank aims to incorporate ESG factors into its objectives, such as considering the Bank's social interests, contributing to environmental protection, and preventing or eliminating any potential negative social impact resulting from the Bank's activities.

5.1.1.3 Risk management

The Bank manages ESG risk as part of its management of other risks as, due to the nature of ESG risk, it is not a separate risk but a cross-disciplinary risk that can cause the Bank's individual risks to materialise, in particular credit risk.

The Bank applies the principle of "double materiality" by taking into account the following perspective:
1) the impact of ESG factors on the Bank's operations, financial results and development,
2) the impact of the Bank's activities on society and the environment.

The Bank verifies and assesses the level of risk generated and compliance with sustainable development, taking into account ESG risks in the short, medium, and long term in its financial, capital, and strategic plans.

Strategic definitions of ESG have been included in the "Risk Management Strategy in PKO Bank Polski S.A. and PKO Bank Polski S.A. Group". They include:
- ESG factors: environmental, social, and governance factors that may have a positive or negative impact on the Bank's customers and counterparties or its balance sheet; ESG factors with a negative impact are referred to as ESG risk factors.
- ESG risk: the risk of negative financial consequences for the Bank of the current or future impact of ESG risk factors on customers and counterparties or the Bank's statement of financial position items.

The Bank has, in each case, assessed the impact of environmental, social and governance (so-called ESG) factors on a customer's creditworthiness in the credit process for customers in the corporate segment and customers in the company and enterprise segment that are assessed using the rating method/ The Bank also examines the impact of credit transactions on ESG and classifies them to four categories, from transactions with a positive impact on ESG to those with material negative impact. When assessing the ESG factors, the Bank takes into account such factors as the risk of climate change and its impact on the customer's operations, potential influence of the customer on climate, factors related to human capital or health and safety, and governance factors (including the corporate culture and internal audit).

In terms of activities of LGUs and lending transactions with LGUs, the Bank introduced the principle that their impact on the environment, social and governance issues shall be neutral, provided that the Bank has no personalised information in relation to a particular customer or transaction – in which case the customer and transaction assessment reflects the assessment of such information.

The ESG risk assessment in the credit process is also carried out through credit policies for industries/sectors described in the Statement on non-financial information, which is part of the Report on activities of the PKO Bank Polski Group.

Environmental risk management components are as follows:
- Strategic limits of ESG risk tolerance A measure of tolerance for this risk is the ratio of the value of loans for customers in high-emission industries and the Bank's total balance sheet.
  In 2022, the share of loans for customers in high-emission industries was 0.38% with a tolerance limit for the Bank ≤ 0.8% and the Bank's Group ≤ 0.8%, compared to 0.37% in the previous year. This limit is monitored on a quarterly basis and reported to the Bank's Management Board. The Bank decided to increase its financing in the district heating sector and to selectively finance energy security transactions (coal purchases) on a transitional basis, in view of the war in Ukraine and the increase in energy commodity prices and the need to secure coal supplies from alternative sources other than Russia, thus pursuing its social responsibility dimension.
- Key non-financial environmental performance indicators:
  - eliminating exposure to the coal mining sector by 2030, measured by the share of financing for coal and lignite mining sectors in total assets; in 2022, the ratio was 0.09%,
  - a 5% y/y increase in the Bank's green financing; In 2022, this growth reached 54% y/y,
  - the value of engagement in green financing is at least 3 times higher than in high-emission financing for the PKO Bank Polski Group (data only applies to the Bank); in 2022, the value of green financing is 5 times higher than high-emission financing.

The Bank is currently operationalising the full implementation of the EU Taxonomy. The process requires adjustments to data infrastructure, portfolio monitoring procedures, and reporting based on the EU Taxonomy.

The Bank develops standards for defining green loans to non-financial enterprises with environmental objectives beyond the adaptation/mitigation of climate change.

Within the Bank, a "green credit product" means financing renewable energy sources, measures to improve energy efficiency, reduce pollution of the environment and over-use of natural resources, to combat climate change, and support the on-going activity of entities pursuing the objectives of sustainable development.

The ESG risk management requires systemic and sector-specific solutions. The key challenge is the availability of information to assess the ESG risk. The Bank continually analyses the possibilities of obtaining the necessary data for ESG risk management and precautionary reporting.

All banks face a key challenge in developing a systemic solution for obtaining ESG data. This applies, among other things, to:

a) physical risks (lack of data allowing for a sector-wide uniform assessment of the impact of floods, droughts, heatwaves, hurricanes, etc., on the non-trading book),
b) the emission levels of customers regarding Scope 1, Scope 2, and Scope 3 emissions,
c) the energy efficiency of properties that serve as collateral for transactions.

The Bank participates in the development of system solutions allowing disclosure of ESG information in a transparent and comparable manner for all participants of the financial market.

Table 5.1 ESG risk mapping on traditional risks:

Type of the bank's risk	The impact of physical risk	The impact of transformation (transition) risk
Credit risk	physical risk through transmission channels (increased costs, decreased revenues, decreased collateral value) may have a negative impact on borrowers and reduce their ability to service debt or decrease the value of the loan collateral.	EU regulations or national regulations may negatively affect the ability of entities operating in high-emission sectors, such as energy, the fuel sector, transport and logistics, to service their debt.
Market risk	serious physical events may lead to changes in market expectations and may cause sudden revaluation, greater volatility and losses in asset values in some markets.	transformation risk factors may cause sudden revaluation of securities and derivative instruments, for example in relation to products associated with asset-stricken industries.
Liquidity risk	Climate change, including natural disasters and sudden weather phenomena, may cause a sudden increase in demand for funds.	transformation risk factors may affect the profitability of some business lines and lead to the risk of limited repayment of loans granted by customers who do not have time to implement solutions, or a decrease in the volume of funds invested by these customers in the Bank; sudden revaluation of securities, e.g., due to stranded assets, may lower the value of the Bank's high-quality liquid assets, thereby affecting liquidity buffers; a downgrade in the Bank's ESG rating may affect financing risk by making it difficult to attract new investors and increasing financing costs.
Operational risk	Extreme weather phenomena may affect the impossibility or difficulties in carrying out activities, among others in bank branches (e.g., floods, lack of energy supplies).	failure to participate in the energy transformation process may result in penalties for exceeding guidelines, norms, and legal costs (lawsuits by customers or market participants).
Reputation risk	may arise from the materialisation of the above risks	further financing of high-emission sectors negatively perceived by regulators, stakeholders, market participants and rating agencies may affect the Bank's reputation and, consequently, result in loss of profits or a decrease in market capitalisation.

5.1.2 Qualitative information on social risks

5.1.2.1 Business strategy and processes

In the Strategy if PKO Bank Polski for the years 2023-2025 – "Ready for the challenges, focused on the future", the Bank has defined its goals in the social dimension of the ESG area. The Bank aims to become a leader in financial education for young people and digitalisation for seniors, in particular supporting social mobility and preventing exclusion.

The Bank intends to continue engaging in pro-social activities and promoting diversity and equal treatment of employees, regardless of their age, gender, or origin.

The Bank implements social projects that integrate business goals with actions for all stakeholder groups, conducting them on a national and local scale, focusing on the following areas:
- **sport** – encouraging physical activity, promoting mass sports, including football – Bank's partnership with the Ekstraklasa, and running (often combined with charity campaigns) as part of the programme "PKO Biegajmy Razem" (PKO Let's Run Together),
- **culture and art** – protecting the Polish cultural heritage, popularising high culture,
- **science and education** – promoting science and technology, caring for the education of young Poles, supporting educational projects that promote digital solutions in finance,
- **innovation** – supporting projects in the area of innovative solutions relating to IT and new technologies,
- **business** – supporting Polish entrepreneurs, promoting Polish business in the international markets, and developing entrepreneurship.

The Bank and the PKO Bank Polski Foundation implement projects jointly or separately. The Foundation engages in social assistance activities, life and health protection, and ecology. The charitable activities of the Foundation in 2022 were aimed to help victims of armed conflict in Ukraine to a large extent.

The Foundation also transfers donations in kind to non-governmental organisations. In 2022, material donations, such as IT equipment, medical equipment, and cars, were provided to 51 organisations.

Additionally, the Bank plans that by 2025:
- at least 40% of managerial positions will be held by women,
- at least 30% of Material Risk Takers will be women,
- the gender pay gap will be close to 0%,
- the employment ratio of people with disabilities will be at least 2%,
- the overall employee turnover rate will not exceed 14%,
- the voluntary turnover rate will not exceed 7%.

In 2021, the Bank updated the Purchasing Policy. In April 2022, the Bank adopted the "The Code of Ethics for Suppliers or Bidders cooperating with PKO Bank Polski S.A. as part of purchasing proceedings". The Code of Ethics puts the requirements for the Bank-Supplier/Bidder-surroundings relations, taking into account corporate social responsibility, e.g., in the area of information security, prevention of corruption and conflicts of interest, environmental protection, and relations within the supply chain. Suppliers / bidders should analyse their activities with due diligence in the field of environmental protection (e.g., CO_2 emissions, sewage management, waste disposal, noise reduction, biodiversity protection). According to the above mentioned Code of Ethics, the Bank does not accept any forms and manifests of forced labour, prohibited work of children, or work contrary to health and safety regulations. The competent body responsible for purchasing goods and services at the Bank is obliged to provide information concerning the application of the Code of Ethics by suppliers or bidders annually to the competent ESG professional unit, covering the previous year.

Currently, the Bank collaborates with companies from the Bank's Group to standardise the requirements for the purchase of goods and services in the Group, including the implementation of the Code of Ethics for Suppliers or Bidders.

The Bank holds the Procurement Excellence certificate issued by CIPS (Chartered Institute of Procurement and Supply), the largest procurement organisation in the world. In the second half of 2022, the Procurement Department was preparing for the renewal process of the CIPS certificate, which has been scheduled for the first quarter of 2023. As a result, the procurement processes within the Bank will continue to be carried out with adherence to the best market standards.

In evaluating the credit risk of customers, the Bank also assesses social and employee-related issues, as well as issues concerning the respect for human rights. Financial activity and projects undertaken by customers represent investments in human capital or communities, and are evaluated with regards to their impact on inequality risks, social cohesion and integration, as well as employment relationships.

5.1.2.2 Corporate governance

The responsibility of the Management Board in terms of social risk concerns management and supervisory actions with respect to the shaping of internal regulations and the Bank's operating strategy, taking into account, among others, the following issues:
- adherence to human and labour rights, determination of appropriate attitudes and behaviours, prevention of ethical violations, prevention of bullying and discrimination,
- cooperation with the Bank's counterparties on principles consistent with corporate social responsibility,
- monitoring the implementation of accepted principles in the area of social risk management, including within established mechanisms of control and reporting.

Social risk issues are continuously monitored and reported on, and internal reporting on this matter takes on a multi-dimensional form. The most important issues in this area concern the monitoring and reporting of compliance with ethical standards, including violations of labour rights, as well as the assessment of the functioning of the compensation policy. Members of the Management Board are informed quarterly about employee complaints in the areas they supervise and the way in which the case has been resolved, and the President of the Management Board is informed quarterly of all employee complaints.

The verification of adherence to ethical standards within the Bank, including monitoring of risk associated with violations, with a comprehensive approach that includes:

- ethics of Bank employees and other persons performing tasks for the Bank,
- ethics in relations with customers,
- ethics in business activity,
- ethics in relations between the Bank and its environment

is subject to an annual assessment carried out by the Management Board. The Supervisory Board is informed at least once a year of the results of the assessment carried out by the Management Board. The assessment of the functioning of the Bank's compensation policy, in terms of its compliance with "Corporate Governance Principles for Supervised Institutions" issued by the PFSA, as well as other regulatory requirements, is carried out annually as part of a review of the Bank's corporate governance. The report is accepted by the Supervisory Board and then presented to the General Meeting.

The "Policy for remunerating the employees of the Bank and the Bank's Group" applies within the Bank's Group, taking into account social risk and providing a consistent remuneration system, among other things, by shaping the level of remuneration based on market trends, job valuation, ensuring gender-neutral practices in the area of employee compensation within the Group, and ensuring compliance with the strategy in the area of environmental, social, and management-related risks.

5.1.2.3 Risk management

As part of social risk management, national and European supervisory guidelines, good practices of the Warsaw Stock Exchange, recommended benchmark values, as well as market standards are utilised, which include:
- striving for gender balance in the composition of management bodies and achieving a minimum representation of 30% of the underrepresented gender,
- maintaining a minimum of 40% of women in management positions in the overall number of managers.

As part of social risk management in terms of gender pay equality, the method developed by the financial market is applied to determine the relationship between the average pay of women and men in the Bank, based on the weighted average of the total remuneration paid in a given year. The Bank continuously monitors the level of basic salaries of employees to ensure compliance with:
- the generally applicable legal provisions determining the minimum wage, taking into account gender pay equality,
- the Bank's internal regulations concerning non-discrimination and determining the level of remuneration in the Bank.

In socially sensitive areas (employment diversity, level of employee satisfaction resulting from implemented standards and working conditions, labour rights, prevention of bullying and discrimination), the Bank continuously monitors employee satisfaction, turnover rate, including voluntary departures, the employment level of women and men in key management positions, and at least once a year, conducts salary reviews taking into account job evaluation, as well as establishing appropriate strategies in this area.

Social risk may materialise as:
- operational risk, which takes into account the impact of socially harmful events, such as unequal treatment of a group of employees or unethical actions of employees, which may result in financial losses for the Bank's Group resulting from lawsuits or fines imposed by supervisory authorities,
- reputation risk, which as a risk resulting from, among others, non-compliance with commonly applicable legal provisions, including non-compliance with human rights and labour law, and conducting actions inconsistent with supervisory recommendations, good practices, adopted strategy, and declared values, may lead to loss of trust of the public and stakeholders in the Bank's Group and ultimately result in a loss of profits or a decrease in market value.

5.1.3 Qualitative disclosures on corporate governance risks

5.1.3.1 Corporate governance

In assessing credit risk, the Bank evaluates factors related to the counterparty's corporate governance, including organisational and management structure, compliance with risk management, organisational culture and supervision, transparency and management reporting.

Conflict of interest management aims to limit their negative impact on the Bank's operations and relationships between the Bank and individuals holding key positions with customers and other entities. Actions that could cause a conflict of interest are avoided, including by establishing control mechanisms to eliminate conflicts of interest and minimise the risk of their occurrence.

5.1.3.2 Risk management

As part of compliance and conduct risk management, each product is evaluated, alongside the associated marketing communication and the manner in which the product is sold.

The Bank makes every effort to ensure that, among other things:
- products are adequate to the needs of the customers,
- the manner and form of proposing the purchase of products are adequate to their nature,
- reliable, transparent, comprehensive, and truthful information on the product is provided to customers before and during the implementation of the agreement, within the scope provided by law and market practice, which eliminates the potential risk of greenwashing.

The Bank records cases of non-compliance, their causes, and their consequences. In addition, the Bank has an anonymous reporting system that provides protection to employees making reports in good faith, without malicious or defamatory intent, against negative consequences in the form of repressive, discriminatory, or other forms of unfair treatment.

The Bank requires its employees and entities acting on its behalf to comply with ethical attitudes, such as honesty, integrity, and professionalism, specified in the "PKO Bank Polski SA's Code of Ethics" and the "Code of Banking Ethics (Good Banking Practices) of the Polish Bank Association".

5.2 Quantitative information on transition risk and physical risk related to climate change

The Bank's Group has developed a policy of disclosing information on transition risk and physical risk related to climate change, in accordance with the applicable regulation on implementing technical standards (ITS). The limited availability of certain data (e.g., actual information on energy efficiency, exact coordinates of the place of operation) requires the use of expert estimates for some of the data disclosed in the following formulas.

Table 5.2 Non-trading book – Potential climate change transition risk indicators: credit quality of exposure by sector, emissions and residual maturity [Template 1]

		a	b	c	d	e	f	g	h	l	m	n	o	p
	Sector/subsector	Gross carrying amount (Mln EUR)					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (Mln EUR)			<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
			Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures					
1	**Exposures towards sectors that highly contribute to climate change***	18 117	610	-	3 634	1 090	1 001	349	562	13 828	2 821	1 437	31	3.82
2	A - Agriculture, forestry and fishing	405	-	-	125	21	27	13	11	285	111	9	-	4.31
3	B - Mining and quarrying	319	97	-	5	78	1	-	-	312	6	-	-	1.03
4	*B.05 - Mining of coal and lignite*	93	93	-	-	76	- 1	-	- 1	93	-	-	-	1.02
5	*B.06 - Extraction of crude petroleum and natural gas*	-	-	-	-	-	-	-	-	-	-	-	-	1.80
6	*B.07 - Mining of metal ores*	159	-	-	-	-	-	-	-	159	-	-	-	0.23
7	*B.08 - Other mining and quarrying*	62	-	-	4	2	2	-	1	56	6	-	-	3.07
8	*B.09 - Mining support service activities*	4	4	-	1	-	-	-	-	4	-	-	-	1.90
9	C - Manufacturing	5 486	97	-	1 132	224	275	118	137	4 292	1 095	96	2	3.22
10	*C.10 - Manufacture of food products*	1 114	-	-	190	30	46	21	22	989	117	8	-	2.63
11	*C.11 - Manufacture of beverages*	72	-	-	8	1	2	1	1	44	28	-	-	3.59
12	*C.12 - Manufacture of tobacco products*	3	-	-	-	-	-	-	-	3	-	-	-	0.94
13	*C.13 - Manufacture of textiles*	28	-	-	4	2	2	-	1	24	2	2	-	3.12
14	*C.14 - Manufacture of wearing apparel*	26	-	-	5	2	2	-	1	21	2	3	-	3.40
15	*C.15 - Manufacture of leather and related products*	12	-	-	6	1	1	-	1	11	1	-	-	1.84
16	*C.16 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials*	247	-	-	107	12	22	12	9	185	56	4	2	3.57
17	*C.17 - Manufacture of pulp, paper and paperboard*	178	-	-	13	2	3	1	1	147	23	9	-	3.30
18	*C.18 - Printing and service activities related to printing*	81	-	-	14	6	6	1	5	67	10	4	-	3.55
19	*C.19 - Manufacture of coke oven products*	115	97	-	-	-	2	-	-	62	53	-	-	5.09
20	*C.20 - Production of chemicals*	496	-	-	7	1	3	-	-	366	130	-	-	3.28
21	*C.21 - Manufacture of pharmaceutical preparations*	48	-	-	1	-	-	-	-	42	5	1	-	3.12
22	*C.22 - Manufacture of rubber products*	584	-	-	78	9	15	8	5	310	264	9	-	4.39
23	*C.23 - Manufacture of other non-metallic mineral products*	202	-	-	83	7	14	10	4	171	28	4	-	2.92
24	*C.24 - Manufacture of basic metals*	141	-	-	11	4	4	-	3	130	9	2	-	1.81
25	*C.25 - Manufacture of fabricated metal products, except machinery and equipment*	775	-	-	146	40	51	17	32	551	204	20	-	3.64
26	*C.26 - Manufacture of computer, electronic and optical products*	90	-	-	2	1	1	-	-	81	9	-	-	3.17

Bank Polski

		a	b	c	d	e	f	g	h	l	m	n	o	p
	Sector/subsector	Gross carrying amount (Mln EUR)					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (Mln EUR)			<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
			Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures					
27	*C.27 - Manufacture of electrical equipment*	*186*	-	-	*66*	*1*	*9*	*8*	-	160	25	1	-	2.95
28	*C.28 - Manufacture of machinery and equipment n.e.c.*	*202*	-	-	*19*	*11*	*8*	*1*	*6*	164	31	7	-	2.96
29	*C.29 - Manufacture of motor vehicles, trailers and semi-trailers*	*315*	-	-	*164*	*2*	*17*	*14*	*2*	274	38	3	-	2.61
30	*C.30 - Manufacture of other transport equipment*	*173*	-	-	*40*	*78*	*39*	*4*	*34*	166	7	-	-	2.58
31	*C.31 - Manufacture of furniture*	*238*	-	-	*140*	*9*	*21*	*17*	*4*	187	39	12	-	3.17
32	*C.32 - Other manufacturing*	*68*	-	-	*7*	*1*	*2*	*1*	*1*	53	12	3	-	3.17
33	*C.33 - Repair and installation of machinery and equipment*	*91*	-	-	*20*	*4*	*5*	*1*	*3*	83	5	4	-	2.88
34	D - Electricity, gas, steam and air conditioning supply	822	105	-	126	3	14	4	1	596	76	134	17	4.78
35	*D35.1 - Electric power generation, transmission and distribution*	630	37	-	34	1	10	1	-	434	53	126	17	5.43
36	*D35.11 - Production of electricity*	*260*	*37*	-	*33*	-	*5*	*1*	-	64	53	126	17	11.00
37	*D35.2 - Manufacture of gas; distribution of gaseous fuels through mains*	*69*	*69*	-	*65*	-	*1*	*1*	-	68	1	-	-	0.18
38	*D35.3 - Steam and air conditioning supply*	*124*	-	-	*27*	*2*	*3*	*2*	*1*	95	22	7	-	4.04
39	E - Water supply; sewerage, waste management and remediation activities	355	-	-	24	5	5	1	3	217	79	55	5	5.76
40	F - Construction	1 125	-	-	306	140	134	35	95	1 027	65	33	-	2.65
41	*F.41 - Construction of buildings*	*532*	-	-	*114*	*77*	*74*	*13*	*58*	482	31	19	-	2.60
42	*F.42 - Civil engineering*	*178*	-	-	*59*	*16*	*17*	*6*	*10*	166	8	4	-	2.52
43	*F.43 - Specialised construction activities*	*414*	-	-	*133*	*46*	*43*	*15*	*26*	379	26	9	-	2.77
44	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	3 894	130	-	534	232	191	42	130	3 478	315	100	-	2.47
45	H - Transportation and storage	2 231	180	-	466	100	95	25	57	1 597	549	85	-	3.97
46	*H.49 - Land transport and transport via pipelines*	*1 723*	*180*	-	*397*	*71*	*68*	*20*	*37*	1 279	374	70	-	3.78
47	*H.50 - Water transport*	*32*	-	-	*17*	*7*	*8*	*1*	*7*	16	17	-	-	4.25
48	*H.51 - Air transport*	*19*	-	-	*15*	-	*1*	*1*	-	18	-	-	-	2.33
49	*H.52 - Warehousing and support activities for transportation*	*375*	-	-	*33*	*19*	*16*	*2*	*12*	204	157	15	-	5.16
50	*H.53 - Postal and courier activities*	*83*	-	-	*3*	*3*	*2*	-	*1*	80	2	1	-	2.95
51	I - Accommodation and food service activities	516	-	-	189	149	93	19	73	387	68	61	-	4.34
52	L - Real estate activities	2 964	-	-	727	139	166	93	55	1 637	457	864	6	6.62
53	**Exposures towards sectors other than those that highly contribute to climate change***	6 800	-	-	620	127	128	36	66	*3 783*	*1 792*	*1 219*	6	5.77
54	K - Financial and insurance activities	535	-	-	44	9	9	2	5	476	57	2	-	2.56
55	Exposures to other sectors (NACE codes J, M - U)	6 265	-	-	577	119	119	35	61	3 308	1 735	1 216	6	6.04
56	**TOTAL**	**24 917**	**610**	-	**4 255**	**1 218**	**1 129**	**385**	**628**	**17 611**	**4 613**	**2 656**	**37**	**4.36**

* In accordance with Commission Delegated Regulation (EU) 2020/1818 supplementing Regulation (EU) 2016/1011 with regard to minimum standards for EU climate transition benchmarks and EU Paris-aligned benchmarks – Regulation on climate benchmarks – Recital 6: sectors listed in sections A-H and section L of Annex I to Regulation (EC) No 1893/2006

Table 5.2 discloses the exposures that are more susceptible to transition risk related to the shift towards a low-emission and climate-resilient economy for non-financial corporations, divided into sectors that contribute significantly to climate change (NACE codes: A, B, C, D, E, F, G, H, I, L) and exposures to non-financial corporations operating in sectors other than those that contribute significantly to climate change (NACE codes: K, J, M-U).

The Bank's Group is in the process of operationalising the technical criteria of the EU Taxonomy and is developing disclosures regarding companies that significantly harm at least one environmental protection objective according to the aforementioned criteria. Disclosure is made only with respect to entities that meet the criteria under Article 12(1)(d)-(g) of Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation (EU) 2016/1011 with regard to minimum standards for EU climate transition benchmarks and the EU's Paris Agreement-aligned benchmarks. The identification of exposures to these entities was based on an expert review of the portfolio of non-financial corporations, which involved assigning customers to groups of companies operating in fossil fuels, oil, natural gas, and electricity production sectors.

Given the current status of the Polish energy sector, a conservative assumption was adopted that companies producing electricity (excluding those producing electricity exclusively from renewable sources) qualify as companies that generate at least 50% of their revenue from electricity production with greenhouse gas emission intensity of more than 100 g CO2e/kWh (according to emission indicators for electricity published by KOBiZE, which show that the average CO2 emission for electricity generated from fuel combustion facilities in 2021 was 745 g CO2/kWh [excluding greenhouse gases other than CO2]).

The Bank's Group is currently exploring the possibility of obtaining external data sources on the greenhouse gas emissions of its customers and is preparing plans for the implementation of methodologies for estimating and disclosing this information.

Table 5.3 Non-trading book – Indicators of potential transition risk associated with climate change: real estate-secured loans – energy efficiency of collateral [Template 2]

		a	b	c	d	e	f	g
	Counterparty sector	Total gross carrying amount amount (in MEUR)						
			Level of energy efficiency (EP score in kWh/m² of collateral)					
			0; <= 100	> 100; <= 200	> 200; <= 300	> 300; <= 400	> 400; <= 500	> 500
1	**Total EU area**	27 492	8 869	9 051	7 165	734	87	481
2	Of which Loans collateralised by commercial immovable property	-	-	-	-	-	-	-
3	Of which Loans collateralised by residential immovable property	83	82	1	-	0	-	0
4	Of which Collateral obtained by taking possession: residential and commercial immovable properties	-	-	-	-	-	-	-
5	Of which Level of energy efficiency (EP score in kWh/m² of collateral) estimated	27 409	8 787	9 050	7 165	734	87	481
6	**Total non-EU area**	-	-	-	-	-	-	-
7	Of which Loans collateralised by commercial immovable property	-	-	-	-	-	-	-
8	Of which Loans collateralised by residential immovable property	-	-	-	-	-	-	-
9	Of which Collateral obtained by taking possession: residential and commercial immovable properties	-	-	-	-	-	-	-
10	Of which Level of energy efficiency (EP score in kWh/m² of collateral) estimated	-	-	-	-	-	-	-

Table 5.3 discloses all exposures related to real estate collateral. Expert, conservative estimates of the EP indicator, i.e., the level of energy efficiency (primary non-renewable energy consumption per square meter of property per year in kWh/m^2) were applied to all types of properties, if the year of construction was known. For some exposures secured by residential real estate, the actual values of the EP indicator were disclosed – the Bank's Group currently holds an energy performance certificate for 0.2% of the volume of properties serving as collateral. For this volume of properties, the compliance of the actual and estimated values of energy efficiency is at 95%.

The EP indicator values were adopted in accordance with the document entitled "*Long-term renovation strategy for buildings – Supporting the renovation of the national building stock,*" which is an annex to Resolution No. 23/2022 of the Council of Ministers of 9 February 2022. The data on the EP indicator of real estate contained in this document were developed based on energy performance certificates drawn up using the Central Register of Energy Performance Characteristics of Buildings.

The Bank's Group is currently analysing the possibility of obtaining external data sources regarding the actual values of energy efficiency levels of buildings or obtaining them directly from customers as part of the loan process, i.e., when granting a loan or monitoring real estate.

(IN PLN MILLION)

Table 5.4 Non-trading book – Indicators of potential transition risk associated with climate change: adaptation indicators [Template 3]

	a	b	c
	Sector	NACE Sectors (a minima)	Portfolio gross carrying amount (Mn EUR)
1	Power	Mapping of NACE codes to PKD sectors in accordance with EU regulations	740
2	Fossil fuel combustion		424
3	Automotive		320
4	Aviation		91
5	Maritime transport		295
6	Cement, clinker and lime production		152
7	Iron and steel, coke, and metal ore production		585
8	Chemicals		118
9	… potential additions relavant to the business model of the institution		-

Table 5.4 discloses the Bank's exposures (excluding credit exposure to the Central Bank and the State Treasury) broken down by Sectors that have a significant impact on the emission of greenhouse gases from Scope 3. The NACE codes of individual activity sectors are assigned PKD numbers. Ultimately – no later than 30 June 2024 – the Bank will present a sectoral adaptation indicator of financing provided to the scenario determined by the International Energy Agency (IEA) with regard to the emissions of its portfolio.

The Bank's Group is developing a methodology for estimating the adaptation indicator related to Scope 3 emissions. The detailed provisions of the methodology will depend on the availability and quality of the data obtained.

The Bank's Group does not finance the world's largest high-emission companies listed in the Carbon Majors Database (Data Reference 1965-2018, Published 2020) and Thomson Reuters (Data Reference 2014, Published 2016). Therefore, Table Template No 4 – Indicators of potential transition risk associated with climate change: exposures to the 20 largest carbon-emitting companies – is not presented.

Table 5.5 Non-trading book – Indicators of potential transition risk associated with climate change: exposures subject to physical risk [Template 5]

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	Variable: Geographical area subject to climate change physical risk - acute and chronic events	Gross carrying amount (Mln EUR)													
			of which exposures sensitive to impact from climate change physical events												
			Breakdown by maturity bucket					of which exposures sensitive to impact from chronic climate change events	of which exposures sensitive to impact from acute climate change events	of which exposures sensitive to impact both from chronic and acute climate change events	Of which Stage 2 exposures	Of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		
			<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity							of which Stage 2 exposures	Of which non-performing exposures
1	A - Agriculture, forestry and fishing	309	203	102	3	-	4.56	0	0	-	57	18	15	4	10
2	B - Mining and quarrying	300	295	6	-	-	0.88	-	0	-	5	78	0	0	- 0
3	C - Manufacturing	4 026	3 459	561	3	2	2.59	0	174	-	667	80	135	65	53
4	D - Electricity, gas, steam and air conditioning supply	786	569	73	126	17	4.76	-	0	-	125	2	14	4	1
5	E - Water supply; sewerage, waste management and remediation activities	268	188	47	30	3	5.21	-	0	-	24	4	4	1	2
6	F - Construction	926	896	28	2		2.18	1	11	-	258	103	98	27	67
7	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	3 142	3 029	106	6	0	1.88	1	6	-	436	170	142	29	96
8	H - Transportation and storage	2 065	1 539	460	65		3.67	0	2	-	453	83	81	23	46
9	L - Real estate activities	1 577	562	298	717	0	9.27	2	24	-	121	16	32	14	11
10	Loans collateralised by residential immovable property	22 632	454	1 363	8 564	12 251	20.31	-	264	-	2 321	389	471	174	275
11	Loans collateralised by commercial immovable property	4 859	3 027	1 260	562	10	4.88	-	112	-	1 386	530	464	171	275
12	Repossessed colalterals	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Other relevant sectors (breakdown below where relevant)	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5.5 discloses exposures in the non-trading book that are vulnerable to the impact of long-term and sudden physical events related to climate change, according to the NACE sector and the geographic location of the customer's activity or the location of the property used as collateral. The Bank has adopted accuracy in the occurrence of physical phenomena at the municipal level. In the case of mortgage collateral, the Bank has divided them into residential and commercial properties, taking into account the maturity dates, degree of sensitivity (long-term and sudden events related to climate change), STAGE baskets with an indication of cumulative loss of value. The Bank has used climate models (KLIMADA 2.0 project) published by the Institute of Environmental Protection – National Research Institute.

The disclosure concerns long-term physical risk, i.e., drought, and sudden physical risk, i.e., floods, inundations and hurricanes (winds exceeding 30 m/s).

The Bank has defined a variable that determines the risk of long-term and sudden physical events occurring in a geographic location at the municipal level. In its analyses, the Bank has assumed the use of the RCP8.5 scenario (maintenance of the current rate of growth of greenhouse gas emissions, in the business as usual formula, the average temperature of the Earth will increase by 4.5°C in relation to the pre-industrial era) for the decades 2021-2030; 2031-2040; 2041-2050 (taking into account the maturity of the Bank's credit portfolio). The Bank used the scale of exposure to physical risk from 1 to 5 (1 – low, 5 – very high).

With respect to the presentation of information in Template No 5, the Bank’s Group discloses the occurrence of physical risk in all geographic locations for which the risk of long-term and sudden physical events is determined as very high.

The Bank’s Group does not disclose exposure to business entities in the construction, services, transport and sales network industries, divided by the impact of climatic phenomena, due to the assumption of low impact of physical risk on the overall activity of these entities, resulting from their strong dispersal of activities.

Table 5.6 Other climate change mitigation actions not covered by Regulation (EU) 2020/852" [Template 10]

	a	b	c	d	e	f
	Type of financial instrument	Type of counterparty	Gross carrying amount (million EUR)	Type of risk mitigated (Climate change transition risk)	Type of risk mitigated (Climate change physical risk)	Qualitative information on the nature of the mitigating actions
1	Bonds (e.g. green, sustainable, sustainability-linked under standards other than the EU standards)	Financial corporations	-	n/a	n/a	As at December 31, 2022, there were no active bonds of the type indicated in column a.
2		Non-financial corporations	-	n/a	n/a	as above
3		Of which Loans collateralised by commercial immovable property	-	n/a	n/a	as above
4		Other counterparties	-	n/a	n/a	as above
5	Loans (e.g. green, sustainable, sustainability-linked under standards other than the EU standards)	Financial corporations	-	n/a	n/a	n/a
6		Non-financial corporations	1487	Limitable risks: - increase in prices of energy produced from fossil fuels, - increase in fossil fuel prices, - increase in fertilizer prices, - increase in prices of CO2 emission allowances, - an increase in the costs of meeting regulatory requirements (increased energy efficiency standards may result in significant costs of necessary adaptations or diversification and, consequently, lower profitability of enterprises in certain business models, which increases the probability of default (PD) and lowers the value of collateral accepted), - change in preferences of contractors and loss of reputation of the Capital Group (potentially negative perception of the Capital Group by stakeholders in the case of more environmentally friendly competition).	Physical risks (droughts, floods, hurricanes, heatwaves) significantly increase the likelihood of loss of an asset that is key to generating revenue streams, generate the risk of a decrease in the value of collateral, increase in costs, and thus increase the probability of default (PD) and losses due to default (LGD) exposures in sectors or geographies that are sensitive to the risk. If the risk materializes, customers of the Capital Group may withdraw deposits and, in the first place, allocate funds for renovation or replacement of lost assets, which may result in delays in servicing credit exposures.	The assessment of all ESG risks is synthetic, it is made as part of the overall ESG risk measurement, while the possibility of full assessment of the compliance of the actions taken with the EU Taxonomy is limited due to the deficiencies and delays of the delegated acts regarding the EU Taxonomy in terms of technical criteria for qualifying economic activity as environmentally sustainable. Risk factors E (Environmental) are defined in terms of potential negative financial effects for the PKO Bank Polski SA Group, which may affect customers and counterparties or balance sheet items of the Group. As at the reporting date, the division into physical risk and transformation risk was not implemented. In subsequent periods, the Capital Group will work on introducing compliance criteria with the EU Taxonomy to the business strategy, product design processes and rules of cooperation with clients and contractors by analyzing regulations and gaps requiring closure in the implementation of the EU Taxonomy. The Capital Group collects data and builds mechanisms for assessing the compliance of the actions taken with the EU Taxonomy. Financing pro-ecological investments (renewable energy sources, electromobility, circular economy, thermal modernization of real estate) is a necessary adaptation of certain models and business lines towards an environmentally sustainable economy with an acceptable level of physical and transformation risk. The application of credit policies for selected industries/sectors allows to limit the risk of negative perception of the Capital Group by stakeholders in terms of ESG risks. The above-mentioned risks are managed through credit policies for selected sectors (e.g. successive reduction of exposure to customers and transactions based on coal as an energy carrier - convergence with the European climate policy and the pursuit of zero-emissions in 2050) and taking these factors into account in the risk assessment customer financing from selected segments.
7		Of which Loans collateralised by commercial immovable property	324	as above	as above	as above
8		Households	68	as above	as above	A discount on the housing loan margin offered to households after the delivery of a real estate energy performance certificate that meets certain conditions is a promotion of real estate with better energy efficiency. More favorable financing conditions for electromobility and photovoltaic devices support households in reducing their carbon footprint and reducing electricity expenses.
9		Of which Loans collateralised by residential immovable property	8	as above	as above	as above
10		Of which building renovation loans	0	as above	as above	as above
11		Other counterparties	-	n/a	n/a	n/a

Table 5.6 discloses exposures that are not in line with the Taxonomy but still support clients in the transformation process related to climate change.

”The green products” within the meaning of the Bank Group, as of December 31, 2022, which are not fully aligned with the Taxonomy, subject to disclosure, are:

1) **Green mortgage** – Customers may obtain a lower margin on the “Własny Kąt” mortgage loan based on the energy performance certificate for the property;
3) **Thermal modernisation loan for multi-family buildings with BGK premium** – performance of projects financed with the “Nasz remont” investment loan with a bonus provided by BGK makes it possible to reduce demand for energy;
4) **Green loans** – investment loans which have been designated, among others, for financing RES;
5) **BIZNESMAX guarantees from BGK** – the possibility to secure loans for the so-called environmentally-friendly projects, such as a circular economy, electromobility, renewable energy sources;
6) **Ekopożyczka,** a loan for the purchase and installation of photovoltaic panels and other environmentally-friendly devices and vehicles;
7) **Leasing or loan for the financing of photovoltaic equipment;**
8) **Leasing of electric vehicles.**

6 REMUNERATION POLICY

6.1 Main elements of the remuneration policy and ways of their application formula

6.1.1 Bodies supervising the remuneration policy

The objective of the Appointments and Remuneration Committee of the Supervisory Board (SBARC) at the Bank is to support the Supervisory Board in the performance of its statutory duties and tasks arising from legal regulations. The SBARC is composed of members of the Bank's Supervisory Board.

Composition of the Appointments and Remuneration Committee of the Supervisory Board at PKO Bank Polski S.A.. as at 31 December 2022:

No	Full name	Function
1.	Wojciech Jasiński	Chairman of the Committee
2.	Dominik Kaczmarski	Deputy Chairman of the Committee
3.	Andrzej Kisielewicz	Member of the Committee
4.	Tomasz Kuczur	Member of the Committee
5.	Robert Pietryszyn	Member of the Committee
6.	Bogdan Szafrański	Member of the Committee

In particular, the SBARC is responsible for carrying out the following tasks:
1) reviewing the policy of remunerating persons holding managerial positions at the Bank on a periodical basis and presenting the results of the review to the Supervisory Board,
2) presenting to the Supervisory Board proposals of principles for remunerating members of the Management Board,
3) giving opinions on the general rules of the policy of remunerating persons whose professional activities have a material impact on the Bank's risk profile, which are subject to approval by the Supervisory Board,
4) reading the report on the review of implementation of the remuneration policy, carried out by the Internal Audit Department,
5) preparing a draft report on the assessment of the functioning of the remuneration policy at the Bank, which is presented to the General Meeting by the Supervisory Board.

In 2022, SBARC held 10 meetings.

The policy for remunerating the employees of the Bank and the PKO BP S.A. Group (hereinafter the "Remuneration Policy" or the "Policy") shall apply to the Bank and the companies of the Bank's Group taking into account the principle of proportionality, based on the following criteria: legal form of business, size, risk related to business activity, internal organisation and the nature and complexity of the conducted business activity. The remuneration policy is applied to foreign branches to the extent consistent with local regulations.

In the process of identifying positions with a significant impact on the risk profile of the Bank, a Bank's Group company, or the entire Bank's Group (MRT), the positions of:
1) members of the Management Board and the Supervisory Board of the Bank,
2) members of the Management Boards and Supervisory Boards of the Bank's Group companies, are considered to be positions with significant influence on the risk profile of the Bank, the Bank's Group companies or the entire Bank's Group respectively.

The MRT positions in the Bank, other than those listed above, identify the Bank's Management Board and, in the case of the Bank's Group companies, the MRTs identify the management board of the Bank's Group, taking into account in particular the provisions of the European Commission delegated regulation supplementing Directive 2013/36/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying the criteria for determining the staff or categories of staff whose professional activities affect the institution's risk profile, according to which the MRTs are considered to be MRT:
1) senior management executives responsible for material business units, for managing specific risk categories and for control functions,
2) positions responsible for providing internal support, which are decisive to conducting the operations by exposing the Bank to a material operational risk and other types of risk,
3) positions generating credit risk and market risk, identified using criteria based on competence limits.

In order to identify MRT positions in the Bank's Group companies, the materiality of the company's impact on the risk profile of the Bank's Group Company or the Group as a whole is determined, taking into account the risk management strategy and the requirements of common law. or Group Companies with subsidiaries, the identification of MRT positions within its group is performed by the parent company.

6.1.2 Structure of the remuneration system

The remuneration policy provides a consistent remuneration system through:
1) using a remuneration system in line with market trends,
2) acquiring optimal job candidates,
3) adjusting mechanisms, tools and salary levels to the strategy and goals of the Bank and the Bank's Group,
4) taking into account the ability of the Bank's Group to determine the desired mechanisms and salary levels,
5) setting permanent salaries on the basis of job valuations,
6) shaping the remuneration structure based on the employees' performance and an assessment of their competences,
7) building the employees' responsibility for the tasks they carry out, on the basis of objectivised criteria,

8) guaranteeing that variable remuneration components are parameterised so that they take into account the cost of risk, the cost of capital and liquidity risk of the Bank and the Bank's Group in the long-term,
9) ensuring that the monetary or non-monetary forms of remuneration do not encourage the persons involved to favour their own interests or the interests of the Bank and the entities in the Bank's Group to the detriment of customers.
10) ensuring gender neutrality in the remuneration of the Group's employees,
11) ensuring compliance with the strategy on environmental, social and governance (ESG) risks.

The Management Board adopts the Policy, and is responsible for implementing the principles resulting from the Remuneration Policy in the Bank and in the Bank's Group companies – through appropriate internal banking regulations and through cooperation with the individual Bank's Group companies. The Supervisory Board approves the Policy.

The Company Collective Labour Agreement (ZUZP) concluded with the trade union organisations on 28 March 1994 (as amended) provides the basis for granting the following remuneration components to the Bank employees:
- base remuneration,
- additional remuneration for working overtime and under conditions which are particularly onerous and detrimental to health,
- bonuses and rewards for special career achievements.

Variable remuneration may be reduced, to the point of total disqualification, as a result of the following actions on the part of the MRT up to the date of payment (in particular during an assessment period equal to at least the last three years):
1) significant breaches of contractual obligations,
2) improper performance of professional duties,
3) lack of compliance with the legal regulations or customer service standards,
4) significant behaviour towards other employees which violates the principles of social coexistence.

When deciding on the payment of variable remuneration for all MRTs, a decision can be made about:
1) possibly limiting the amount of funds for variable remuneration, taking into account:
   a) the effect on regulatory capital, solvency ratio and equity so that the payment of variable remuneration does not limit the possibility of enhancing them,
   b) the effect on the cost of capital so that the payment of variable remuneration does not limit the possibility of maintaining an adequate capital base,
   c) the desired risk profile, including the related costs,
   d) the financial performance with regard to long-term development plans.
2) a temporary change, in the event of extraordinary and unforeseen circumstances that require taking a conservative approach to variable remuneration of the MRT:
   a) the proportion of deferred to non-deferred variable remuneration in favour of increasing the deferred variable remuneration,
   b) extending the deferral periods with respect to the payment of variable remuneration specified in the MRT remuneration principles and the dates as of which:
      - the base value of variable remuneration is converted into the value of financial instruments,
      - the value of financial instruments will constitute the basis for converting a financial instrument into cash to be paid out,
   c) the proportion between the cash and the financial instrument component of variable remuneration in favour of an increase in the financial instrument component of variable remuneration.

Before the end of the deferred remuneration period, the Management Board determines whether and in which period the conditions for a reduction in variable remuneration (malus) for the assessment period (i.e., the deferred remuneration instalment) occurred – using the following assessment scheme:
1) significant deterioration in performance due to:
   a) balance sheet loss or threat of balance sheet loss,
   b) the emergence of a threat of insolvency or loss of liquidity (taking into account the cost of risk, cost of capital and long-term liquidity risk),
2) determination that there has been a material adverse change in equity,
3) a breach of a provision of law, rules and regulations, procedures or obligations arising from the MRT's employment relationship or the MRT committing material errors, e.g., non-compliance with an internal code of conduct, compliance guidelines or core values, particularly in areas of risk management,
4) adjustment of the MRT's performance/objectives and degree of achievement of results/objectives,
5) deterioration in the performance of structures supervised by the MRT,
6) having awarded variable remuneration on the basis of incorrect, misleading information or as a result of fraud by the MRT concerned.

The report for 2021 on the assessment of the functioning of the remuneration policy has been adopted by the Supervisory Board under the resolution of 11 April 2022, following the SBARC recommendation. The report indicates that in 2021, the Bank and the Bank's Group continued the remuneration policy leading to a coherent and transparent remuneration system, based on the alignment of remuneration levels to the different grade groups and comparing them to market remuneration. The Bank continues its policy in line with the job evaluation method, relating to the determination of individual job weights according to: skills, problem solving and impact on results, and the programme for recommending job candidates.

In the Remuneration Policy for employees of the Bank and the PKO BP Group, in 2022, changes were approved by resolution of the Supervisory Board, consisting primarily of:
1) introduction of a provision on the application of the Remuneration Policy with respect to variable remuneration of members of the Management Board of the Bank, members of the management board of individual companies in the Bank's Group and employees in the Risk Management Team, to a limited extent referred to in Article 9ca(1b) of the Banking Law;
2) removal, due to the change described in section 1, of the provision providing for a threshold amount (exempt from the application of the Remuneration Policy) of PLN 50,000 for persons in positions in the Risk Management Team, following the introduction of the above-mentioned provision on the application of the Remuneration Policy to a limited extent;
3) addition of provisions defining the principles of severance pay;
4) addition of a provision authorising the supervisory boards of companies in the Group to establish a maximum ratio between the average gross total remuneration of members of the management board of a given Group Company in annual terms and the average gross total remuneration of other employees of a given Bank's Group company in annual terms;
5) implementation of provisions stating that the provisions on remuneration are gender-neutral;
6) addition of provisions related to environmental protection and social responsibility, i.e., ESG;

7) stipulation that the malus applies to the entire variable remuneration.

Employment on a position, termination of the employment contract and change in the terms and conditions of the employment contract with respect to a position, made in accordance with the employer's decision concerning the head of the internal audit function or the head of the compliance unit – requires prior approval of the Supervisory Board. Determination of the amount of basic remuneration and changes thereto made with respect to such persons are approved by the Supervisory Board or its competent committee, respectively.

Termination of an employment contract and changes in the terms and conditions of the employment contract with respect to a position or changes resulting in a reduction of the basic remuneration, made at the employer's initiative with respect to an employee of the internal audit function or an employee of the compliance unit, require prior approval of the President of the Management Board.

The level of remuneration of persons performing independent control functions should enable the institution to employ qualified and experienced staff to perform these functions, which is taken into account in the job evaluation process. The remuneration of persons performing independent control functions should be predominantly fixed and should reflect the nature of the duties performed, which is taken into account at the goal-setting stage.

Guaranteed variable remuneration components are exceptional and occur only at the time of initiating an employment relationship or concluding a different contract forming the basis for the provision of work, and are limited to the first year of employment.

A member of the Management Board or MRT may be granted a severance payment (not resulting from the generally applicable regulations) related to the termination of employment, in an amount not exceeding three times the fixed remuneration (arising from the contract on the last day of employment), provided that:

- the person was employed for an appropriate period,
- the contract was terminated for any reason other than a breach of fundamental contractual obligations.

If severance pay is granted, its amount should reflect the assessment for the last three years.

6.1.3 Description of the ways in which current and future risks are taken into account in the remuneration processes.

The Bank applies the ex ante and ex post adjustment mechanisms described in section 6.1.2 above.

When deciding on payment, the Bank assesses the relation of the payment to: the Bank's capital requirement, the Bank's equity, the total capital ratio.

The consideration of risk in the process of shaping the MRT remuneration is also visible in the bonus targets set for MRT, which are linked to the level of risk in the Bank's business (see section 6.1.5).

6.1.4 The ratio of fixed to variable remuneration components

The total amount of the Variable MRT for a given bonus period may not exceed 100% of the fixed remuneration for the duration of the position. The Bank applies ex ante and ex post adjustment mechanisms described in section 6.1.2.

The impact of risk on the variable remuneration is secured in the process of setting objectives, in accordance with section 6.1.5. below.

6.1.5 Description of the ways in which the institution seeks to link performance during a performance measurement period with levels of remuneration.

MRTs are covered by the Management by Objectives System "MbO". The objectives set for MRTs include both institutional level objectives as well as individual level objectives specific to the business area and are assigned for the bonus period. The objectives assigned are intended to ensure that the Bank's business cycle and risks are taken into account both by setting appropriate, risk-sensitive performance evaluation criteria and by reducing or not providing variable remuneration in the event of deteriorated financial performance, loss or deterioration of other indicators. MRT's bonus targets also include quantitative as well as qualitative criteria, and are set in a way that ensures:

1) motivating work and behaviour in such a way that the Bank and the Group achieve the best possible stable financial results in the long term,
2) supporting proper and effective risk management and discouraging excessive risk-taking beyond the risk appetite approved by the Supervisory Board,
3) supporting the implementation of the business strategy and limiting conflicts of interest.

MRT's deferred and non-deferred variable remuneration consists of the following components:

1) cash, which represents 50% of variable remuneration,
2) a financial instrument (phantom shares), which represents 50% of variable remuneration.

The only financial instruments used are the Bank's phantom shares, hence there is no need for the Bank to assess the balance between the different types of instruments granted.

When deciding on the payment, the Bank applies the criteria and performance indicators indicated in section 6.1.3. In the event of "poor" performance, the Bank may apply the measures described in section 6.1.2.

6.1.6 Description of the ways in which the institution seeks to adjust remuneration to take account of long-term performance

The total variable remuneration for a given bonus period is determined in the form of non-deferred variable remuneration and deferred variable remuneration in a ratio of 60% to 40% below a particularly large amount and 40% to 60% above a particularly large amount. The Bank, for the variable remuneration for 2021 and subsequent years, applies a 5-year deferral period, consisting of annual settlement periods following the end of the remuneration period and calculation of the total base value of all MRT variable remuneration components. The Bank also applies the appropriate required holding period for the instrument.

The Bank does not apply a clawback mechanism for previously paid bonuses. Before the end of the deferred remuneration period, it is determined whether and during which period the conditions for a reduction in the variable remuneration (malus) for the assessment period in question (i.e., the deferred remuneration instalment, in the case of members of the Management Board malus as of 30 December 2022 concerns the total variable remuneration), in accordance with section 6.1.2.

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6.1.7 Description of the main parameters and rationale for any variable component scheme and any other non-cash benefits in accordance with Article 450(1)(f) of the CRR

The Bank applies performance measurement through appropriate target setting which takes into account:
1) Net profit of the Bank's Group,
2) C/I ratio of the Bank's Group in the period (%),
3) ROE of the Bank's Group (in %),
4) Share of impaired receivables in the loan portfolio of the Bank's Group including loans measured at FVPL (in %),
5) Interest margin of the Bank's Group (%),
6) Alternative target (understood as the selection of a more favourable target after final settlement),
   A. Customer Satisfaction Index presented based on Entry to Inactivity and Customer Exit Rates as defined by Finalty,
   B. Customer Satisfaction Index measured by Relational NPS.

The structure of performance indicators combines various types of KPIs, in particular quantitative and effectiveness indicators consistent with the specific nature of an organisation. All performance indicators are parameterised and measurable. Due to the nature of a given managerial position, a different percentage of each objective in the overall assessment is defined by assigning weights to the aforementioned KPI types. Responsibility for long-term financial performance was used, adjusted for risk and costs with a different structure of objectives depending on the specific nature of the tasks performed. The positions responsible for control functions are assessed in terms of accomplishment of objectives which are independent of the performance of the structures being controlled.

The division of MRT's deferred and non-deferred variable remuneration is described in section 6.1.5.

6.1.8 Other remuneration policy issues

The Bank does not benefit from the derogation set out in Article 94(3)(a) of the CRD. The provisions arising from Article 94(3)(b) of the CRD were adopted at the Bank on 30 December 2022.

6.2 Quantitative data on remuneration

The following tables present quantitative remuneration data for 2022.

The number of employees shown in tables REM 1-5 is presented in accordance with section 35 of EBA/GL/2022/06 dated 30 June 2022 concerning comparative analyses of practices in the field of remuneration, gender pay gap and approved higher variable to fixed remuneration ratios based on Directive 2013/36/EU.

Table 6.1 Remuneration awarded for the financial year [Template EU REM1]

			31.12.2022			
			a	b	c	d
			MB Supervisory function	MB Management function	Other senior management	Other identified staff
1	Fixed remuneration	Number of identified staff	11	8	52	90
2		Total fixed remuneration	1.89	9.88	29.32	33.22
3		Of which: cash-based	1.89	9.40	28.60	31.81
4		(Not applicable in the EU)				
EU-4a		Of which: shares or equivalent ownership interests	-	-	-	-
5		Of which: share-linked instruments or equivalent non-cash instruments	-	-	-	-
EU-5x		Of which: other instruments	-	-	-	-
6		(Not applicable in the EU)				
7		Of which: other forms	-	0.48	0.73	1.41
8		(Not applicable in the EU)				
9	Variable remuneration*	Number of identified staff	-	-	-	1
10		Total variable remuneration	-	1.40	2.39	1.39
11		Of which: cash-based	-	1.40	2.39	1.39
12		Of which: deferred	-	-	-	-
EU-13a		Of which: shares or equivalent ownership interests	-	-	-	-
EU-14a		Of which: deferred	-	-	-	-
EU-13b		Of which: share-linked instruments or equivalent non-cash instruments	-	-	-	-
EU-14b		Of which: deferred	-	-	-	-
EU-14x		Of which: other instruments	-	-	-	-
EU-14y		Of which: deferred	-	-	-	-
15		Of which: other forms	-	-	-	-
16		Of which: deferred	-	-	-	-
17	Total remuneration (2 + 10)		1.89	11.28	31.71	34.61

*As at the publication date, the variable remuneration for 2022 was not yet awarded.

The quantitative data on all the variable remuneration components awarded for 2022 will be published together with the information on the capital adequacy of the PKO Bank Polski S.A. Group prepared for the first half of 2023.

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Table 6.2 Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff) [Template EU REM2]

		31.12.2022			
		a	b	c	d
		MB Supervisory function	MB Management function	Other senior management	Other identified staff
Guaranteed variable remuneration awards					
1	Guaranteed variable remuneration awards - Number of identified staff	-	-	-	-
2	Guaranteed variable remuneration awards -Total amount	-	-	-	-
3	Of which guaranteed variable remuneration awards paid during the financial year, that are not taken into account in the bonus cap	-	-	-	-
Severance payments awarded in previous periods, that have been paid out during the financial year					
4	Severance payments awarded in previous periods, that have been paid out during the financial year - Number of identified staff	-	6	8	2
5	Severance payments awarded in previous periods, that have been paid out during the financial year - Total amount	-	1.07	0.23	0.03
Severance payments awarded during the financial year					
6	Severance payments awarded during the financial year - Number of identified staff	-	1	2	-
7	Severance payments awarded during the financial year - Total amount	-	0.27	0.22	-
8	Of which paid during the financial year	-	-	-	-
9	Of which deferred	-	-	0.22	-
10	Of which severance payments paid during the financial year, that are not taken into account in the bonus cap	-	-	-	-
11	Of which highest payment that has been awarded to a single person	-	-	0.22	-

Table 6.3 Deferred remuneration [Template EU REM3]

		31.12.2022							
		a	b	c	d	e	f	EU - g	EU - h
	Deferred and retained remuneration	Total amount of deferred remuneration awarded for previous performance periods	Of which due to vest in the financial year	Of which vesting in subsequent financial years	Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in the financial year	Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in future performance years	Total amount of adjustment during the financial year due to ex post implicit adjustments (i.e.changes of value of deferred remuneration due to the changes of prices of instruments)	Total amount of deferred remuneration awarded before the financial year actually paid out in the financial year	Total of amount of deferred remuneration awarded for previous performance period that has vested but is subject to retention periods
1	MB Supervisory function	-	-	-	-	-	-	-	-
2	Cash-based	-	-	-	-	-	-	-	-
3	Shares or equivalent ownership interests	-	-	-	-	-	-	-	-
4	Share-linked instruments or equivalent non-cash instruments	-	-	-	-	-	-	-	-
5	Other instruments	-	-	-	-	-	-	-	-
6	Other forms	-	-	-	-	-	-	-	-
7	MB Management function	11.09	3.17	7.92	- 0.09	- 0.09	1.36	4.43	4.81
8	Cash-based	4.39	1.38	3.01	- 0.09	-	0.01	1.30	-
9	Shares or equivalent ownership interests	-	-	-	-	-	-	-	-
10	Share-linked instruments or equivalent non-cash instruments	6.70	1.79	4.91	-	- 0.09	1.34	3.13	4.81
11	Other instruments	-	-	-	-	-	-	-	-
12	Other forms	-	-	-	-	-	-	-	-
13	Other senior management	24.57	7.06	17.51	- 0.60	-	1.86	8.32	10.56
14	Cash-based	10.08	3.13	6.95	- 0.29	-	0.03	2.86	-
15	Shares or equivalent ownership interests	-	-	-	-	-	-	-	-
16	Share-linked instruments or equivalent non-cash instruments	13.26	3.64	9.62	- 0.30	-	1.81	5.15	9.62
17	Other instruments	1.23	0.30	0.93	-	-	0.01	0.31	0.93
18	Other forms	-	-	-	-	-	-	-	-
19	Other identified staff	24.47	8.14	16.33	- 0.43	-	2.56	10.27	9.82
20	Cash-based	10.10	3.59	6.51	- 0.22	-	0.04	3.41	-
21	Shares or equivalent ownership interests	-	-	-	-	-	-	-	-
22	Share-linked instruments or equivalent non-cash instruments	13.81	4.44	9.37	- 0.21	-	2.51	6.73	9.37
23	Other instruments	0.56	0.11	0.46	-	-	0.01	0.12	0.46
24	Other forms	-	-	-	-	-	-	-	-
25	Total amount	60.13	18.37	41.76	- 1.12	- 0.09	5.77	23.02	25.19

In 2022, there were no persons in the entire PKO Bank Polski S.A. Group who received total remuneration of at least EUR 1 million, therefore the EU REM4 table has not been filled in.

Table 6.4 Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (identified staff) for 2022 [Template EU REM5]

		31.12.2022									
		a	b	c	d	e	f	g	h	i	j
		Management body remuneration			Business areas						
		MB Supervisory function	MB Management function	Total MB	Investment banking	Retail banking	Asset management	Corporate functions	Independent internal control functions	All other	Total
1	Total number of identified staff										161
2	Of which: members of the MB	11	8	19							
3	Of which: other senior management				-	7	-	23	9	12	
4	Of which: other identified staff				3	30	14	17	16	9	
5	Total remuneration of identified staff	1.89	20.33	22.23	4.23	32.08	5.82	34.97	13.81	15.51	
6	Of which: variable remuneration	-	10.45	10.45	1.97	14.68	2.58	13.77	5.05	5.97	
7	Of which: fixed remuneration	1.89	9.88	11.78	2.26	17.40	3.24	21.34	8.76	9.54	

(IN PLN MILLION)

7 Glossary of terms and abbreviations

AMA (*Advanced Measurement Approach*)	operational risk advanced measurement approach for the purpose of defining the own funds requirements for operational risk according to the CRR Interest Rate Swap)
Carbon Majors Database and Thomson Reuters	databases used to identify companies with the largest carbon dioxide emissions recommended by the European Commission
CBI (*Climate Bond Initiative*)	an international organisation working to mobilise global capital for climate action, involved in developing climate bond standards and a certification system
CIRS (*Currency Interest Rate Swap*)	a transaction involving the exchange of interest payments between counterparties based on different currency denominations and different interest rates
CRD	Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC
CSA (*Credit Support Annex*)	a collateral agreement – annex to the framework agreement
EaR (*Earnings at risk*)	defines maximum deviation of net business income from expected value with an assumed range of confidence in a specified time horizon
EBA (*European Banking Authority*)	European Banking Authority
ECAI (*External Credit Assessment Institutions*)	External Credit Assessment Institution
ESG (*environmental, social and governance*)	environmental, social and governance issues
FX Swap	foreign currency exchange swap – a transaction in which two parties exchange agreed amounts including accrued interest in different currencies for a specified period of time
Greenwashing	marketing communication of a company based on false or misleading statements regarding the compliance of the product or its components with environmental protection principles
IEA (*International Energy Agency*)	International Energy Agency
IRB (*Internal Ratings Based Approach*)	an internal ratings method used to determine the capital requirement for credit risk
ISDA (*International Swap and Derivatives Association*)	International Swap and Derivatives Association
Internal capital	amount of capital, that is required to cover all identified significant types of risk present in the Bank or the Bank's Group's business activity and the effect of changes in its business environment, taking into account the anticipated risk level
KRI (*Key Risk Indicator*)	operational risk measure, defined as key for a given area of the systemic operational risk management, application, product, service, or process in the context of losses resulting from operational events, i.e., monitoring the main factors affecting the level of key risks for the Bank
KOBiZE	National Centre for Emissions Management operates within the structure of the Institute of Environmental Protection – National Research Institute, administering the EU Emissions Trading System in Poland, and maintaining a national database of greenhouse gas emissions.
CVA (*Credit Value Adjustment*)	adjustment of the valuation of derivatives reflecting counterparty credit risk
DVA (*Debt Value Adjustment*)	adjustment of the valuation of liabilities and derivatives reflecting the Bank's own credit risk
LDA (*Loss Distribution Approach*)	an approach in which historical data on internal and external events are used, as well as the information on the development of business environment factors for statistical measurement of operational risk
LGD (*Loss Given Default*)	a loss suffered by the Bank in case of customer's default

TCR (*Total Capital Ratio*)	the main measure of capital adequacy, calculated as the quotient of own funds and total own funds requirements multiplied by 12.5
MRT (*Material Risk Takers*)	members of the Management Board and key managers with a significant impact on the risk profile of the Bank
IAS	International Accounting Standards
IFRS	International Financial Reporting Standards
NACE (*nomenclature statistique des activités économiques dans la Communauté européenne*)	The Statistical Classification of Economic Activities in the European Community. NACE is a four-digit classification providing a framework for collecting and presenting a wide range of statistical data according to economic activity in economic statistics and other statistical areas developed within the European Statistical System (ESS).
NBP	The National Bank of Poland
Outsourcing	using external resources, by delegating certain tasks and actions to be performed by external companies on the basis of contracts
P2G (*Pillar 2 Guidance*)	Capital recommendations under Pillar 2 imposed by the Polish Financial Supervision Authority to absorb potential losses resulting from extreme conditions.
Non-trading book	the book containing operations not included in the trading book, specifically related to credit facilities and loans and deposits extended or accepted within the bank's basic business activity or for the purposes of liquidity and interest rate risk management
Trading book	all positions in financial instruments and commodities held by an institution either with trading intent, or in order to hedge positions held with trading intent.
Individual position for a specific foreign currency (*the currency position*)	the difference between total assets in a currency, off-balance sheet liabilities received and assets indexed to that currency on the one hand, and total liabilities in that currency, off-balance sheet liabilities awarded and liabilities indexed to that currency on the other hand
Probability of Default (PD)	a statistical assessment of the probability of a borrower's insolvency on the annual scale (defines the portfolio-related credit risk to become materialised in the future)
RI – additional risk indicator (*Risk Indicator*)	operational risk measure, not specified as a key, operational nature, supporting monitoring of operational risk level for a given area, systemic operational risk management, application or process
RTS AMA	Commission Delegated Regulation (EU) 2018/959 of 14 March 2018 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards of the specification of the assessment methodology under which competent authorities permit institutions to use Advanced Measurement Approaches for operational risk
Business risk	the risk of failing to achieve the assumed financial goals, including incurring losses, due to adverse changes taking place in the business environment, making bad decisions, incorrect implementation of the decisions made or failing to take appropriate action in response to changes taking place in the business environment.
Credit risk	the risk of losses resulting from customer's failure to meet obligations towards the Bank or the risk of a decrease in the economic value of the Bank's receivables as a result of deterioration of the customer's ability to service obligations
Model risk	the risk of suffering losses as a result of wrong business decisions taken on the basis of functioning models
Operational risk	the risk of losses resulting from inadequacy or unreliability of the internal processes, the human factor and systems, or from external events; Operational risk does not include reputation risk or business risk, but does include: • legal risk – the risk of incurring losses resulting from the ignorance, misunderstanding and non-application of legal and accounting standards, inability to enforce contractual provisions, unfavourable interpretations or decisions of courts or public administration authorities, • cybersecurity risk – the degree of vulnerability due to potential negative ICT-related cyber security risk factors that could cause a financial loss to the organisation by compromising the availability, integrity, confidentiality or accountability of information processed on SIB resources.

Liquidity risk	the risk of inability to timely discharge of liabilities due to non-availability of liquid means
Interest rate risk	the risk of loss on the Bank's balance sheet and off-balance sheet items sensitive to interest rate changes, resulting from unfavourable interest rate changes on the market
Foreign exchange risk	the risk of loss due to changes in the foreign exchange rates, generated through maintaining open currency positions in individual currencies
Reputation risk	Current or future risk of reputation deterioration among customers, contractors, investors, external supervisory and control bodies, and public opinion as a result of business decisions, operational incidents, security incidents, cases of non-compliance or other events that may have an unfavourable impact on financial results, own funds, or liquidity.
Macroeconomic risk	the risk of deterioration of the Bank's financial condition as a result of adverse impact of changes in macroeconomic conditions
Expected Loss (EL)	a statistically assessed value of the mean (expected) credit risk loss that the bank expects to incur on the portfolio within one year
Strategic tolerance limit	acceptable risk level defined by the Management Board
Rating method	a method for assessing the bank's credit risk involved in the financing of institutional customers, incurred when awarding or changing the essential terms of a loan transaction and in the period of performance of such transaction
EU taxonomy	A set of regulations supporting companies in sustainable activities for the environment and climate. The primary document is the Regulation of the European Parliament and of the Council of the European Union 2020/852 of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, amending Regulation (EU) 2019/2088.
Stress tests	a risk management tool used for assessment of the potential impact of a specific event or changes in the market parameters on the Bank or the Bank's Group
Fair value	an amount for which a specific asset might be exchanged, and a liability discharged, within a market transaction between interested and informed unrelated parties
Value-at-Risk (VaR)	a potential loss resulting from changes in the present value of cash flows from financial instruments, or a potential loss on the maintained currency positions due to changes in the foreign exchange rates, on the assumption that a defined confidence level and holding period of the position are kept
Credit Value-at-Risk (CVaR)	a potential loss that should not be exceeded in relation to credit risk on the maintained credit portfolio, on the assumption that a defined confidence level and holding period of the position are kept
EP indicator	determines the level of energy efficiency of a property, which is the unit consumption of non-renewable primary energy in kWh/m2 of the property per year
Own funds requirements	total own funds requirements for particular risk types and own funds requirements for exceeded limits and other violations of norms described in the CRR and CRD, BRR and decisions of external supervisory and control bodies
PBA	the Polish Bank Association
OGSM	Ordinary General Shareholders' Meeting

Representation of the Management Board of PKO Bank Polski S.A.

The Management Board of PKO Bank Polski S.A.:

- declares that, to the best of its knowledge, the information has been prepared in compliance with the internal control processes;
- declares that, to the best of its knowledge, the adequacy of risk management arrangements at PKO Bank Polski S.A. ensures that the risk management systems used are appropriate to the risk profile and strategy of the Bank and the Bank's Group;
- approves this Report "Capital Adequacy and other information subject to publication of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group as at 31 December 2022", which includes information on risk, discusses the overall risk profile of the Bank and the Bank's Group related to the business strategy and includes key indicators and figures that provide external stakeholders with a holistic view of the risk management of PKO Bank Polski S.A. and the PKO Bank Polski S.A. Group, including interactions between the Bank's risk profile and risk tolerance expressed in the form of strategic tolerance limits determined by the Management Board and approved by the Supervisory Board

Management Board of PKO Bank Polski S.A.

on the original, the relevant signatures