This document is a translation of a document originally issued in Polish. The only binding version is the original Polish version.

Capital Adequacy and Other Information Subject to Disclosure of The Group of PKO Bank Polski SA as at 31 December 2019

Introduction

The Report "Capital Adequacy and Other Information Subject to Disclosure of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group as at 31 December 2019", hereinafter referred to as the "Report", was prepared in accordance with the provisions of 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 and amending Regulation (EU) No 648/2012, hereinafter referred to as the "CRR", taking into account the implementing acts under the CRR, the Act of 5 August 2015 on macroprudential supervision over the financial system and crisis management,[2] hereinafter referred to as the "Act on macroprudential supervision", as well as Recommendation M on operational risk management in banks, Recommendation P on liquidity risk management in banks, and Recommendation H on the internal control system in banks, issued by the Polish Financial Supervision Authority (*Komisja Nadzoru Finansowego*), hereinafter referred to as the "PFSA").

The disclosures also reflect the requirements set out in Commission Implementing Regulation (EU) No 1423/2013 of 20 December 2013 laying down implementing technical standards with regard to the disclosure of own funds requirements for institutions according to the CRR (Regulation 1423/2013), in Commission Implementing Regulation (EU) No 1030/2014 of 29 September 2014 laying down implementing technical standards with regard to the uniform formats and the date for the disclosure of values used to identify global systemically important institutions according to the CRR (Regulation 1030/2014), in Commission Delegated Regulation (EU) No 1222/2014 of 8 October 2014 supplementing Directive 2013/36/EU of the European Parliament and of the Council with regard to regulatory technical standards for specifying the methodology for identifying global systemically important institutions and for defining subcategories of global systemically important institutions (Regulation 1222/2014), in Commission Delegated Regulation (EU) 2015/1555 of 28 May 2015 supplementing the CRR with regard to regulatory technical standards for the disclosure of information in relation to the compliance of institutions with the requirement for a countercyclical capital buffer in accordance with Article 440 (Regulation 2015/1555), in Commission Implementing Regulation (EU) 2016/200 of 15 February 2016 laying down implementing technical standards with regard to the disclosure of the leverage ratio for institutions, according to the CRR (Regulation 2016/200), in Commission Delegated Regulation (EU) 2017/2295 of 4 September 2017 supplementing the CRR with regard to regulatory technical standards for disclosure of encumbered and unencumbered assets (Regulation 2017/2295), in the guidelines no. EBA/GL/2014/03 of 27 June 2014 on the disclosure of encumbered and unencumbered assets (EBA/GL/2014/03 Guidelines), in guidelines no. EBA/GL/2015/22 of 27.06.2016 on sound remuneration policies under Articles 74(3) and 75(2) of Directive 2013/36/EU and disclosures under Article 450 of the CRR (EBA/GL/2015/22 Guidelines), in the guidelines no. EBA/GL/2016/01 of 29.02.2016 on the further specification of the indicators of global systemic importance and their disclosure (EBA/GL/2016/01 Guidelines), in the guidelines no. EBA/GL/2016/11 on disclosure requirements under Part Eight of the CRR (EBA/GL/2016/11 Guidelines), in the EBA/GL/2017/01 guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 of the CRR (EBA/GL/2017/01 Guidelines), in the EBA/GL/2018/01 guidelines on uniform disclosures under Article 473a of the CRR as regards transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds (EBA/GL/2018/01 Guidelines) in connection with the application of the transitional arrangements of the implementation of IFRS 9 and in the guidelines no. EBA/GL/2018/10 of 17 December 2018 on the disclosure of non-performing and forborne exposures.

Pursuant to Article 13(1) of the CRR, Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna hereinafter referred to as "PKO Bank Polski SA" or the "Bank", being a European parent institution, discloses the information regarding capital adequacy referred to in Part Eight of the CRR in a separate document annually and semi-annually.

This Report was prepared in accordance with the Bank's internal regulations concerning the information policies of PKO Bank Polski SA regarding capital adequacy ("The information policies of PKO Bank Polski SA regarding capital adequacy and other information subject to disclosure", within the meaning of Article 431 of the CRR, are available on the Bank's website (www.pkobp.pl)) as well as the related internal regulations which contain detailed information relating to disclosures concerning capital adequacy, the manner of their verification, approval and publication.

In accordance with Commission Delegated Regulation (EU) No 183/2014, the capital adequacy calculation includes adjustments recognized in profit or loss, which relate to credit risk, for the periods covered by Common Equity Tier 1 capital. Therefore, the Bank took into account specific credit risk adjustments as of 30 June 2019, appropriate adjustments were also taken into account at Group level.

The Report covers the year 2019 and presents data as of 31 December 2019 and was prepared in accordance with the regulations referred to in the paragraph above, in force as of 31 December 2019. The Report presents the consolidated data[3] of the Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna Group, hereinafter referred to as the "Bank's Group". Some of the information in the Report relates to the separate data of PKO Bank Polski SA due to the Bank's material effect 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 was prepared taking into account all the available data as of 31 December 2019. 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 were deemed inapplicable. This Report was subject to an internal verification by the Bank's internal audit function.

[1] Journal of Laws of 2018, item 2187, as amended.
[2] Journal of Laws of 2017, item 1934, as amended.
[3] The data covers only the entities subject to prudential consolidation.

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CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

1. Information on the Bank and the Bank Group

Pursuant to the CRR, prudential consolidation is used for capital adequacy purposes, which, unlike consolidation in compliance with International Financial Reporting Standards, covers only subsidiaries which meet the definition of an institution, a financial institution or an ancillary services undertaking.

Pursuant to the CRR, for prudential consolidation purposes the Bank Group comprises: PKO Bank Polski SA, the PKO Leasing SA Group, PKO BP BANKOWY PTE SA, PKO Towarzystwo Funduszy Inwestycyjnych SA, the KREDOBANK SA Group, PKO Finance AB, PKO BP Finat sp. z o.o., PKO Bank Hipoteczny SA, and the Bankowe Towarzystwo Kapitałowe SA Group.[4]

Non-financial and insurance entities are not subject to prudential consolidation. Tables 1.1–1.2 present the differences in the scope of the consolidation of the Bank's Group for the purposes of accounting and prudence regulations as of 31 December 2019.

Table 1.1. Differences in accounting and regulatory consolidation and mapping of categories of financial statements to regulatory risk categories [template EU LI1]

The Bank Group	2019	
	a)	b)
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation
ASSETS		
Cash and balances with the Central Bank	14 677	14 677
Amounts due from banks	4 092	3 929
Hedging derivatives	645	645
Other derivative instruments	2 795	2 795
Securities	80 573	78 225
- held for trading	1 112	1 113
- not held for trading, measured at fair value through profit or loss	2 199	771
- measured at fair value through other comprehensive income	63 807	62 922
- measured at amortized cost	13 455	13 419
Loans and advances to customers	231 434	231 584
- not held for trading, measured at fair value through profit or loss	8 286	8 286
- measured at fair value through other comprehensive income	-	-
- measured at amortized cost	223 148	223 298
Investments in subsidiaries, associates and joint ventures	377	1 368
Non-current assets held for sale	12	9
Intangible assets	3 178	3 014
Property, plant and equipment	4 442	4 248
Current income tax receivable	5	5
Deferred income tax assets	2 243	2 239
Other assets	3 571	2 678
TOTAL ASSETS	**348 044**	**345 416**
Amounts due to the Central Bank	-	
Amounts due to banks	2 885	2 885
- measured at fair value through profit or loss	317	317
- measured at amortized cost	2 568	2 568
Hedging derivatives	589	589
Other derivative instruments	2 924	2 924
Amounts due to customers	258 199	257 105
- measured at fair value through profit or loss	45	45
- measured at amortized cost	258 154	257 060
Liabilities in respect of insurance activities	1 640	
Debt securities in issue	31 148	31 246
Subordinated liabilities	2 730	2 730
Other liabilities	5 075	4 851
Current income tax liabilities	455	455
Deferred income tax provision	239	205
Provisions	582	582
TOTAL LIABILITIES	306 466	303 572
Share capital	1 250	1 250
Other capital	34 205	34 127
Retained earnings	2 101	2 417
Current year result	4 031	4 050
Capital allocated to shareholders of the parent company	41 587	41 844
Non-controlling interest	-9	-
TOTAL EQUITY	41 578	41 844
TOTAL LIABILITIES AND EQUITY	**348 044**	**345 416**

Balance sheet values shown according to the regulatory model differ from the values included in the published financial statements for the end of 2019 only due to the application of different scope of consolidation.

[4] Up until 31 August 2019, Operator Chmury Krajowej sp. z o.o. – currently a joint venture of PKO Bank Polski SA - was subject to prudential consolidation.

Table 1.2. Outline of differences in the scope of consolidation (of each entity) [template EU LI3]

Grupa Kapitałowa Banku		2019					
		a)	b)	c)	d)	e)	f)
No.[1]	Name of entity	Method of accounting consolidation	Method of regulatory consolidation				Description of the entity
			Full consolidation	Proportional consolidation	Neither consolidated nor deducted	Deducted[2]	
1	PKO Bank Polski SA	parent company					Banking activities
2	PKO Bank Hipoteczny SA	Full consolidation	X				Banking activities
3	PKO Towarzystwo Funduszy Inwestycyjnych SA	Full consolidation	X				Creation and management of Open-end and Closed-end Investment Funds and management of the trading book
4	PKO BP BANKOWY PTE SA	Full consolidation	X				Management of an open and voluntary pension fund
5	PKO Leasing SA	Full consolidation	X				Leasing and providing bank loans
	PKO Leasing Nieruchomości sp. z o.o.	Full consolidation	X				Leasing
	PKO Agencja Ubezpieczeniowa sp. z o.o.	Full consolidation	X				Insurance brokerage and providing bank loans within PKO Leasing Group
	PKO Leasing Finanse sp. z o.o.	Full consolidation	X				Ancillary services in the field of storing and selling post-Leasing items
	PKO Leasing Sverige AB	Full consolidation	X				Leasing
	Prime Car Management SA	Full consolidation	X				Leasing and fleet management services.
	Futura Leasing SA	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
	ROOF Poland Leasing 2014 DAC[3]	Full consolidation	X				A special-purpose vehicles set up for the purpose of leasing receivables securitization.
	Polish Lease Prime 1 DAC[3]	Full consolidation	X				A special-purpose vehicles set up for the purpose of leasing receivables
	PKO Faktoring SA	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 SA	Full consolidation				X	Life insurance
	Ubezpieczeniowe Usługi Finansowe sp. z o.o.	Full consolidation			X		Service activities
8	PKO Towarzystwo Ubezpieczeń SA	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 SA	Full consolidation	X				Banking activities
	Finansowa Kompania „Idea Kapitał" sp. z o.o.	Full consolidation	X				Financial services

11	ZenCard sp. z o.o.	Full consolidation				X	Technology company dealing in services and products in the field of IT and business support - not included in prudential consolidation pursuant to Art. 19 par. 1 of the CRR
12	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.	Full consolidation			X		
	Molina spółka z ograniczoną odpowiedzialnością 3 S.K.A. w likwidacji	Full consolidation			X		
	Molina spółka z ograniczoną odpowiedzialnością 4 S.K.A.	Full consolidation			X		
	Molina spółka z ograniczoną odpowiedzialnością 5 S.K.A.	Full consolidation			X		
	Molina spółka z ograniczoną odpowiedzialnością 6 S.K.A.	Full consolidation			X		
13	NEPTUN - fizan	Full consolidation			X		Placing funds collected from fund participants
	Bankowe Towarzystwo Kapitałowe SA	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
	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
	„CENTRUM HAFFNERA" sp. z o.o.	Full consolidation			X		Real estate management of subsidiaries
	„Sopot Zdrój" sp. z o.o.	Full consolidation			X		Real estate management
14	PKO VC - fizan	Full consolidation			X		Placing funds collected from fund participants

[1] The "numbered" entities other than PKO Bank Polski SA – the direct subsidiaries of PKO Bank Polski SA, 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 Bank Group's own funds. In view of the fact that the total exposures in 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 of 31 December 2019 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 Group does not have any exposures constituting deductions from Tier 2 capital.
[3] In accordance with IFRS 10, PKO Leasing SA exercises control over the above-mentioned company despite the fact that it has no capital investment in the company.

In 2019, new entities joined the Bank's Group (under the accounting consolidation):

1) Prime Car Management SA (a subsidiary of PKO Leasing SA) and its subsidiaries Masterlease sp. z o.o., MasterRent24 sp. z o.o. and Futura Leasing SA – the activities of the above-mentioned entities consist of leasing and vehicle fleet management, as well as renting passenger cars and sale, maintenance and repair of motor vehicles,
2) Polish Lease Prime 1 Designated Activity Company (a subsidiary of PKO Leasing SA) – a special purpose vehicle established for the purposes of securitization of lease receivables.

All of the above-mentioned new companies were subject to prudential consolidation as of 31 December 2019.

In 2019, there was also a merger of Qualia Development sp. z o.o. (the acquiree) with PKO Leasing SA (the acquirer) and the reclassification of Operator Chmury Krajowej sp. z o.o. from a subsidiary to a joint venture.

The Parent Company of the Bank's Group is PKO Bank Polski SA whose share in the consolidated total assets amounts to 90,51%[5].

PKO Bank Hipoteczny SA is a specialist bank operating on the basis of the Act of 29 August 1997 on Mortgage Covered Bonds and Mortgage Banks. It specializes in granting residential mortgage loans to individual customers, and it purchases receivables in respect of such loans from PKO Bank Polski SA. PKO Bank Hipoteczny SA 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 as part of the National Programme and the International Programme.

The PKO Leasing SA Group (i.e. PKO Leasing SA and its subsidiaries) carries out mainly leasing and factoring activities. The companies in the above-mentioned Group operate mainly in the territory of the Republic of Poland, Sweden (PKO Leasing Sverige AB) and Ireland (ROOF Poland Leasing 2014 DAC and Polish Lease Prime 1 DAC).

KREDOBANK SA carries out banking activities in the territory of Ukraine and is subject to Ukrainian banking supervision. KREDOBANK SA is a universal bank oriented towards serving retail customers and enterprises and the customers of companies and enterprises operating mainly in the western part of Ukraine and in Kiev. Furthermore, it strives to attract corporate customers with high creditworthiness.

The company offers services which consist of, among other things: maintaining accounts for natural persons and business entities, collecting deposits, granting loans, sureties and guarantees, leasing, transactions in cheques and bills of exchange, foreign exchange market and securities market operations. In 2012, KREDOBANK SA became the sole shareholder of Finansowa Kompania "Idea Kapitał" sp. z o.o. and established a Group.

The other companies listed in Table 1.2, which form part of the Bank's Group (under prudential consolidation) operate mainly in the territory of the Republic of Poland, Ukraine (Finansowa Kompania "Prywatne Inwestycje" sp. z o.o. and "Inter-Risk Ukraina" an additional liability company) and Sweden (PKO Finance AB).

Through its branches, PKO Bank Polski SA also operates in Germany (PKO Bank Polski SA Niederlassung Deutschland) and the Czech Republic (PKO BP SA Czech Branch).

Detailed information about all of the Bank's subsidiaries, including the information about the Bank's interests in the share capitals of the individual entities is included in the consolidated financial statements of the Bank's Group for the year ended 31 December 2019, which were published on 12 February 2020 (Note 38 Composition of the PKO Bank Polski SA Group and the scope of the activities of the PKO Bank Polski SA).

Within the Bank's Group, there are certain restrictions (described below) on the premature settlement of liabilities by the subsidiaries[6] and with regard to the transfer of funds in the form of dividends:

1) in accordance with the resolution of the Extraordinary General Shareholders' Meeting of KREDOBANK SA of 2009, a moratorium was introduced on dividend payments, the moratorium is valid until the relevant resolution is adopted on lifting it – in 2019, the moratorium on dividend payments remained in force,
2) the strategy for 2017–2020, approved by the Supervisory Board of PKO Bank Hipoteczny SA, does not provide for making any dividend payments during the period covered by the strategy,
3) selected loan agreements signed by the companies in the Bank's Group include covenants concerning restrictions on dividend payments prior to a loan's maturity.

Furthermore, in making decisions on dividend payments, PKO Bank Polski SA and its subsidiaries follow the legal regulations and the PFSA's recommendations. The supervisory expectations regarding capital adequacy measures are described in more detail in the following chapters: "6. Capital buffers" and "9. Capital adequacy" of this Report.

[5] The share was calculated taking into account the consolidated total assets of the companies subject to prudential consolidation before adjustments and consolidation eliminations as of 31 December 2019.
[6] Other than the redemption of bonds or mortgage covered bonds at the request of the issuer before the maturity date.

2. Management system

The management system is a set of principles and mechanisms related to the decision-making processes taking place at the Bank, as well as the assessment of its banking activities. The Bank's management system comprises a risk management system and an internal control system.

2.1. Risk management

Risk management is one of the key internal processes both in PKO Bank Polski SA, including the Bank's foreign branches, and in the other entities in the Bank's Group. The objective of risk management is to ensure that profitable business activities are conducted, while ensuring control of the risk level and keeping it within the risk tolerance and the system of limits adopted by the Bank and the Bank's Group, in the changing macroeconomic and legal environment. The expected risk level is an important factor in the planning process.

The objectives of managing risk by striving to maintain the risk level within the accepted tolerance level are:
1) to protect the value of the shareholders' capital,
2) to protect customer deposits,
3) to support the Bank's Group in conducting effective operations.

The objectives of risk management are achieved, in particular, by providing appropriate risk information so that decisions can be made with full awareness of the individual types of risk they carry.

Risk management in the Bank's Group is based, in particular, on the following principles:
1) the Bank's Group manages all the identified risk types,
2) the risk management process is adequate to the scale of operations and the materiality, scale 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 (in particular, the models and their assumptions) and the risk measurement or assessment systems are tailored to the scale and complexity of a risk, the present and planned activities, and the environment, and they are reviewed and validated periodically,
4) the risk management area is organizationally independent of the business activities,
5) risk management is integrated with the planning and controlling systems,
6) the risk level is monitored and controlled on an ongoing basis,
7) the risk management process supports the pursuit of the Bank's Strategy while remaining in compliance with the risk management strategy, in particular with regard to the risk tolerance level.

The risk management process in the Bank's Group consists of the following elements:
1) risk identification – which consists of recognizing both current and potential sources of risk and assessing the materiality of its potential impact on the activities of the Bank and the Bank's Group. The assessment of risk materiality and the analysis of the impact of individual risk types on the business operations of the Bank and the 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 type, determining whether the analysed risk type 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, the risk of foreign currency mortgage loans to households, foreign exchange risk, interest rate risk, liquidity risk, including financing risk, operational risk, business risk, macroeconomic risk and model risk. For the risk types which have been recognized as material, the method of estimating internal capital is determined at the next stage. For the risk types recognized as being subject to monitoring in the Bank and the entities in the Bank's Group, the current values of materiality ratios and their thresholds are compared semi-annually and annually. The entities in the Bank's Group may consider other risk types to be material in these entities, taking into account the specific nature and scale of their operations and the market in which an entity operates. For these risk types, the Bank verifies the risk materiality at the Bank's Group level. The entities in the Bank's Group participate in assessing the materiality of risk types, which is initiated by the parent 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 action is taken.

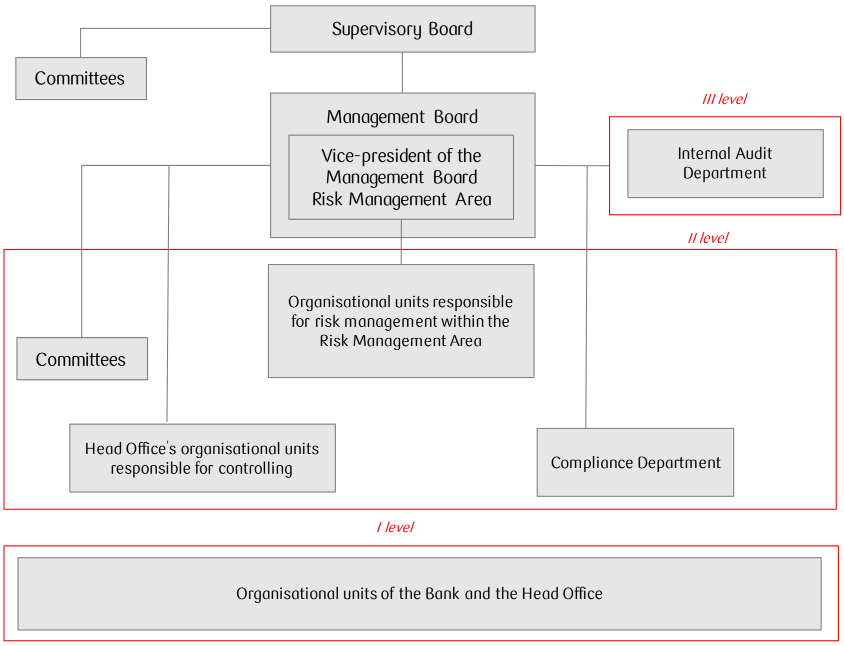
4) risk forecasting and monitoring – which consists of preparing risk level forecasts on a regular basis and monitoring deviations of the actual values from the forecasts or the assumed points of reference (e.g. limits, thresholds, plans, prior period measurements, recommendations and guidance issued by an external supervisory and control authority), as well as conducting specific, reverse and comprehensive stress tests. Risk level forecasts are subject to verification. Risk is monitored at a frequency adequate to the materiality of a given risk type and its volatility.

5) risk reporting – which consists of regularly informing the Bank's bodies of the results of risk measurement or risk assessment, the activities undertaken and the recommended activities. The scope, frequency and form of reporting are tailored to the management level of the addressees. 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 event of material operating events or security incidents occurring.

6) management actions – which consist, in particular, of issuing internal regulations that shape 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. Management actions are aimed at shaping the risk management process and influencing the risk level.

Risk management in the Bank takes place in all the Bank's units.

Scheme 2.1. Bank's risk management organisation



The 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 and on the key risk management activities.

The Supervisory Board is supported by the following committees, including:
1) Appointments and Remuneration Committee of the Supervisory Board (SBARC),
2) Risk Committee of the Supervisory Board (SBRC),
3) Audit Committee of the Supervisory Board (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 SA Group. The SBARC is described in more detail in Chapter "10. 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, as expressed, in particular, in the strategic limits of tolerance to individual risk types, formulating opinions on solutions related to mitigating the risk of its operations, 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 entity authorized to audit financial statements. The SBAC also supports the Supervisory Board by monitoring the effectiveness of the internal control system and the operations of the Internal Audit Department and the Compliance Department as well as monitoring the effectiveness of the risk management system, in particular by analysing the information received from the Risk Committee.

In 2019, 6 meetings of the SBRC and 9 meetings of the SBAC took place.

As far as risk management is concerned, the Management Board is responsible for strategic risk management, including supervising and monitoring the activities undertaken by the Bank in the area of risk management. The Management Board takes the key decisions affecting the Bank's risk profile and adopts the Bank's internal regulations concerning risk management.

The following committees working within the Bank support the Management Board in risk management:
1) Risk Committee (RC),
2) Assets & Liabilities 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 principles in compliance with the Bank's strategy, and it analyses and evaluates the application of the strategic risk tolerance limits defined in the Risk Management Strategy of PKO Bank Polski SA and the Bank's Group. The RC supports the Management Board in the risk management process by formulating recommendations and making decision on capital adequacy and the effectiveness of the risk control system. In 2019, seven meetings of the Risk Committee took place.

The ALCO manages the Bank's assets and liabilities by influencing the structure of the Bank's balance sheet and 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 both settlement and pre-settlement credit risk of wholesale market transactions. In 2019, the ALCO made decisions by circulation and at 23 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. In 2019, the BCC made decisions by circulation and at 74 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 in the Bank's Group, which are forwarded as part of the Bank's corporate governance of those entities. In 2019, the ORC made decisions by circulation and at 12 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 risk management system is implemented on three independent complementary levels:

1) the first level comprises organizational structures responsible for product management, sales of products and customer support as well as other structures which carry out risk-generating operating tasks and which function based on internal regulations. This function is performed in all of the Bank's organizational units and the entities in the Bank's Group. The Bank's units implement appropriate risk controls (in particular limits) which have been designed by the Bank's units situated on the second level, and ensure compliance with such limits through appropriate controls. Furthermore, the entities in 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 entities in the Bank's Group, 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 specialized organizational 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 undertaking activities aimed at eliminating adverse deviations from the financial plan with regard to amounts affecting the quantitative strategic risk tolerance limits included in the financial plan. This function is carried out, in particular, in the Risk Management Area, Compliance Department and the relevant committees,
3) the third level comprises the internal audit which conducts independent audits of the elements of the Bank's management system, including the risk management system and the internal control system, the internal audit operates separately from the first and second levels and may support the activities carried out there through consultations but it may not affect any of the decisions taken. This function is carried out in accordance with the Bank's internal regulations concerning the principles of the functioning of the internal control system.

The independence of the levels consists of remaining organizationally separate in the following areas:

1) the second level function as regards the development of system solutions is independent of the first level function,
2) the third level function is independent of the first and second level functions,
3) the compliance risk management function reports to the President of the Management Board.

In 2019, the Bank's units responsible for managing material risk and other risks identified in the Bank's operations, within the scope of their respective competencies, were situated in: the Banking Risk Division, Corporate Receivables Department, Restructuring and Debt Collection Centre, 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 the Compliance Department supervised by the President of the Management Board responsible for the Area of 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) identifying risk factors and sources of risk,
2) measuring, assessing, controlling as well as monitoring and reporting the risk level 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 designed to support risk and capital adequacy management,
8) coordinating the implementation of coherent risk management standards in the Bank's Group,
9) validating models used in risk management.[7]

The Corporate Receivables 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 manner of recovering such receivables,
2) cooperating with the entities in the Bank's Group in assessing customer or transaction risk and developing a strategy for dealing with non-performing receivables from the same customers,
3) preparing proposals for outsourcing the collection or sale of non-performing receivables,
4) foreclosing property as a result of the collection of receivables,

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

5) reviewing and classifying the receivables managed by the Department and the off-balance sheet liabilities granted, and determining the amounts of write-downs for impairment related to the risk of the Bank's operations.

The Restructuring and Debt Collection Centre is responsible for, in particular:

1) developing systemic solutions, including the Bank's internal regulations, applications and tools supporting the restructuring and debt collection process and the process of monitoring delays in repayment,
2) recovering receivables through their restructuring and collection, as well as improving the effectiveness of such activities,
3) outsourcing the monitoring and debt collection activities and managing the property foreclosed as a result of collecting the Bank's receivables, as well as the effective sale of receivables,
4) intervention measures as part of monitoring delays in the collection of receivables from individual and institutional customers of the Retail Market Area.

The Retail Customer Credit Risk Centre is responsible for, in particular:

1) designing and shaping an effective credit risk assessment system related to financing customers served within the Retail Market Area and the Enterprise Banking Area, Analysis Area and Administration, including credit risk assessment models, the Bank's internal regulations regarding credit risk assessment policies and methodologies as well as tools that support processes,
2) assessing and taking credit risk within the powers granted, and monitoring the customer and transaction credit risk.

The Corporate Customer Credit Risk Centre is responsible for, in particular:

1) assessing and taking credit risk within the powers granted, and monitoring the customer and transaction credit risk,
2) improving and streamlining lending processes and the IT tools used in carrying out the tasks,
3) developing an effective corporate customer risk assessment system that ensures an adequate level of the cost of risk,
4) designing and shaping the credit policy assumptions for customers' credit portfolios, including industry-related assumptions, and measuring the risk parameters of corporate portfolios,
5) managing the Bank's exposure concentration risk.

The Compliance Department, in the field of risk management, is responsible in particular for:

1) compliance risk management,
2) conduct risk management,
3) reputational risk management,
4) organization and monitoring of control functions.

The Bank supervises the functioning of the individual entities in the Bank's Group. As part of such supervision, the Bank supervises their risk management systems and supports their development, and it also takes into account the level of risk of the activities of the individual entities as part of the risk monitoring and reporting system at the Bank's Group level.

The policies and manner of assessment of individual risk types in the entities in the Bank's Group are defined in the internal regulations introduced by those entities. The entities in the Bank's Group develop and update their internal regulations concerning the management of individual risk types after consulting the Bank and taking into account the recommendations formulated by the Bank as well as the provisions of the Risk Management Strategy of PKO Bank Polski SA and the Bank's Group. The internal regulations of the entities in the Bank's Group, concerning risk management, take into account:

1) the principle of consistency and comparability of the assessment of individual risk types in the Bank and the entities in the Bank's Group,
2) the scopes and types of relationships between the entities in the Bank's Group,
3) the specific nature and scale of operations of an entity in the Bank's Group and the market in which it operates,
4) the risk types managed by the entities in the Bank's Group, arising from the specific nature of their operations.

At least once a year, the Bank's entities in the Banking Risk Division and the Compliance Department review the Risk Management Strategy of PKO Bank Polski SA and the Bank's Group, including, in particular, the strategic risk tolerance limits, in order to tailor them to the current and forecasted market conditions and the needs of the Bank and the Bank's Group. In justified cases resulting from significant changes in macroeconomic conditions or on the basis of 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 entities in the Bank's Group, risk management is supervised, in particular, by involving the Bank's units in 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 entities in the Bank's Group in accordance with the Bank's separate internal regulations. At least once a year, a list of the key entities in the Bank's Group is drawn up, which have a significant impact on the risk profile of the Bank's Group. For those entities, the Bank's units in the Risk Management Area and the Compliance Department, in accordance with the Bank's separate internal regulations, formulate an opinion on the approach to strategic tolerance limits for the risks specific to a given entity and the manner of reporting them.

The priority of the Bank's Group is to maintain its strong capital position, including managing capital adequacy in an effective manner, to support Polish enterprises, customer satisfaction, innovations, involvement in creating new market standards, 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. To this end, the following activities were carried out in 2019:

1) In 2019, the risk of foreign currency mortgage loans to households was considered material.
2) In 2019, the PKO Bank Polski SA Group decreased its portfolio of issued short-term bonds (mainly 3–6 month bonds) from PLN 4.1 billion as at the end of 2018 to PLN 3.7 billion as at the end of 2019,
3) In September 2019, PKO Leasing carried out the largest asset securitization on the domestic market. The transaction consisted of selling a portfolio of high quality lease receivables totalling PLN 2.5 billion,
4) In 2019, the Group repaid early the financing received from the European Investment Bank, it also redeemed its own issues maturing under the EMTN programme, and it paid an instalment of the loan from the Council of Europe Development Bank,
5) In 2019, PKO Bank Hipoteczny SA conducted two issues of PLN mortgage covered bonds addressed to institutional investors with a total nominal value of PLN 500 million and maturing within approx. 5 years of the issue date. The institutions which purchased the mortgage covered bonds

included both domestic and foreign investors. The mortgage covered bonds issued by PKO Bank Hipoteczny SA are one of the safest debt instruments on the Polish financial market. As a result, Moody's has awarded them the highest possible rating available to Polish securities, namely Aa3. Moreover, in 2019 PKO Bank Hipoteczny SA conducted issue of EUR denominated mortgage covered bonds addressed to institutional investors with a nominal value of EUR 600 million and maturing within approx. 3 years of the issue date and the issue of the second tranche of series 1 mortgage bonds of 2016 with a nominal value of EUR 100 million,

6) After obtaining the relevant approvals from the PFSA, the Bank's Group recognized the Group's net profit for the first half of 2019, less the expected charges, of PLN 1,038 million,
7) Within the Bank's Group, the portfolios of mortgage loans previously granted by PKO Bank Polski SA are gradually transferred to PKO Bank Hipoteczny SA. The value of the portfolio transferred in 2019 amounted to PLN approx. PLN 2.7 billion,
8) The transactions conducted in 2019 within the Bank's Group with the related entities and the related parties of the Bank's Group had no 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 types of risk, 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 profit and loss account, 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. Calculations are performed using the Bank's internal models, taking into account the macroeconomic assumptions made. The data is analysed with a high degree of detail, taking into account the segmentation into portfolios and product types.

Comprehensive stress tests comprise periodical and supervisory tests. Periodical tests are performed on an annual basis, over a three-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 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 requirements 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 risk types:
1) credit and concentration risk,
2) market risk,
3) liquidity risk,
4) operational risk,
5) business risk,
6) leverage risk.

Reverse stress tests (RSTs) complement the results of comprehensive stress tests and are aimed at evaluating 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 materialization.

2.3. Internal control

The Bank has an internal control system in place, which forms part of the Bank's management system. The Bank's Management Board is responsible for its design, implementation and functioning. The Supervisory Board supervises the implementation and functioning of the internal control system and regularly monitors and evaluates its adequacy and effectiveness, including the control function, the compliance unit, and the internal audit unit. The internal control 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 control system. In this regard, the Bank's Supervisory Board is supported by the Audit Committee of the Supervisory Board which is responsible for, in particular, monitoring the effectiveness of the internal control system.

The objectives of the internal control system are to ensure:
1) effectiveness and efficiency of the Bank's operations,
2) reliability of the financial reporting,
3) compliance with the risk management policies at the Bank,
4) compliance of the Bank's operations with the generally applicable laws, the Bank's internal regulations, regulatory recommendations and the market standards adopted by the Bank.

The Bank's internal control system is organized at three independent levels:
1) the first level consists of the Bank's organizational structures conducting operating activities, in particular: the sales of products and customer service, and the Bank's other organizational structures carrying out risk-generating operating tasks and functioning on the basis of the Bank's separate internal regulations,
2) the second level consists of the operations of the compliance unit and the identification, measurement, control, monitoring and reporting of individual risk types, as well as any threats and irregularities identified. These tasks are performed by specialized organizational structures operating on the basis of the applicable rules, methodologies and procedures, the objective of these structures is to ensure that the operations carried out on the first level are properly designed and that they mitigate risk in an effective manner and support the measurement and analysis of risk and business effectiveness,
3) the third level is represented by the operations of the internal audit unit which performs independent audits of the elements of the Bank's management system, including the risk management system and the internal control system, internal audit functions separately from the first and second levels.

Within the internal control system, the Bank has the following separate elements:
1) control function,
2) compliance unit,
3) independent internal audit unit.

The control function ensures compliance with the controls relating to, in particular, the risk management at the Bank and covers all of the Bank's units and the organizational positions within these units which are responsible for carrying out the tasks assigned to this function.

The control function comprises:
1) controls,
2) independent monitoring of controls,
3) reporting.

The Bank determines and the Management Board approves a list of material processes which have a material impact on the achievement of the objectives of the internal control system and the Bank's business objectives and ensures periodical reviews of the processes in place at the Bank, regarding their materiality.

Controls are embedded in the processes in place at the Bank and in the applications which support these processes. These controls are tailored to the objectives of the internal control system and to the specific nature of the operations conducted by the Bank. These controls are subject to independent monitoring, including a periodical evaluation of their adequacy and effectiveness.

The compliance unit is a separate, independent unit which plays the key role in ensuring compliance and managing compliance risk understood as the risk of 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 objective of the compliance unit is to shape the solutions to ensure compliance and manage compliance risk, as well as the identification, assessment, control, monitoring and reporting of such risk within the Bank.

Internal audit is an independent and objective assurance and advisory activity consisting of a systematic and orderly assessment of the individual areas of the Bank's operations and identifying operating directions which contribute to improving 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 control system at the first and second levels of the internal control 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 processes in the Bank.

At the Bank, the following mechanisms are in place to ensure the 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 and the Supervisory Board,
2) direct 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 organizational units situated at the second level of the internal control system,
5) providing the directors of the said units with direct access to the members of the Management Board and the Supervisory Board,
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 control system or risk management,
8) the director of the internal audit unit is appointed and dismissed and his remuneration is determined with the consent of the Supervisory Board, following a hearing,
9) the director of the compliance unit is appointed and dismissed following the acceptance by the Supervisory Board, with dismissal being preceded by a hearing,
10) approval of the amount of remuneration (including bonuses) of the director of the compliance unit 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 performance,
11) informing the PFSA of any changes of the directors of the said units, including the reasons for those changes,
12) providing the employees of the said units with access to all necessary information (including confidential and sensitive information), rooms and IT systems (without the possibility of interference in the system's resources), as well as communication with the Bank's employees, to the extent they deem necessary to perform their duties,
13) non-participation of the employees of the said units in the performance of day-to-day business tasks,
14) providing solutions for controlling the remuneration of employees of the said 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 the employees of the said units from unjustified termination of their employment,
16) organizational separation of the said units and preventing the employees of these units from performing any duties other than those assigned to them,
17) providing the financial resources necessary for the effective performance of tasks and the systematic improvement of the skills and qualifications of employees of the said units.

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

On the Bank's website (www.pkobp.pl), the Bank has placed a description of the internal control system which takes into consideration, in particular, a description of: the objectives of the internal control 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 control system is organized, the individual elements of the internal control system, i.e. the control function, the compliance unit, and the internal audit unit.

The entities in the Bank's Group have internal control systems which are tailored to the specific nature and character of the operations of these entities. These entities create and introduce internal regulations in which they specify, in particular, tasks relating to the control activities carried out within the internal control system and the division of responsibility for these tasks. The manner in which the internal control systems function in the companies is dependent on the scale and type of operations of the entities in the Bank's Group. In most of the entities, there are separate organizational units or positions which perform these functions, reporting directly to a given entity's Management Board or Supervisory Board. In cases justified by an entity's operating profile and its organizational structure (small entities with a limited range of activities), control activities are performed by their managers, without a structurally separated function or internal control unit.

2.4. Assessment of members of the management body

The members of the Management Board are assessed by the Supervisory Board, starting from the time of recruitment, throughout the term of office.

The members of the Management Board are selected and assessed on the basis of the following regulations of the Supervisory Board:

1) the policy on the suitability of the members of the Management Board and key function holders at the Bank and in the companies in the Bank's Group,
2) the rules and procedure for assessing the suitability of candidates for members of the Bank's Management Board and the members of the Bank's Management Board.

An assessment of the suitability of the members of the Bank's Management Board is carried out by the Appointments and Remuneration Committee of the Supervisory Board (SBARC), by accepting a relevant assessment report. The sources of data for the report include, among other things, 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 other sources of information. The report is forwarded to the Bank's Supervisory Board which, when this is required by the regulations and the guidelines of the supervisory authorities, informs the PFSA of the results of the suitability assessments made.

The verification of suitability of the members of the Management Board 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 recruitment procedure before appointing a Management Board member, and as a periodic assessment carried out once a year for persons already holding these positions.

The assessment of suitability takes into account the criteria arising from the respective guidelines issued by national or European supervisory authorities, as well as the requirements set out in the generally applicable laws, while focusing primarily on the assessment of the qualifications of the person concerned, which are understood as knowledge, experience and skills in the field of the relevant position, as well as in the field of Bank management rules, the structure of the Bank's Group and the related potential conflicts of interest, as well as reputation understood as a sufficiently good opinion. 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.

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 level of knowledge, skills and experience in the context of the nature and scope of the Bank's operations and significant risks of such operations, considering the ability of the Bank's Management Board as a whole to manage the Bank.

In selecting the members of the Management Board, the principle of diversification of the members of the Management Board and the principles of succession management are taken into account. These principles are to ensure the continuity of decision making and an appropriate selection of the members of the Management Board in order to reach a wide range of competencies, knowledge and skills adequate to the position, which guarantee that the members of the Management Board will, individually and as a body, issue and make high quality independent opinions and decisions relating to the entire range of the Bank's operations. When assessing suitability, the Supervisory Board strives to achieve a gender balance in the composition of the Management Board. However, the objectives of diversification in the composition of the Management Board are taken into account in the selection process only to the extent that it does not adversely affect the functioning and suitability of the Management Board. More information on diversity is included in the Group Directors' Report of PKO Bank Polski SA for 2019, prepared together with the Directors' Report of PKO Bank Polski SA for 2019, published on 12 February 2020 (10. Corporate Governance, 10.4 Diversity Policy).

In the course of the Management Board members carrying out their functions, pursuant to Article 395(2)(3) of the Commercial Companies Code, the Annual General Meeting acknowledges the fulfilment of duties by each member of the Management Board once a year. The acknowledgement of the fulfilment of duties represents a positive assessment of these people's work, irrespective of the approval of the Directors' Report by the Annual General Meeting, whereas the absence of such acknowledgement represents a negative assessment of a Management Board member's work and, in consequence, may lead to his or her dismissal from a company's body.

On 12 August 2019, the periodic assessment of the suitability of the members of the Bank's Management Board was completed. As a result of the said process, it was found that each member of the Management Board meets the suitability requirements individually, and that the Management Board meets the collective suitability requirements as a body.

At December 31, 2019, there were 11 members of the Supervisory Board and 9 members of the Management Board, as at that date all members of the Bank's Management Board and the Supervisory Board met the requirements specified in Article 22aa of the Banking Act.

2.5. Credit risk

2.5.1. Introduction

Credit risk is understood as the risk of incurring losses as a result of a customer defaulting on his or her liabilities to the Bank's Group, as the risk of a decrease in the economic value of the receivables of the Bank's Group as a result of the deterioration of a customer's ability to service his or her liabilities or as the risk of incurring losses as a result of changes of the valuation (CVA).

The objective of credit risk management is to reduce losses on the loan portfolio and losses due to changes in CVA as well as to minimize the risk of the occurrence of non-performing loan exposures 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 in the Bank's Group are mainly guided by the following principles of credit risk management:
1) a lending transaction requires a comprehensive credit risk assessment expressed as an internal rating or a credit scoring,
2) credit risk related to lending transactions is measured at the time of examining an application for a transaction and on a regular basis, during the monitoring process, taking into consideration changes in external conditions and in the financial standing of 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) a lending transaction's terms and conditions offered to a customer are dependent on the assessment of the level of the credit risk generated by the transaction,
5) lending decisions may be made only by authorized 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 accepted by the Bank to minimize 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 his or her liabilities to the Bank in respect of a foreign currency mortgage loan. The Bank considers this risk to be material.

2.5.2. Risk identification

The identification of credit risk consists of recognizing 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 credit risk level in the operations of the Bank's Group as well as estimating their potential impact on the operations of the Bank's Group.

Credit risk identification covers 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 risk related to foreign currency and PLN credit exposures. The assumptions for conducting stress tests ensure a reliable measurement or estimation of credit risk in the Bank's Group.

The measurement, estimation and assessment of the portfolio credit risk involves a regular assessment of that risk, taking into account the total credit exposures of the customers, as well as different aspects of the portfolio, such as customer groups and lending product groups.

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 Loss (EL),
5) Credit Value at Risk (CVaR),
6) the share and structure of non-performing credit exposures,
7) the coverage ratio of impaired loans (Coverage Ratio),
8) credit risk cost,
9) stress testing.

PKO Bank Polski SA systematically 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 method.

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 in the Bank's Group takes into account the requirements of the Polish Financial Supervision Authority, as set out in the PFSA's Recommendations. The Bank conducts analyses and stress tests, taking into account, in particular, the PFSA's Recommendations S, T and C. 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 loan portfolio, and their results are presented in reports for the Bank's governing 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 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 such methods is supported by specialist IT applications. The manner of credit risk assessment 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 process of credit risk assessment at the Bank takes into account the PFSA's requirements set out in Recommendation 'S' on Good Practices in Management of Mortgage-Secured Credit Exposures and Recommendation 'T' on Good Practices in Management of Retail Credit Exposure Risk.

The Bank assesses the credit risk of individual 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 concerns low-value, non-complex lending transactions and is performed in two perspectives: a customer's credit standing and creditworthiness. The assessment of credit standing consists of examining the customer's ability to settle its 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 measures of this assessment are the assessment of the customer's creditworthiness, i.e. credit rating, and the assessment of 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, which ensures that they are tailored to the risk profile 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 periodic 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 powers 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, implementing credit risk controls to reduce the level of that risk and complying with controls as part of credit risk management, both in lending processes and at portfolio level.

The set strategic credit risk tolerance limits and internal credit risk limits are the main tools for controlling credit risk at the level of the Bank and the Bank's Group.

The strategic credit risk tolerance limits define the maximum amount of credit risk which the Bank or the Bank's Group is willing to take. The strategic credit risk tolerance limits are set out in a risk management strategy. The internal credit risk limits include:
1) limits which define the appetite for portfolio credit risk,
2) industry limits, and
3) competence limits.

The Bank and the Bank's Group set limits which define the appetite for portfolio credit risk in terms of, in particular:
1) exposures to customers operating in industry segments,
2) mortgage-secured credit exposures,
3) exposures to customer groups (segments),
4) loan portfolio quality,
5) exposure to individual types or groups of products,
6) the maximum and individual ratios of the expenditures related to servicing loan and financial liabilities to individual customers' income,
7) duration of a lending transaction,
8) exposure generated by the manner (channels) of distribution of loan products.

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 competence limits which define 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 competencies for these levels, as referred to in the Bank's internal regulations concerning the segregation of competencies to make lending decisions. As part of monitoring the competence limits, the Bank verifies, in particular, the level of the lending competencies of the authorized persons and the validity of the lending competence certificates awarded to these persons. The tasks referred to above are supported by an IT application.

The Bank and the entities in the Bank's Group monitor and control the utilization of strategic credit risk tolerance limits and the limits defining the appetite for portfolio credit risk as well as industry-related 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 SA, respectively. Where the level of utilization 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

Credit risk forecasting and monitoring consists of preparing credit risk level forecasts and 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 manner,
3) identification of groups of related entities,
4) evaluation of collateral and inspection of real estate and investment projects,
5) recognizing 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 and develops an EWS IT application as well as scoring models used for behavioural assessment.

Monitoring credit risk at portfolio level consists of:
1) supervising the portfolio credit risk level on the basis of the adopted credit risk measurement tools, taking into account the identified sources of credit risk and the analysis of the effects and measures taken as part of systemic management,
2) recommending remedial measures if an increased credit risk level is detected.

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 loan portfolios exposed to a single risk factor.

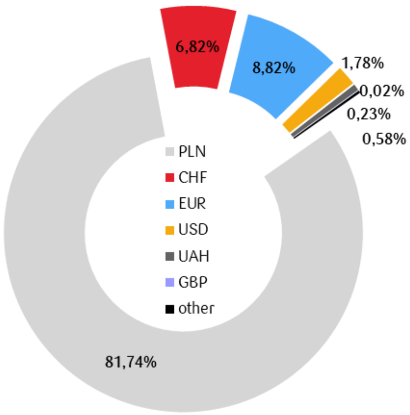
The risk of concentration of exposures to individual customers and groups of related customers is monitored in relation to the exposure concentration limit, where the total individual exposure may not exceed 25% of consolidated own funds.

In the process of monitoring the concentration of exposures at entity level, the Bank takes into account:
1) the daily monitoring of the level of concentration of large exposures within the meaning of Article 392 of the CRR (if an exposure reaches or exceeds 10% of the Bank's capital, the Bank immediately informs the PFSA),
2) a monthly check of the utilization of the limits arising from Article 395(1) of the CRR and 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 regions,
2) currencies,
3) industries,
4) mortgage-secured credit exposures,
5) the largest entities,
6) the largest groups.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Chart 2.1. Currency structure of the (on-balance-sheet and off-balance-sheet) loan portfolio



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 48.3% as at the end of 2019, which represents a 0.2% increase compared with the end of 2018. Another group of foreign currency loans are loans in CHF which represented 37.4% of the Group's foreign currency portfolio as at the end of 2019, which represents a 4.5% drop compared with the end of 2018.

Table 2.1. Exposures to 10 largest clients

No.	2019		2018	
	Value*	Own funds percentage	Value*	Own funds percentage
1	3 793	9,6%	2 859	7,6%
2	3 753	9,5%	2 777	7,3%
3	2 900	7,4%	2 710	7,2%
4	2 718	6,9%	2 274	6,0%
5	2 679	6,8%	2 169	5,7%
6	2 584	6,6%	1 899	5,0%
7	2 453	6,2%	1 898	5,0%
8	2 271	5,8%	1 669	4,4%
9	1 793	4,5%	1 539	4,1%
10	1 548	3,9%	958	2,5%
Razem	26 490	67,2%	20 752	54,8%

*Value understood as total (on-balance sheet and off-balance sheet) exposure to non-banking customers, which is the basis for comparison with the exposure concentration limit. The chart does not contain any items which are excluded from the concentration limit.

As at 31 December 2019 and as at 31 December 2018, the concentration limits were not exceeded. As at 31 December 2019, the largest exposure to a single entity amounted to 9,6% of consolidated own funds.

As at 31 December 2019, the largest concentration of the exposure of the Bank's Group to a group of related entities within the meaning of the Banking Law accounted for 11,7% of consolidated own funds.

Table 2.2. Exposure to 5 largest groups*

No.	2019		2018	
	Value	Own funds percentage	Value	Own funds percentage
1	4 593	11,7%	3 683	9,7%
2	3 839	9,7%	3 160	8,3%
3	3 591	9,1%	2 863	7,6%
4	3 183	8,1%	2 446	6,5%
5	2 912	7,4%	2 280	6,0%
Razem	18 118	46,0%	14 432	38,1%

*Total (on-balance sheet and off-balance sheet) exposure to non-banking customers, which is the basis for comparison with the exposure concentration limit

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 2.3. Geographical breakdown of exposures [template EU CRB-C]

		2019														
		a)	b)	c)	d)	e)	f)	g)	h)	i)	j)	k)	l)	m)	n)	o)
		Net value														
		Poland	Luxembourg	United Kingdom	Germany	Austria	Spain	Switzerland	Norway	Netherlands	France	USA	South Korea	Other countries	0	Total
1	Central governments or central banks	74 464	0	0	0	0	0	0	0	0	0	0	0	0	507	**74 970**
2	Regional governments or local authorities	12 165	0	0	0	0	0	0	0	0	0	0	0	0	0	**12 165**
3	Public sector entities	3 266	0	0	0	0	0	0	0	0	0	0	0	0	0	**3 266**
4	Multilateral development banks	1 064	3	0	0	0	0	0	0	0	0	0	0	0	0	**1 068**
5	International organisationse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6	Institutions	5 330	10	951	407	907	6	540	21	108	322	347	345	692	181	**10 166**
7	Corporates	80 633	1 880	0	563	0	682	17	505	283	58	0	0	820	953	**86 392**
8	Retail	83 205	0	5	5	0	0	1	1	1	0	1	0	86	1 362	**84 667**
9	Secured by mortgages on immovable property	106 592	1	58	16	0	1	7	6	3	6	3	1	30	174	**106 897**
10	Exposures in default	6 109	0	10	0	0	0	0	0	0	0	0	0	31	53	**6 204**
11	Items associated with particularly high risk	3 110	0	0	0	0	0	0	0	0	0	0	0	0	0	**3 110**
12	Covered bonds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
13	Claims on institutions and corporates with a short-term credit assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	Collective investments undertakings	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
15	Equity exposures	910	0	0	0	0	0	0	0	0	0	0	0	0	0	**910**
16	Other exposures	16 175	0	0	0	0	0	0	0	0	0	0	0	0	280	**16 455**
17	**Total standardised approach**	393 025	1 894	1 024	990	907	689	565	532	395	385	351	345	1 659	3 510	**406 272**
18	**Total**	**393 025**	**1 894**	**1 024**	**990**	**907**	**689**	**565**	**532**	**395**	**385**	**351**	**345**	**1 659**	**3 510**	**406 272**

The exposures secured with a mortgage on real estate, shown in the table under item 9, include retail exposures and exposures to enterprises, up to the amount effectively secured with mortgages on real estate.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 2.4. Concentration of exposures by industry [template EU CRB- D]

		2019																			
		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Transportation and storage	Accommodation and food service activities	Information and communication	Financial and insurance activities	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence; compulsory social security	Education	Human health and social work activities	Arts, entertainment and recreation	Other activities	Total
1	Central governments or central banks	0	0	0	0	0	0	0	0	0	0	188	0	0	0	58 874	0	0	0	15 907	**74 970**
2	Regional governments or local authorities	0	0	0	0	17	0	0	0	0	0	0	0	29	55	11 952	0	0	0	111	**12 165**
3	Public sector entities	0	0	0	0	3	0	0	0	0	0	0	0	2 505	0	4	162	533	56	2	**3 266**
4	Multilateral development banks	0	0	0	0	0	0	0	0	0	0	1 064	0	0	0	0	0	0	0	3	**1 068**
5	International organisationse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
6	Institutions	0	0	0	0	0	0	0	0	0	0	5 710	0	0	0	0	0	0	0	4 455	**10 166**
7	Corporates	452	2 529	21 309	9 693	933	4 063	9 208	209	339	4 829	8 941	5 739	8 657	1 397	21	26	662	651	6 734	**86 392**
8	Retail	15	94	596	37	117	1 331	2 359	4 031	456	78	300	4 966	92	133	98	70	244	55	69 593	**84 667**
9	Secured by mortgages on immovable property	99	175	2 948	73	87	706	1 742	157	370	86	17 000	1 586	111	93	0	104	185	38	81 336	**106 897**
10	Exposures in default	41	79	1 415	187	9	355	752	296	488	29	79	459	66	38	3	32	18	24	1 835	**6 204**
11	Items associated with particularly high risk	0	0	0	0	0	1 866	14	0	1	0	0	319	5	0	0	0	0	0	905	**3 110**
12	Covered bonds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
13	Claims on institutions and corporates with a short-term credit assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
14	Collective investments undertakings	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	**3**
15	Equity exposures	0	0	4	0	0	1	0	0	0	0	13	0	0	0	0	0	0	0	892	**910**
16	Other exposures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16 455	**16 455**
17	**Total standardised approach**	608	2 876	26 272	9 991	1 167	8 321	14 076	4 693	1 652	5 022	33 300	13 069	11 466	1 716	70 952	394	1 643	823	198 230	**406 272**
18	**Total**	**608**	**2 876**	**26 272**	**9 991**	**1 167**	**8 321**	**14 076**	**4 693**	**1 652**	**5 022**	**33 300**	**13 069**	**11 466**	**1 716**	**70 952**	**394**	**1 643**	**823**	**198 230**	**406 272**

2.5.9. Impairment of loan 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 which are not measured at fair value through profit or loss, including:
1) debt financial instruments comprising credit exposures and securities,
2) lease receivables,
3) off-balance sheet financial and guarantee commitments.

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

Impairment losses on credit exposures are measured as 12-month or lifetime expected credit losses on an asset. The horizon of the measurement of an expected loss is dependent on whether credit risk has increased significantly from the moment of the initial recognition of the asset. Due to this criterion, financial assets are allocated to 4 Stages:
1) Stage 1 – assets in the case of which credit risk is not significantly higher than the credit risk on the date of their initial recognition, and no indication of impairment has been recognized for them,
2) Stage 2 – assets in the case of which credit risk is significantly higher than the credit risk on the date of initial recognition of the exposure, but no indication of impairment has been recognized for them,
3) Stage 3 – assets for which an indication of impairment has been recognized,
4) Stage 4 – assets granted or purchased with an indication of impairment recognized (on the date of granting or purchasing).

In order to assess a significant increase in the credit risk of mortgage exposures and others 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 a significant increase in risk for a given exposure based on the comparison of probability-of-default curves over the exposure horizon as at the date of initial recognition and as at 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 curve of the maximum acceptable deterioration of credit quality over time, which is not identified as a significant increase in credit risk, is calculated on the basis of probabilities of default estimated based on the migration of customers between individual rating and scoring classes.

In order to identify other indications of a material increase in credit risk, the full qualitative and quantitative information available is used, including:
1) forbearance measures providing concessions to a borrower due to his or her financial distress,
2) delinquency in the repayment of a material amount of principal or interest of more than 30 days,
3) a material increase in the probability of insolvency compared with the probability of insolvency on the date of initial recognition of a credit exposure,
4) early warning signals identified during the monitoring process, indicating a significant increase in credit risk,
5) a significant increase in the LTV ratio,
6) an analyst's assessment as part of the individualized analysis process.

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 days,
2) deterioration of a debtor's economic and financial position in the lending period, expressed by his or her classification to 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 recognized as cured),
4) filing a petition in bankruptcy against a debtor, putting the debtor in liquidation or initiating enforcement proceedings against the debtor,
5) declaration of consumer bankruptcy by any of the co-borrowers.

The Bank recognizes changes in the terms and conditions of an agreement, agreed with a debtor or an issuer, forced by the debtor's or the issuer's distress (forbearance measures introducing concessions which otherwise would not be granted) as 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 maximize the effectiveness of non-performing loan management, i.e. obtaining the highest recoveries possible while minimizing the related costs.

Zmiany warunków spłaty dokonywane w ramach forbearance mogą dotyczyć:
1) rozłożenia zadłużenia wymagalnego na raty,
2) zmiany formuły spłaty (raty annuitetowe, raty malejące),
3) wydłużenia okresu kredytowania,
4) zmiany oprocentowania,
5) zmiany wysokości marży,
6) redukcji wierzytelności.

Changes in repayment terms made as part of forbearance may consist of:
1) dividing the past due debt into instalments,
2) changing the repayment formula (annuity instalments, reducing instalments),
3) extending the lending period,
4) changing the interest rate,
5) changing the margin,
6) reducing the debt.

Granting concessions recognized 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 (the Bank ceases to recognize a forbearance agreement as an indication of impairment) after 12 months from the introduction of forbearance, provided that all past due payments and at least six instalments resulting from an agreed schedule have been settled during this period, and a customer's current financial position does not pose, in the Bank's Group opinion, a threat to his or her compliance with the terms and conditions of the forbearance agreement.

Forborne exposures cease to meet the criteria for exposures under forbearance status no earlier than after 24 months from the time this status ceases to be recognized as an indication of impairment, provided that a 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.

Informations about forbearance at the level of the Bank's Group was described in the consolidated financial statements of the Bank's Group for the year ended 31 December 2019 (Note 59).

In portfolio method the expected loss is determined as the product of credit risk parameters: probability of default (PD), loss given default (LGD) and exposure at default (EAD), with each of these parameters having the form of a vector with the number of months covering the credit loss estimation horizon. In the case of exposures classified as Stage 1, the Bank uses a 12-month expected loss estimation horizon at most. In the case of exposures classified as Stages 2, 3 or 4, 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 resulting from past observations. The expected loss both throughout the exposure period and over a 12-month period is the sum of expected losses in individual periods, discounted at the effective interest rate. In order to determine the value of an asset at the time of default in a given period, the Bank adjusts the parameter determining the exposure value at the time of default for future payments according to the repayment schedule and potential overpayments and underpayments.

The calculation of expected credit losses takes into account estimates concerning future macroeconomic conditions. As regards the portfolio analysis, the impact of macroeconomic scenarios is taken into account in the values of individual risk parameters. The methodology of calculation of risk parameters covers examining the dependence of the values of these parameters on 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 scope of the forecasted 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 average of the expected losses corresponding to the individual scenarios, weighted by the probability of the scenarios. The Bank's Group ensures the compliance of the macroeconomic scenarios used for calculating risk parameters with the macroeconomic scenarios used in credit risk budgeting processes.

In the event of identifying an indication of impairment of individually significant exposures, the expected credit loss on an exposure is determined individually as the difference between its gross carrying amount (in the case of an off-balance sheet credit exposure – the value of its on-balance sheet equivalent) and the present value of expected future cash flows determined taking into account possible scenarios regarding the performance of the agreement and management of the credit exposure, weighted by the probability of their implementation.

The individual measurement of the expected loss is also used for individually significant exposures which do not show any indications of impairment, in the case of which the use of portfolio parameters in the calculations would be unjustified due to the specific nature of the case.

Both the assessment of a material increase in credit risk and the calculation of the expected loss are performed on a monthly basis at individual exposure level. They use a computing environment which makes it possible to distribute the results to the Bank's Group internal units.

The indications for classifying credit exposures as non-performing 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 recognizing the past due status as impairment.

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

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 2.5. Total and average net amount of exposures [template EU CRB-B]

		2019		2018	
		a)	b)	a)	b)
		Net value of exposures at the end of the period	Average net exposures over the period	Net value of exposures at the end of the period	Average net exposures over the period
1	Central governments or central banks	74 970	67 892	66 174	55 572
2	Regional governments or local authorities	12 165	12 220	12 007	10 594
3	Public sector entities	3 266	3 165	2 981	3 011
4	Multilateral development banks	1 068	754	207	179
5	International organisations	0	0	0	0
6	Institutions	10 166	9 730	12 391	11 439
7	Corporates	86 392	87 368	81 542	77 282
8	*Of which: SMEs*	7 477	8 047	8 110	8 025
9	Retail	84 667	84 876	82 758	96 455
10	*Of which: SMEs*	28 436	28 612	28 082	26 853
11	Secured by mortgages on immovable property	106 897	100 216	92 053	73 293
12	*Of which: SMEs*	3 003	1 951	927	932
13	Exposures in default	6 204	6 244	6 708	7 029
14	Items associated with particularly high risk	3 110	1 935	1 108	918
15	Covered bonds	0	0	0	0
16	Claims on institutions and corporates with a short-term credit assessment	0	0	0	0
17	Collective investments undertakings	3	4	5	6
18	Equity exposures	910	869	834	971
19	Other exposures	16 455	16 165	15 572	15 404
20	**Total standardised approach**	406 272	391 438	374 339	352 154
21	**Total**	**406 272**	**391 438**	**374 339**	**352 154**

Table 2.6. Maturity of exposures [template EU CRB- E]

		2019					
		a)	b)	c)	d)	e)	f)
		Net exposure value					
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Central governments or central banks	0	14 679	47 810	12 481	0	**74 970**
2	Regional governments or local authorities	1 725	38	272	10 119	11	**12 165**
3	Public sector entities	2 643	14	125	484	0	**3 266**
4	Multilateral development banks	0	3	0	1 064	0	**1 068**
5	International organisationse	0	0	0	0	0	**0**
6	Institutions	5 347	3 053	1 610	155	0	**10 166**
7	Corporates	41 107	6 924	11 026	22 323	5 012	**86 392**
8	Retail	6 940	15 049	21 519	41 126	33	**84 667**
9	Secured by mortgages on immovable property	1 577	166	1 626	103 527	1	**106 897**
10	Exposures in default	1 096	596	1 089	3 422	1	**6 204**
11	Items associated with particularly high risk	0	39	2 119	47	905	**3 110**
12	Covered bonds	0	0	0	0	0	**0**
13	Claims on institutions and corporates with a short-term credit assessment	0	0	0	0	0	**0**
14	Collective investments undertakings	3	0	0	0	0	**3**
15	Equity exposures	0	0	0	17	892	**910**
16	Other exposures	0	5 642	23	0	10 790	**16 455**
17	**Total standardised approach**	60 438	46 202	87 219	194 766	17 646	**406 272**
18	**Total**	**60 438**	**46 202**	**87 219**	**194 766**	**17 646**	**406 272**

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 2.7 Credit quality of exposures by exposure classes and instruments [template EU CR1-A]

		2019					
		a)	b)	c)	d)	e)	f)
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Accumulated write-offs
		Defaulted exposures	Non-defaulted exposures				(a+b-c-d)
1	Central governments or central banks	0	74 971	1	0	0	74 970
2	Regional governments or local authorities	0	12 180	16	0	0	12 165
3	Public sector entities	0	3 269	3	0	0	3 266
4	Multilateral development banks	0	1 068	0	0	0	1 068
5	International organisations	0	0	0	0	0	0
6	Institutions	0	10 169	4	0	0	10 166
7	Corporates	0	86 723	331	0	0	86 392
8	*of which: SMEs*	0	7 529	52	0	0	7 477
9	Retail	0	85 214	548	0	51	84 667
10	*of which: SMEs*	0	28 708	271	0	3	28 436
11	Secured by mortgages on immovable property	0	107 453	556	0	0	106 897
12	*of which: SMEs*	0	3 064	61	0	0	3 003
13	Exposures in default	10 348	0	4 143	0	1 434	6 204
14	Items associated with particularly high risk	0	3 198	88	0	0	3 110
15	Covered bonds	0	0	0	0	0	0
16	Claims on institutions and corporates with a short-term credit assessment	0	0	0	0	0	0
17	Collective investments undertakings	0	3	0	0	0	3
18	Equity exposures	0	910	0	0	0	910
19	Other exposures	0	16 466	11	0	0	16 455
20	**Total standardised approach**	10 348	401 625	5 701	0	1 484	406 272
21	**Total**	**10 348**	**401 625**	**5 701**	**0**	**1 484**	**406 272**
22	*of which: Loans**	8 783	200 941	4 979	0	1 484	204 746
23	*of which: Debt securities**	0	66 971	4	0	0	66 966
24	*of which: Off-balance-sheet exposures**	483	66 265	135	0	0	66 614

* concerns PKO Bank Polski SA

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Table 2.8. Credit quality of exposures by industry [template EU CR1 B]

	2019					
	a)	b)	c)	d)	e)	f)
	Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Net values (a+b-c-d)
	Defaulted exposures	Non-defaulted exposures				
Agriculture, forestry and fishing	52	602	45	0	10	608
Mining and quarrying	86	2 806	16	0	3	2 876
Manufacturing	1 840	25 048	615	0	116	26 272
Electricity, gas, steam and air conditioning supply	244	9 835	88	0	1	9 991
Water supply; sewerage, waste management and remediation activities	21	1 165	20	0	6	1 167
Construction	626	8 163	468	0	119	8 321
Wholesale and retail trade; repair of motor vehicles and motorcycles	1 252	13 502	678	0	173	14 076
Transportation and storage	240	4 596	143	0	31	4 693
Accommodation and food service activities	713	1 214	275	0	51	1 652
Information and communication	28	5 024	30	0	7	5 022
Financial and insurance activities	58	33 293	50	0	39	33 300
Real estate activities	578	12 722	231	0	15	13 069
Professional, scientific and technical activities	90	11 452	77	0	218	11 466
Administrative and support service activities	77	1 689	50	0	10	1 716
Public administration and defence; compulsory social security	0	70 967	16	0	0	70 952
Education	24	385	14	0	1	394
Human health and social work activities	31	1 636	23	0	6	1 643
Arts, entertainment and recreation	33	809	18	0	2	823
Other activities	4 354	196 717	2 841	0	674	198 230
Total	**10 348**	**401 625**	**5 701**	**0**	**1 484**	**406 272**

The gross carrying amount includes loans and borrowings, shares, bills, bonds, interbank deposits, derivative instruments, other assets and off-balance sheet items. The exposures presented in the table take into account a breakdown by industry, without a breakdown by counterparty type.

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Table 2.8a Credit quality of exposures for the construction sector and the construction-related sector, such as developers, housing communities and cooperatives (according to the internal classification used by the Bank)

	2019				
	a)	b)		c)	d)
	Defaulted exposures	Non-defaulted exposures		Specific credit risk adjustment	Net values
	Gross carrying values of	Gross carrying values of	Off-balance sheet value		(a+b-c)
Construction (including: motorways, streets, bridges, finishing works)	256	870	2 358	194	3 290
Developers	941	7 529	4 538	465	12 544
Housing cooperatives	71	5 425	601	21	6 076

The exposures to the construction sector totalling PLN 3 484 million include on-balance sheet exposures of PLN 1 126 million and off-balance sheet exposures of PLN 2 358 million.

Table 2.9. Credit quality of exposures by geography [template EU CR1-C]

		2019					
		a)	b)	c)	d)	e)	f)
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Net values
		Defaulted exposures	Non-defaulted exposures				(a+b-c-d)
1	Poland	10 204	388 457	5 636	0	1 445	393 025
2	United Kingdom	12	1 014	2	0	0	1 024
3	France	1	386	2	0	0	385
4	South Korea	1	345	1	0	0	345
5	Germany	0	992	2	0	0	990
6	Netherlands	0	396	1	0	0	395
7	Norway	0	534	2	0	0	532
8	Spain	0	689	0	0	0	689
9	USA	0	351	0	0	0	351
10	Switzerland	0	565	0	0	0	565
11	Austria	0	907	0	0	0	907
12	Luksemburg	0	1 900	6	0	0	1 894
13	Other countries	40	1 636	17	0	39	1 659
14	Ukraine	89	3 453	31	0	0	3 510
15	Total	10 348	401 625	5 701	0	1 484	406 272

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 2.10. Ageing of past-due exposures [template EU CR1-D]

		2019					
		a)	b)	c)	d)	e)	f)
		Gross carrying values					
		≤ 30 days	> 30 days ≤ 60 days	> 60 days ≤ 90 days	> 90 days ≤ 180 days	> 180 days ≤ 1 year	> 1 year
1	Loans	3 536	175	120	425	615	4 396
2	Debt securities	0	0	0	0	0	0
3	**Total exposures**	**3 536**	**175**	**120**	**425**	**615**	**4 396**

Table 2.11. Non-performing and forborne exposures in PKO Bank Polski SA [template EU CR1-E]

PKO Bank Polski SA		2019												
		a)	b)	c)	d)	e)	f)	g)	h)	i)	j)	k)	l)	m)
		Gross carrying values of performing and non-performing exposures							Accumulated impairment and provisions and negative fair value adjustments due to credit risk				Collaterals and financial guarantees received	
			Of which performing but past due > 30 days and <= 90 days	Of which performing forborne	Of which non-performing				On performing exposures		On non-performing exposures		On non-performing exposures	Of which forborne exposures
						Of which defaulted	Of which impaired	Of which forborne		Of which forborne		Of which forborne		
010	Debt securities	66 971	0	0	0	0	0	0	0	0	0	0	0	0
020	Loans and advances	209 725	479	268	8 911	8 911	8 877	6 732	-43	-32	-3 816	-3 491	147	74
030	Off-balance-sheet exposures	66 749	20	0	483	483	483	483	0	0	-20	-13	44	2

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Table 2.12. Changes in stock of defaulted and impaired loans and debt securities [template EU CR2- B]

		2019
		a)
		Gross carrying value defaulted exposures
1	**Opening balance**	11 965
2	Loans and debt securities that have defaulted or impaired since the last reporting period	1 685
3	Returned to non-defaulted status	417
4	Amounts written off	-1 484
5	Other changes	-2 236
6	**Closing balance**	**10 348**

2.5.10. Credit risk reporting

Credit risk reporting comprises providing periodical information on the scale of exposure to credit portfolio risk.

The Bank prepares monthly and quarterly credit risk reports. In addition to the information concerning the Bank, the reports also contain information about 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 SA Group, PKO Leasing SA Group, and PKO Bank Hipoteczny SA).

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, with monthly and quarterly reports also concerning the Bank's Group. 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 utilization of limits. The users of the reports are mainly the BCC, ALCO, RC, the Management Board and the Supervisory Board.

2.5.11. Management actions related to credit risk

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

The management activities in credit risk management include, in particular:
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) making 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 and monitoring the functioning of controls in credit risk management,
6) designing and improving credit risk assessment methods and models,
7) developing and improving IT tools used in credit risk management,
8) planning activities and issuing recommendations.

The basic credit risk management tools used by the Bank's Group include, in particular:
1) the minimum transaction requirements (risk parameters) specified for a given type of transaction (e.g. the minimum LtV ratio, maximum loan amount, required collateral),
2) the rules on defining credit availability, including cut-off points – the minimum number of points awarded as a result of the creditworthiness assessment process with the use of a scoring system (for retail customers, companies and enterprises) or a customer's rating class (for institutional customers) as from which a lending transaction may be effected with a customer,
3) concentration limits – the limits defined in Article 395(1) of the CRR and in the Banking Law or internal limits defining the appetite for concentration risk,
4) industry-related limits – the limits defining the appetite for credit risk, which reduce the level of risk related to financing institutional customers operating in industries which have a high level of credit risk,
5) limits defining the appetite for portfolio credit risk, arising from, among other things, Recommendations S and T,
6) credit limits defining the Bank's Group maximum exposure to a specific counterparty or country in respect of wholesale market operations as well as settlement limits and limits for the period of exposure,
7) competence limits defining the maximum level of powers required to make lending decisions with respect to the Bank's customers, these limits are dependent mainly on the amount of the Bank's credit exposure to a customer (or a group of related customers) and the period of a lending transaction, the competence limits are dependent on the level at which a lending decision is made (within the Bank's organizational structure),
8) minimum credit margins – credit risk margins related to a specific lending transaction concluded by the Bank's Group with a given institutional customer, however, the interest rate offered to the customer should not be lower than the reference rate plus a credit risk margin. If the reference rate drops to 0 or less, the interest rate is determined using a reference rate of 0.

The collateral policy plays a special role in determining the terms and conditions of lending transactions. 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 can be sold without a significant reduction in its price and within a timeframe which does not expose the Bank to a change in the value of the collateral due to the fluctuation of prices which is typical of given collateral. The Bank's Group strives to diversify its collateral (both in terms of forms and the objects collateralized). The Group assesses collateral in terms of the actual possibility to use it as the source from which its claims may be satisfied.

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2.5.12. Use of credit risk and counterparty 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 credit collateral.

The collateral policy of the PKO Bank Polski SA Group defines the rules for establishing and remeasuring collateral as well as the procedures to be followed if the applicable limits are exceeded, in order to hedge against risk. The appropriate methods set out in the internal regulations of the PKO Bank Polski SA Group are applied.

Market value is the basis for assessing the value of real estate, tangible collateral and rights. Market value is determined on the basis of an estimation made by the Bank's Group or an appraisal prepared by an independent expert, verified in accordance with other regulations concerning the assessment of collateral, including the assessment of real estate.

The following factors are taken into account in the assessment of collateral:
1) the assets, the economic and financial or the social and financial position of the entities which provide personal collateral,
2) the condition and market value of the underlying objects of tangible collateral and their susceptibility to depreciation during the life of the collateral (the impact of technological obsolescence of the underlying objects of the collateral on its value),
3) the condition and market value of real estate and data adequate to the type of real estate which makes it possible to estimate the level of risk related to a portfolio of a given type of collateral in an effective manner and to manage such risk,
4) the potential economic benefits arising from a specific method of securing receivables, in particular, the possibility to reduce impairment losses,
5) the manner 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 Bank's internal regulations concerning the assessment of collateral,
6) complexity, duration as well as the economic and legal conditions relating to 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.

The establishment of specific types of collateral is dependent on the product and the customer segment.

In granting loans for financing residential and commercial real estate, collateral is mandatorily established in the form of a mortgage on real estate.

Until collateral is established effectively (depending on the type of loan and its amount), temporary collateral may be accepted in a different form.

In granting consumer loans, the Bank usually accepts personal collateral (a guarantee under civil law or an aval) or a bank account, a car or securities are collateralized.

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 does not use any credit derivatives as collateral for risk in accordance with the CRR (Article 453 d).

Table 2.13. Credit Risk Mitigation Techniques – overview [template EU CR3]

		2019				
		a)	b)	c)	d)	e)
		Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Total loans*	278 665	6 087	3 609	2 478	0
2	Total debt securities	51 035	0	0	0	0
3	**Total exposures**	**329 700**	**6 087**	**3 609**	**2 478**	**0**
4	Of which defaulted	5 576	164	90	75	0

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

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Table 2.14. Standardised approach – credit risk exposure (without derivatives) and Credit Risk Mitigation (CRM) effects [template EU CR4]

		2019					
		a)	b)	c)	d)	e)	f)
		Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
Exposure classes		On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
1	Central governments or central banks	74 970	0	76 984	82	6 917	9%
2	Regional government or local authorities	10 253	1 912	10 584	438	2 204	20%
3	Public sector entities	568	2 698	445	1 302	845	48%
4	Multilateral development banks	1 064	0	1 064	0	0	0%
5	International organisations	0	0	0	0	0	0%
6	Institutions	3 117	4 647	3 251	2 588	2 055	35%
7	Corporates	47 330	37 603	43 114	8 562	50 614	98%
8	Retail	68 603	16 058	67 119	2 818	48 144	69%
9	Secured by mortgages on immovable property	105 396	1 501	105 312	318	68 240	65%
10	Exposures in default	5 740	464	5 576	112	6 919	122%
11	Exposures associated with particularly high risk	1 385	1 725	1 369	1	2 055	150%
12	Covered bonds	0	0	0	0	0	0%
13	Institutions and corporates with a short-term credit assessment	0	0	0	0	0	0%
14	Collective investment undertakings	3	0	3	0	3	100%
15	Equity	910	0	910	0	2 247	247%
16	Other items	16 448	7	16 448	4	5 370	33%
17	**Total**	**335 788**	**66 614**	**332 178**	**16 224**	**195 614**	**56%**

The total exposure value does not include derivative instruments, repurchase transactions, securities or commodities lending or borrowing transactions, long settlement transactions or margin lending transactions of PLN 3 870 million.

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Table 2.15. Standardised approach - breakdown of exposures by asset class and risk weight [template EU CR5]

	Exposure classes	2019																	
		Risk weight																Total	Of which unrated
		0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Deducted		
1	Central governments or central banks	72 020	0	0	1 538	548	0	0	0	0	499	0	2 462	0	0	0	0	**77 066**	0
2	Regional government or local authorities	0	0	0	0	11 021	0	0	0	0	0	0	0	0	0	0	0	**11 021**	572
3	Public sector entities	0	0	0	0	94	0	1 652	0	0	0	0	0	0	0	0	0	**1 747**	521
4	Multilateral development banks	1 068	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1 068**	1 068
5	International organisations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
6	Institutions	771	0	0	0	3 774	0	3 043	0	0	221	10	0	0	0	0	0	**7 820**	0
7	Corporates	0	0	0	0	0	0	570	0	0	52 565	0	0	0	0	0	0	**53 134**	1 506
8	Retail	0	0	0	0	0	0	0	0	69 943	0	0	0	0	0	0	0	**69 943**	69 943
9	Secured by mortgages on immovable property	0	0	0	0	0	74 705	0	0	99	7 305	23 521	0	0	0	0	0	**105 630**	105 630
10	Exposures in default	0	0	0	0	0	0	0	0	0	3 226	2 462	0	0	0	0	0	**5 688**	5 688
11	Exposures associated with particularly high risk	0	0	0	0	0	0	0	0	0	0	1 370	0	0	0	0	0	**1 370**	1 370
12	Covered bonds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
13	Institutions and corporates with a short-term credit assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0
14	Collective investment undertakings	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	**3**	3
15	Equity	0	0	0	0	0	0	0	0	0	18	0	891	0	0	0	0	**910**	910
16	Other items	10 438	0	0	0	805	0	0	0	0	5 209	0	0	0	0	0	0	**16 451**	16 451
17	**Total**	**84 297**	**0**	**0**	**1 538**	**16 242**	**74 705**	**5 265**	**0**	**70 042**	**69 046**	**27 363**	**3 354**	**0**	**0**	**0**	**0**	**351 851**	**203 662**

Table 2.15 presents the total exposure amount of the on-balance sheet and off-balance sheet items of the Bank's Group of PLN 351 851 million, which represents the total exposure net of specific credit risk adjustments and impairment losses and after applying appropriate conversion factors for off-balance sheet exposures, i.e. after multiplying the exposure amounts of off-balance items by the corresponding factors of 0%, 20%, 50% or 100%.

Table 2.15a the total exposure amount of the on-balance sheet and off-balance sheet exposures of the Bank's Group by CCF value

	2019										
	Exposures net provisions and imparment losses	Credit risk mitigation techniques affecting exposure (funded protection)	Fully adjusted exposure value			Off-balance sheet exposures by CCF value				Off-balance sheet exposures after CCF	Exposure of which: value
				of which:							
				Balance sheet exposure	Off-balance sheet exposures	0%	20%	50%	100%		
	(a)	(b)	(c = a-b)	(d)	(e = f+g+h+i)	(f)	(g)	(h)	(i)	(J = f*0%+g*20%+h*50%+i*100%)	(k = d+j)
Total exposure	406 272	4 508	401 764	335 627	66 137	20 018	27 353	16 026	2 740	16 224	351 851

As at 31 December 2019, the Bank did not use on- and off-balance sheet netting pursuant to Article 205 of the CRR, therefore, the provisions of Article 453(a) of the CRR, regarding disclosing the information about the policies and processes for, and an indication of the extent to which the entity makes use of, on- and off-balance sheet netting, are not applicable.

As at 31 December 2019, 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.

2.5.13. Using external credit assessment institutions (ECAIs) and other information on counterparty credit risk exposures

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

The PKO Bank Polski SA Group does not use the assessments of export credit agencies in the process of calculating own funds requirements.

In calculating the own funds requirements for credit risk, the PKO Bank Polski SA Group uses the credit assessments assigned by credit assessment institutions (ECAIs). 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 rules for using external ratings and the manner of mapping issuer and issue credit assessments to individual exposures are in line with the CRR.

The process of mapping issuer and issue credit assessments to items not included in the trading book for the purposes of calculating own funds requirements is in line with the provisions of Part Three, Title II, Chapter 2 of the CRR.

On the wholesale market, PKO Bank Polski SA cooperates with financial institutions whose registered offices are located in 68 countries. The Bank may enter, within the set limits, into transactions with 403 counterparties, including domestic and foreign banks, insurance companies, pension funds and investment funds. Transactions include investment and deposit transactions, transactions in securities, foreign exchange transactions and derivative transactions.

The Bank has access to two clearing houses (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,[8] with selected domestic and foreign counterparties.

In order to limit the credit risk of derivative transactions and transactions in securities, the Bank enters into framework agreements with its counterparties (according to the Polish Bank Association, 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.

In addition, the Bank concludes collateral agreements (CSA – Credit Support Annex according to the ISDA standard or Collateral Agreements according to the standards of the Polish Bank Association) with its counterparties, under which each of the parties, after meeting the conditions specified in the agreement, undertakes to establish appropriate collateral along with the right to its netting.

For lending transactions with financial institutions having 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 sets 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 proceeds from a single counterparty or country within one day.

According to the methodology in force 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.

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 2019, 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 an additional margin 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 926 million.

As at 31 December 2019, the positive gross fair value of derivative instruments concluded with financial institutions amounted to PLN 1,420 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 482 million (excluding centrally cleared transactions). The profits from the netting

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

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amounted to PLN 938 million. The value of the collateral accepted from the counterparties under the CSA agreements and the PBA collateral agreements was PLN 568 million.

As at 31 December 2019, the Bank had no credit derivatives.

As at 31 December 2019, the Bank recognized adjustments for credit valuation in the valuation of derivative financial instruments concluded with non-financial business entities based on the analysis of recoverability of exposures. In the adjustment, the Bank took into account the market value of credit risk from the Bank's perspective. The analysis covered all material exposures in respect of the positive valuation (for the Bank) of derivative financial instruments concluded with non-financial business entities. 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 CCC (Table 2.16.).

Table 2.16. Quality of exposures* to financial institutions**

	PKO Bank Polski SA
Rating	**2019**
AAA	38,623%
AA	14,717%
A	24,343%
BBB	21,978%
BBB	0,201%
B	0,000%
CCC	0,001%
No rating	0,138%
Total	100,000%

*Exposure is the total nominal exposures in respect of deposits and securities and the total valuations of derivative instruments after their netting for the counterparties with which there are effective framework netting agreements.
**Exposures to institutions from outside the Bank's Group.

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 mark-to-market 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 2019, the PKO Bank Polski SA Group did not have any credit derivatives used to reduce capital requirements.

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Table 2.17 Analysis of the counterparty credit risk (CCR) exposure by approach (excluding capital requirements or exposures cleared through a CCP) [template EU CCR1]

		2019						
		a)	b)	c)	d)	e)	f)	g)
		Notional	Replacement cost/current market value	Potential future credit exposure	EEPE	Multiplier	EAD post CRM	RWAs
1	Mark to market		699	2 581			3 402	1 870
2	Original exposure	0					0	0
3	Standardised approach		0				0	0
4	IMM (for derivatives and SFTs)				0	0	0	0
5	*Of which securities financing transactions*				0	0	0	0
6	*Of which derivatives and long settlement transactions*				0	0	0	0
7	*Of which from contractual cross-product netting*				0	0	0	0
8	Financial collateral simple method (for SFTs)						0	0
9	Financial collateral comprehensive method (for SFTs)						47	47
10	VaR for SFTs						0	0
11	**Total**							**1 917**

Table 2.18. Exposures to CCPs [template EU CCR8]

		2019	
		a)	b)
		EAD post CRM	RWAs
1	**Exposures to QCCPs (total)**		403
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	1 055	356
3	(i) OTC derivatives	1 047	355
4	(ii) Exchange-traded derivatives	8	1
5	(iii) SFTs	0	0
6	(iv) Netting sets where cross-product netting has been approved	0	0
7	Segregated initial margin	54	
8	Non-segregated initial margin	0	0
9	Prefunded default fund contributions	33	0
10	Alternative calculation of own funds requirements for exposures		47
11	**Exposures to non-QCCPs (total)**		**0**
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	0	0
13	(i) OTC derivatives	0	0
14	(ii) Exchange-traded derivatives	0	0
15	(iii) SFTs	0	0
16	(iv) Netting sets where cross-product netting has been approved	0	0
17	Segregated initial margin	0	
18	Non-segregated initial margin	0	0
19	Prefunded default fund contributions	0	0
20	Unfunded default fund contributions	0	0

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Table 2.19. Credit valuation adjustment (CVA) capital charge [template EU CCR2]

		2019	
		a)	b)
		Exposure value	RWAs
1	Total portfolios subject to the advanced method	0	0
2	(i) VaR component (including the 3× multiplier)		0
3	(ii) SVaR component (including the 3× multiplier)		0
4	All portfolios subject to the standardised method	1 289	290
EU4	Based on the original exposure method	0	0
5	Total subject to the CVA capital charge	0	0

Table 2.20. Standardised approach - Impact of netting and collateral held on exposure values [template EU CCR5-A]

		2019				
		a)	b)	c)	d)	e)
		Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
1	Derivatives	3 440	1 786	1 654	426	1 228
2	SFTs	1 131	0	1 131	1 124	7
3	Cross-product netting	0	0	0	0	0
4	Total	4 571	1 786	2 785	1 551	1 235

Table 2.21. Composition of collateral for exposures to counterparty credit risk [template EU CCR5-B]

	2019					
	a)	b)	c)	d)	e)	f)
	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		
Total	474	0	600	0	1 081	50

Table 2.22. Credit derivatives exposures [template EU CCR6]

	2019		
	a)	b)	c)
	Credit derivative hedges		Other credit derivatives
	Protection bought	Protection sold	
Notionals	0	0	0
Single-name credit default swaps	0	0	0
Index credit default swaps	0	0	0
Total return swaps	0	0	0
Credit options	0	0	0
Other credit derivatives	0	0	0
Total notionals	0	0	0
Fair values	0	0	0
Positive fair value (asset)	0	0	0
Negative fair value (liability)	0	0	0

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Table 2.23. Standardised approach - counterparty credit risk exposures by exposure category and risk weight [template EU CCR3]

		2019												
Exposure classes		Risk weight											Total	Of which unrated
		0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Other issues		
1	Central governments or central banks	0	0	0	0	0	0	0	0	0	0	0	**0**	0
2	Regional government or local authorities	0	0	0	0	0	0	0	0	0	0	0	**0**	0
3	Public sector entities	0	0	0	0	0	0	0	0	0	0	0	**0**	0
4	Multirateral development banks	3	0	0	0	0	0	0	0	0	0	0	**3**	3
5	International organisations	0	0	0	0	0	0	0	0	0	0	0	**0**	0
6	Institutions	771	0	0	0	492	717	0	0	0	0	0	**1 981**	0
7	Corporates	0	0	0	0	0	7	0	0	1 452	0	0	**1 459**	797
8	Retail	0	0	0	0	0	0	0	6	0	0	0	**6**	6
9	Institutions and corporates with a short - term credit assessment	0	0	0	0	0	0	0	0	0	0	0	**0**	0
10	Other items	0	0	0	0	0	0	0	0	0		0	**0**	0
11	**Total**	**774**	**0**	**0**	**0**	**492**	**724**	**0**	**6**	**1 452**	**0**	**0**	**3 449**	**806**

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2.5.14. Exposure to securitisation positions

The Bank's Group does not calculate risk weighted exposure amount in accordance with the provisions of Part Three, Title II, Chapter 5 of the CRR or the own funds requirement pursuant to Article 337 or Article 338 of the CRR, therefore it does not disclose information in accordance with Article 449.

Detailed informations in in the field of securitization were presented in the consolidated financial statements of the Bank's Group for the year ended 31 December 2019 (Note 67. Information on securitization of the lease portfolio and package sale of receivables).

2.5.15. Exposures in equities not included in the trading book

PKO Bank Polski SA and its subsidiaries subject to prudential consolidation have equity exposures[9] in other entities which are classified in the banking book.

The exposures in the banking book as at 31 December 2019, due to the nature of an exposure and the purpose of the acquisition, are broken down into the following groups:

1) exposures to subsidiaries not subject to prudential consolidation – this group includes companies which complement the Bank's basic offer with insurance services and which provide services in the area of information and computer technologies, 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 optimize management and sales activities related to supervised asset portfolios,
2) exposures to associates and joint ventures – investments in companies which provide financial and technological services, this group includes, among other things, Centrum Elektronicznych Usług Płatniczych eService sp. z o.o., together with which PKO Bank Polski SA offers comprehensive services related to setting up POS terminals and the settlement of transactions made with the use of these terminals and payment instruments,
3) exposures with a minority interest in entities' capital, 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) units in investment funds – mainly the investments of PKO Towarzystwo Funduszy Inwestycyjnych SA (PKO TFI SA) in the units of the new investment funds it manages, assets are acquired to provide the funds required to establish a fund,
   c) other equity exposures – 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 the restructuring of loan receivables, including collected collateral.

Table 2.24. Equity exposures - banking book

	2019		2018	
	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)	1 369	1 396	1 633	1 590
Shares in other entities, this includes also equity investments in entities revealed as fixed assets items for sale**	87	87	25	25
Equity securities	370	370	284	284
Shares in entities listed on regulated market	24	24	43	43
Shares in entities not listed on regulated market***	346	346	241	241
Participation units in PKO TFI SA investment funds	3	3	5	5
Total	1 830	1 857	1 947	1 903

*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 above entities as from the date of acquisition has been recognized in the profit and loss account, whereas its share in changes in other comprehensive income as from the date of acquisition has been recognized 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, is estimated (an impairment test). If the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recognized 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 a 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 recognized in profit or loss.

Units in investment funds and participation units are measured at fair value, with the effect being recognized in profit or loss.

[9] This information concerns equity exposures in the form of shares, units and investment certificates. The Bank classifies the following in the banking 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.

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 2019, in the notes on the fair value hierarchy.

In 2019, the Bank's Group (according to prudential consolidation) realized accumulated gains on the disposal of securities constituting equity exposures of the banking book of PLN 0,4 million. The total unrealized gains of the Bank's Group on the revaluation of the equity exposures of the banking book (PLN 563,5 million as at the end of 2019). The aforementioned value includes the unrealized gain of the Bank's Group of PLN 178,5 million in respect of the revaluation of the purchase price of shares in one of the companies to fair value.

In 2019, PKO Bank Polski SA received a gross dividend totalling PLN 73,5 million in respect of shares constituting equity exposures of the banking book.

2.6. Interest rate risk

2.6.1. Introduction

Interest rate risk is the risk of loss on the on-balance sheet and off-balance sheet items of the Bank's Group, which are sensitive to interest rate changes as a result of interest rate changes on the market.

The Bank applies the division into portfolios from the perspective of interest rate risk management:
- the banking book – which comprises on-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 related hedging transactions,
- the trading book – which comprises transactions in financial instruments carried out as part of the activities on its own account and customers' activities.

The Bank manages the interest rate risk arising both from the items in the trading book and the banking book in an active manner.

The objective of interest rate risk management is to reduce possible losses due to changes in market interest rates to an acceptable level by shaping the structure of on-balance sheet and off-balance sheet items appropriately.

2.6.2. Interest rate risk identification, measurement and assessment

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 organization of interest rate risk management in the Bank's Group are in compliance with the principles described in section 2.1.

The interest rate 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 in the area of interest rate risk management. The Supervisory Board also approves reports confirming the compatibility of the interest rate risk profile with the tolerance to interest rate risk specified at the level of the Bank and the Bank's Group. The Management Board is responsible for managing the Bank's interest rate risk, including supervising and monitoring the measures taken by the Bank in the area of interest rate risk management. The Management Board adopts internal regulations on interest rate risk management.

The Risk Management Strategy of PKO Bank Polski SA and the PKO Bank Polski SA Group defines an acceptable level of interest rate risk both in the Bank and the Bank's Group and lays down the principles of interest rate risk management in the Bank's Group. Additionally, the Strategy for managing interest rate risk in the banking book of PKO Bank Polski SA specifies 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 banking 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 level of the Bank's Group.

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 centralized 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 determine the level of interest rate risk, the Bank uses an interest income sensitivity measure, economic value sensitivity measure, model of value at risk (*VaR),* shock analysis and repricing gaps.

The sensitivity of interest income to an abrupt shift of the yield curve defines the potential financial impact of that shift, expressed as a change in the amount of interest income in a given time horizon. This change is the result of the mismatch of the repricing dates of assets, liabilities as well as off-balance sheet liabilities granted and received (in particular derivative instruments), which are sensitive to changes in interest rates.

The economic value sensitivity measure (Basis Point Value - BPV) reflects a fair value change of portfolio items caused by a parallel upward shift of the yield curves by one basis point.

The IR VaR measure is the potential loss which may occur in normal market conditions over a specific period of time (i.e. a horizon) and with an assumed probability level due to changes in interest rate curves. For market risk management purposes, VaR is calculated with a 99% confidence level and 10-day holding. For interest rate risk management purposes, the following is used, among other things: the VaR determined for individual financial instruments and for the Bank's portfolios, and by type of business activities of the Bank.

Shock analysis (stress tests, crash tests) is used to assess 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 analysis in the form of reverse stress tests related to interest rate risk.

Types of shock analysis scenarios are used at the Bank:
a) hypothetical stress tests – in which fluctuations in interest rates 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,
b) historical stress tests – in which fluctuations in interest rates are assumed on the basis of fluctuations in interest rates observed in the past, including: the biggest historical change, deflection of the interest rate curve taking into account portfolio positions, the biggest historical nonparallel movement of interest rate curves for securities and for derivatives hedging those securities,
c) crash tests – in which fluctuations in interest rates are assumed on the basis of fluctuations in interest rates observed in the past in such a manner as to maximize the Bank's potential loss,
d) 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 population current accounts, and
- an increase in the frequency of termination of deposits bearing fixed interest rates, subject to a strategy for hedging against changes in interest rates,

e) Supervisory Test in accordance with EBA Guidelines on IRRBB,
whose results would correspond to a given change in the Bank's on-balance sheet and off-balance sheet items.

The repricing gap is the difference between the current value of assets and liabilities exposed to interest rate risk, repriced in a given time bracket, with the said items being recognized as at the transaction date.

In the process of interest rate risk measurement, in relation to loan and deposit balances with indefinite repricing dates, the Bank uses an approach based on replicated interest rate risk profiles, taking into account the instability of the balances of these products (determined on the basis of movements in them in the past). Moreover, the Bank regularly monitors the impact of the early repayment of loans on interest rate risk measures and, according to the latest analyses, it considers such impact to be immaterial.

2.6.3. Interest rate risk control

The control of interest rate risk covers determining limits and thresholds concerning interest rate risk, in particular strategic limits of tolerance to interest rate risk, tailored to the scale and complexity of the activities of the Bank's Group.

2.6.4. Interest rate risk monitoring

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 2019, the interest rate risk of the Bank's Group was determined mainly by the mismatch of the repricing dates of assets and liabilities.

2.6.4.1. Banking book

In order to monitor interest rate risk, the Bank uses interest rate risk measures reflecting the identified four main types of interest rate risk:
a) repricing risk,
b) income curve risk,
c) base risk, and
d) customer option risk.

The sensitivity of interest income in the Group's banking book to an abrupt shift of the yield curve by 100 p.b. within a year in all currencies is presented in the table below:

Table 2.25. Sensitivity interest income

Measure name	31.12.2019	31.12.2018
Sensitivity of interest income (in PLN million)	904	1 000

The table below presents the economic value sensitivity measure (BPV) of the Group's banking book in all currencies as at 31 December 2019 and as at 31 December 2018:

Table 2.26. Sensitivity measure (BPV)

Measure name	31.12.2019	31.12.2018
Sensitivity of economic value (in PLN million)	3	8

The objective of stress tests is to estimate potential losses on interest-bearing items in the event of a market situation which is not described in a standard manner, using statistical measures.

A stress test analysis of the Group's exposure to interest rate risk is presented in the table below:

Table 2.27. The results of the interest rate stress test analysis

Measure name[1]	31.12.2019	31.12.2018
Parallel shift of the interest rate curves by +200 bps	207	761
Parallel shift of the interest rate curves by -200 bps	-426	-1 318
Parallel shift of the interest rate curves by a given increase for each currency	275	930
Parallel shift of the interest rate curves by a given decrease for each currency	-290	-1 079
Increase in long-term rates	26	755
Decrease in long-term rates	-114	-1 088
Sudden shock of interest rates	108	-528
Moderate interest rate shock	-106	471

[1] The results of the stress-test analysis are presented only for the Bank's banking portfolio, for currencies representing at least 5% of the total financial assets in the banking portfolio. The stress tests presented are the Supervisory Test in accordance with EBA guidelines on IRRBB.

2.6.4.2. Trading book

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

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

Table 2.28. VaR in the Bank's trading book

Measure name	31.12.2019	31.12.2018
IR VaR (in PLN million)		
Average value	5	6
Maximum value	10	11
Value at the end of the year	6	5

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

2.6.4. Interest rate risk reporting

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 the interest rate risk exposure and information on the utilization of the risk limits. The Bank's exposure to interest rate risk is measured on a daily basis. The users of such reports are mainly the ALCO, RC, the Management Board, Risk Committee of the Supervisory Board, and the Supervisory Board.

2.6.5. Management actions 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) limits and thresholds for interest rate risk,
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 rate.

The Bank's Group has established limits and thresholds for interest rate risk, among other things, for interest income sensitivity, economic value sensitivity 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 SA and the PKO Bank Polski SA 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 chapter 2.6.5 of this Report.

2.7. Foreign exchange risk

2.7.1. Introduction

Foreign exchange risk is the risk of loss due to changes in foreign exchange rates, generated by maintaining open currency positions.

The objective of foreign exchange risk management is to reduce possible losses resulting from changes in foreign exchange rates to an acceptable level by shaping the foreign currency structure of on-balance sheet and off-balance sheet items appropriately. 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 SA and the PKO Bank Polski SA 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. Foreign exchange risk identification, measurement and assessment

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 organization 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 in the area of managing that risk. The Supervisory Board also approves reports confirming the compatibility of the foreign exchange risk profile with the tolerance to 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 in the area of foreign exchange risk management. The Management Board adopts internal regulations on foreign exchange risk management.

The Risk Management Strategy of PKO Bank Polski SA and the PKO Bank Polski SA 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 level of the Bank's Group.

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

Shock analysis (stress tests and crash tests) for foreign exchange risk are used to assess 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 analysis 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 changes in foreign exchange rates:

1) hypothetical scenarios – in which the hypothetical appreciation or depreciation of foreign exchange rates (by 10% and 30%) is assumed,
2) historical scenarios – scenarios relating to the fluctuations in foreign exchange rates observed in the past,
3) reverse stress tests – which examine potential changes in foreign exchange rates resulting in the Bank's losses at the specified level of the Bank's own funds.

2.7.3. Foreign exchange risk control

The main tool for controlling foreign exchange risk both at the level of the Bank and the Bank's Group are the established strategic limits of tolerance to foreign exchange risk and the limits imposed by the ALCO, which specify 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. Foreign exchange risk monitoring

In 2019, 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. The 10-day VaR for the Bank's currency position amounted to PLN 3.7 million as at 31 December 2019.
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 2019 and as at 31 December 2018:

Table 2.29. The results of the foreign exchange risk stress test analysis

Measure name	31.12.2019	31.12.2018
FX VaR for a 10-day time horizon at the confidence level of 99% (in PLN million)[1]	9	4
Change in CHF/PLN exchange rate by 10% (in PLN million) (stress-test)[2]	24	3
Change in EUR/PLN exchange rate by 10% (in PLN million) (stress-test)[2]	19	68
Change in CUR/PLN exchange rate by 10% (in PLN million) (stress-test)	25	60

[1] In connection with the nature of activity of entities in the Bank's Group, the Value at Risk measure is presented to the Bank.
[2] Stress test scenarios assume the appreciation or depreciation of PLN against the individual foreign currencies, depending on which change generates a bigger loss.

As in the case of interest rate risk, given the nature of the business 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 determine 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 SA, it amounted to PLN 0.24 million as at 31 December 2019 and PLN 0.24 million as at 31 December 2018.

2.7.5. Foreign exchange risk reporting

The Bank prepares daily, weekly, monthly and quarterly FX risk reports, with the monthly and quarterly reports also concerning the Bank's Group. The reports contain information on the FX risk exposure and information on the utilization of the risk limits. The users of such reports are mainly the ALCO, RC, the Management Board, Risk Committee of the Supervisory Board, and the Supervisory Board.

2.7.6. Management actions related to foreign exchange risk

The main foreign exchange risk management tools used in the Bank's Group include:
1) foreign exchange risk management procedures,
2) limits and thresholds for foreign exchange risk,
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 SA and the PKO Bank Polski SA 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 2.7.8 of this Report.

2.8. Liquidity risk including financing risk

2.8.1. Introduction

Liquidity risk is the risk of inability to discharge liabilities on a timely basis due to the absence of liquid cash and cash equivalents. The absence of liquidity may result from an improper balance sheet structure, cash flows mismatch, non-payment by counterparties, a sudden withdrawal of funds by customers or other market events.

The objective of liquidity risk management is to ensure, by structuring the balance sheet and off-balance sheet items appropriately, the necessary amount of funds required to discharge the current and future (as well as potential) liabilities, taking into account the nature of the business activities and the needs which may arise as a result of changes in the market environment.

As part of liquidity risk management, the Bank also manages:
1) financing risk, which includes the risk of losing the available sources of financing and the inability to renew the required funding or losing 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 organization 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 in the area of liquidity risk management. The Supervisory Board also approves reports confirming the compatibility of the liquidity risk profile with the tolerance to liquidity risk specified 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 in the area of liquidity risk management. The Management Board adopts internal regulations on liquidity risk management.

The Risk Management Strategy of PKO Bank Polski SA and the PKO Bank Polski SA 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 level of the Bank's Group.

The Bank's treasury and liquidity risk management functions are segregated between the Corporate and Investment Banking Area and the Risk Management Area, whereas within the individual entities in the Bank's Group they are centralized. The internal transfer of liquidity within the 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 SA on the domestic market and the Euro Medium Term Notes (EMTN) programme on the foreign market, bond issues on the foreign market through PKO Finance AB under the EMTN programme, covered mortgage bond issues by PKO Bank Hipoteczny SA and the securitization of assets by PKO Leasing SA.

2.8.2. Liquidity risk identification, measurement and assessment

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). Moreover, money market instruments, including the operations of the open market of the National Bank of Poland, are used to manage liquidity risk.

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 defining the relationship of high quality liquid assets to net outflows in a 30-day horizon in stress conditions (a supervisory measure specified in the CRR),
4) Net Stable Funding Ratio (NSFR) – a measure defining 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) national supervisory ratios M3-M4 – the measures specified in Resolution 386/2008 of the PFSA, on liquidity standards for banks,
8) 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,
9) concentration of long-term market sources of financing – the relationship of long-term sources of financing, grouped collectively by defined maturity, to a deposit base and all long-term sources of financing,
10) measures of stability of the deposit and loan portfolios,
11) early warning indicators – monitored with a view to early detection of adverse events which may have a negative impact on the liquidity of the Bank or the financial sector (which, when exceeded, trigger liquidity contingency plans),
12) stress tests (stress tests for liquidity).

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 materialize.

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 a mass withdrawal of deposits by non-financial customers,
3) scenarios of the sensitivity of inflows and outflows to a change in market conditions,
4) scenarios of the impact of stress market conditions on the expected losses on the housing loan portfolio,
5) scenarios of a forecasted liquidity risk in shock conditions,
6) scenarios of additional collateral for the 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) determining the symptoms which trigger the Bank's liquidity contingency plans,
6) determining the levels of the ratios which trigger the Recovery Plan.

2.8.3. Liquidity risk control

The control of liquidity risk covers determining the strategic limits of tolerance to liquidity risk, limits and thresholds which specify 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. Liquidity risk monitoring

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 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:

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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 as well as 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 the payability of these loans and the possibility of their revolving,
3) 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),
4) 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,
5) 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,
6) 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 utilization of the 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 2019 and 31 December 2018, respectively.

Table 2.30. Adjusted liquidity gap* - assets and liabilities

2018	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	22 430	22 576	-3 039	-398	8 871	14 112	18 632	-141 162
Cummulative gap	22 921	45 497	42 457	42 060	50 931	65 043	83 675	-57 487
Bank subsidiaries								
Periodic gap	1 042	233	-5 431	-6 021	-6 011	-1 671	-4 149	23 683
Cumulative gap	551	784	-4 646	-10 668	-16 679	-18 350	-22 500	1 184
Total - Periodic gap	**23 472**	**22 809**	**-8 470**	**-6 419**	**2 860**	**12 441**	**14 482**	**-117 478**
Total - Cumulative gap	**23 472**	**46 281**	**37 811**	**31 392**	**34 252**	**46 693**	**61 175**	**-56 303**

2019	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	13 368	25 861	-9 437	-5 561	-928	8 177	30 644	-131 302
Cummulative gap	13 368	39 229	29 792	24 231	23 303	31 480	62 124	-69 179
Bank subsidiaries								
Periodic gap	-2 014	4 922	1 345	-1 724	-2 389	-3 153	-12 439	16 277
Cumulative gap	-2 014	2 908	4 254	2 529	140	-3 012	-15 451	826
Total - Periodic gap	**11 355**	**30 783**	**-8 092**	**-7 285**	**-3 317**	**5 024**	**18 205**	**-115 025**
Total - Cumulative gap	**11 355**	**42 138**	**34 046**	**26 760**	**23 443**	**28 468**	**46 673**	**-68 353**

*Calculated as the total of the adjusted liquidity gap of PKO Bank Polski SA, PKO Bank Hipoteczny, PKO Leasing SA, PKO Życie Towarzystwo Ubezpieczeń SA and KREDOBANK and the contractual liquidity gap of the other companies in the Bank's Group. Data as at 31 December 2018 has been reduced to levels of comparability with data as at 31 December 2019.

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 2019 and as at 31 December 2018.

Table 2.31. Bank's liquidity surplus

SENSITIVITY MEASURE	2019	2018
Liquidity surplus in 30-day horizon	11 572	21 323

The Bank maintains a high and safe level of high quality unencumbered liquid assets which constitute a hedge in case of extreme liquidity scenarios (a liquidity surplus) materialize. 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 2.32. Liquidity surplus items

CATEGORY	2019	2018
Cash	3 806	5 075
Nostro accounts and deposits	4 791	16 335
Treasury bills and bonds	57 563	39 884
Monetary bills	1 000	2 900
Other liquid securities	2 467	988

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The table below presents the supervisory liquidity measures of the Bank and the Bank's Group as at 31 December 2019 and as at 31 December 2018.

Table 2.33. The supervisory liquidity measures [template LIQ 2]

PKO Bank Polski SA		
Measure	2019	2018
M3	14,92	17,44
M4	1,25	1,22

Bank subsidiaries		
Measure	2019	2018
LCR	146,3%	132,0%
NSFR	123,1%	117,7%

In the period from 31 December 2018 to 31 December 2019, 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 2019, published on 4 March 2019 (Note 68. Liquidity risk management, Structure of financial sources). 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, CHF, PLN and USD 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 2.34. - Liquidity Coverage Ratio for the Capital Group (average for 2019) [template LIQ1]

		2019							
Scope of consolidation (solo/consolidated)		Total unweighted value (avg)				Total weighted vlaue (avg)			
Currency and units (PLN million)									
Quarter ending on (DD Month YYY)		31-03-2019	30-06-2019	30-09-2019	31-12-2019	31-03-2019	30-06-2019	30-09-2019	31-12-2019
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)					49 633	52 112	56 555	60 173
CASH-OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	155 429	160 270	165 715	167 626	11 150	11 788	12 527	13 153
3	*Stable deposits*	112 778	113 290	113 760	114 296	5 639	5 665	5 688	5 761
4	*Less stable deposits*	42 630	46 958	51 932	53 307	5 490	6 101	6 817	7 369
5	Unsecured wholesale funding	69 798	71 151	73 153	73 391	22 065	24 040	25 972	26 694
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*	44 878	35 409	26 001	22 396	9 718	7 864	6 045	5 153
7	*Non-operational deposits (all counterparties)*	24 081	34 796	46 302	50 136	11 507	15 230	19 076	20 665
8	*Unsecured debt*	839	946	851	859	839	946	851	876
9	Secured wholesale funding					3	2	0	0
10	Additional requirements	47 017	47 754	49 409	49 771	8 208	7 735	7 394	7 075
11	*Outflows related to derivative exposures and other collateral requirements*	3 510	3 034	2 530	2 342	3 510	3 034	2 530	1 993
13	*Credit and liquidity facilities*	43 506	44 720	46 879	47 430	4 697	4 701	4 864	5 082
14	Other contractual funding obligations	2 129	2 022	2 274	2 327	1 216	805	982	1 043
15	Other contingent funding obligations	19 289	19 111	18 365	18 206	3 702	3 740	3 755	3 821
16	**TOTAL CASH OUTFLOWS**					46 344	48 109	50 632	51 787
CASH-INFLOWS									
17	Secured lending (eg reverse repos)	621	1 032	1 408	1 504	150	140	124	121
18	Inflows from fully performing exposures	11 863	12 309	11 744	11 143	9 248	9 650	9 185	8 112
19	Other cash inflows	1 911	1 890	1 871	1 830	1 077	1 017	959	836
20	TOTAL CASH INFLOWS	14 395	15 232	15 023	14 477	10 475	10 807	10 268	9 068
EU-20c	*Inflows Subject to 75% Cap*	14 395	15 232	15 023	14 477	10 475	10 807	10 268	9 068
						TOTAL ADJUSTED VALUE			
21	LIQUIDITY BUFFER					49 633	52 112	56 555	60 173
22	TOTAL NET CASH OUTFLOWS					35 868	37 302	40 364	42 719
23	LIQUIDITY COVERAGE RATIO (%)					138%	140%	141%	141%

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. A list of companies subject to consolidation is determined in accordance with the scope of prudential consolidation.

As at the end of December 2019, the Bank's Group had 3 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, EUR and CHF. The Bank's Group had an LCR above 100% for all foreign currencies in total and for PLN.

As at the end of December 2019, the outflows in respect of derivative instruments calculated in accordance with the CRR amounted to PLN 0.5 billion, whereas the impact of the unfavourable market conditions scenario on derivative instruments, financing transactions and other agreements accounted for 0.2% of the total unweighted outflows recognized in the liquidity coverage ratio.

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 contain information on the liquidity risk exposure and information on the utilization of the risk limits. The users of such reports are mainly the ALCO, RC, the Management Board, Risk Committee of the Supervisory Board, and the Supervisory Board.

2.8.6. Management actions related to liquidity risk

The main liquidity risk management tools used in the Bank's Group include:
1) liquidity risk management procedures, including, in particular, liquidity contingency plans,
2) limits and thresholds for liquidity risk,
3) deposit, investment and derivative transactions, including structured foreign exchange transactions, and the purchase and sale of securities,
4) transactions ensuring the long-term financing of 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 risks are 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 SA and the PKO Bank Polski SA 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 loss resulting from inadequate or unreliable internal processes, people and systems or external events. Operational risk includes legal risk, however, it does not include reputation risk or business risk.

The objective of operational risk management is to increase the security of the operating activities carried out by the Bank's Group by improving effective mechanisms of identification, assessment, measurement, control, monitoring, mitigation and reporting of operational risk, tailored to the profile and scale of the activities.

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 operating events arising in servicing products, conducting processes and using IT applications from materializing and of responding to the occurrence of operating events. The responding includes:
1) identifying events and explaining the reasons for their occurrence,
2) defining the consequences of operating events,
3) recording data on operating events and their consequences,
4) monitoring information on operating events and their consequences,
5) minimizing the negative consequences of operating events,
6) implementing corrective and preventive measures.

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 tolerance limits for operational risk.

The Bank's internal regulations clearly define the segregation of duties between the Supervisory Board and the Management Board in the area of operational risk management. As part of operational risk management, the Supervisory Board supervises the operational risk management process, including:
1) approving strategic tolerance limits 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 regular operational risk reports taking into account the annual assessment of the adequacy and effectiveness of the operational risk management system.

As part of operational risk management, the Management Board determines the operational risk management process, in particular:
1) it sets the objectives of operational risk management,
2) it shapes the operational risk management strategy,
3) it adopts resolutions on the operational risk management principles, strategic tolerance limits 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 compliance with the AMA requirements,
3) validation of the AMA,
4) internal audit.

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

2.9.2. Operational risk identification, measurement and assessment

2.9.2.1. Operational risk identification, method of measurement and assessment

For the purposes of operational risk management, the Bank collects internal and external data on operating 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 control system.

The operational risk self-assessment includes the identification and assessment of operational risk for the products, processes and IT applications of the Bank as well as organizational changes. Self-assessment is conducted periodically and before the introduction of new or changed products, processes and applications of the Bank, using collected data on operating events and information obtained during the measurement, monitoring, cooperation with the entities in the Bank's Group and reporting operational risk, including internal audits and security audits.

In 2019, PKO Bank Polski SA and the PKO Leasing SA 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. Operational risk measurement includes:

1) calculation of operational risk indicators: KRI and RI,
2) calculation of the own funds requirement for operational risk under the AMA (for the Bank, including the branch in Germany) 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) calculation of 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 III, Title III) and applies to the part of the Bank's operations for which the Bank has the PFSA's consent obtained in connection with combining the BIA and AMA approaches to calculating the own funds requirement for operational risk.

The Bank estimates the parameters of the distributions used to measure operational risk on the basis of internal and external information on operating events. The algorithm for estimating these parameters takes into account the thresholds of losses from which information on operating events is collected. The value of a threshold for internal events was established, taking into account the economic cost of collecting information on operating events and their added value in operational risk measurement. The used external data on operating events comes 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. Moreover, the operational risk measurement takes into account macroeconomic data and data illustrating the scale of the Bank's operating and business activities.

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 in respect of changes in the quality of internal control and a management adjustment, according to the following formula:

$AMA = (LDA + SA) * (1 + IC) + MA$

where:

AMA - own funds requirement for operational risk (the AMA requirement),
LDA - value at risk,
SA - result of the scenario analysis,
IC - adjustment due to changes in the quality of internal control,
MA - management adjustment.

The AMA requirement measure captures potentially severe tail events, reaching a prudential standard comparable with a 99.9% confidence level over a period of one year.

Value at risk is calculated using a loss distribution approach (LDA). Under this approach, based on historical internal and external information on operating events and on the operating environment, a potential loss is measured which 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 operating events which have not been covered with the LDA approach.

The adjustment for changes in the quality of internal control allows the possibility of deterioration of the quality of the Bank's internal control, which would result in an increase in the frequency or severity of operational risk events, to be taken into account.

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 as part of the scenario analysis, in the calculation of the AMA requirement.

Risk measurement includes conducting stress tests related to the possible consequences of materialization of extremely unfavourable, yet possible, scenarios. This is aimed at defining the sensitivity of the Bank's results to the materialization of a test scenario and at determining whether the AMA requirement covers the total losses resulting from the materialization 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 calculated AMA requirement. Backtesting results confirm the sufficient conservatism of the AMA requirement.

The Model Validation Department, as an independent unit of the Bank, regularly validates the AMA approach used. 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 validation.

2.9.2.2. The Bank's insurance policy

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

The Bank's insurance programme is regularly monitored 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 fulfil the criteria defined in Article 323 of the CRR and are in compliance with the Bank's internal regulations regarding the calculation of reductions in the own funds requirement in respect of insurance. The Bank's insurance policies concern mainly all risk property insurance and the Bank's liability insurance. In calculating reductions in respect of purchased insurance policies, 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. Operational risk control

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 operational risk covers determining risk control mechanisms in the form of operational risk limits, in particular strategic tolerance limits 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 tolerance limits for operational risk are defined by the Management Board and approved by the Supervisory Board. Additionally, the Management Board defines the levels of utilization of the strategic tolerance limits for operational risk for the Bank and the Bank's Group, which, when exceeded, serve as a signal for taking management activities aimed at mitigating 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 for operational risk are not exceeded.

2.9.4. Operational risk monitoring

The objective of operational risk monitoring is to observe deviations from the assumed benchmarks (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) degree of utilization of strategic tolerance limits for the Bank and the Bank's Group and loss limits for operational risk for the Bank,
2) operating events and their consequences,
3) results of operational risk self-assessment,
4) 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) results of stress tests, including reverse stress tests,
6) values of operational risk indicators in relation to thresholds and critical values,
7) 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, and loss limits,
8) effectiveness and timeliness of the management activities undertaken as part of reduction or transfer of operational risk,
9) management activities undertaken because of an increased or high level of operational risk and their effectiveness in reducing the operational risk level.

2.9.5. Operational risk reporting

The reporting of information on operational risk is carried out for the needs of senior management, the ORC, RC, the Management Board and the Supervisory Board on a monthly and quarterly basis.

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 effects of operating events,
2) the structure of operating events,
3) values of operational risk indicators.

The users of quarterly reports are the ORC, 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, 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, and loss limits,
3) results of operational risk measurement and monitoring,
4) 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 actions related to 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.

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,
2) IT,
3) settlements,
4) human resources,
5) business activities,
6) administration,
7) 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.).

Management activities are undertaken in the following cases:
1) on the initiative of the ORC or the Management Board,

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2) on the initiative of the Bank's units responsible for managing operational risk,
3) when operational risk has exceeded the levels set by the Management Board or the 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 results of risk materialization by implementing or enhancing operational risk management tools, such as:
   a) control instruments (among other things, authorization, internal control, separation of functions),
   b) human resources management instruments (personnel selection, improving employees' qualifications, incentive systems),
   c) establishing or verifying the thresholds and critical values of operational risk indicators,
   d) establishing or verifying operational risk limits,
   e) contingency plans,
2) risk transfer – the transfer of responsibility for covering potential losses to an external entity:
   a) insurance,
   b) outsourcing,
3) risk avoidance – discontinuation of risk-generating activities or eliminating the probability that a risk factor will occur.

2.9.7. Incurred losses and operational risk management actions

In 2019, events related to operational risk were disclosed in the Bank, excluding losses related to the lending process, which comprised the losses presented in Table 2.35na, totalling PLN 586.94 million, net (PLN 612.04 million, gross).

The most material operating events were disclosed in the category "Customers, products and operating practices" and related to the recognition of a provision of approximately PLN 127 million for the reimbursement of costs in respect of early repayment of consumer loans, arising from the CJEU's judgement C-383/18, as well as the increase in legal risk costs of convertible currency mortgage loans by approximately PLN 447 million (to a total level of PLN 451 million). These events are the result of the observed growing volatility of the legal environment, over which the Bank has no direct control.

Table 2.35. Gross losses* related to disclosed events

PKO BANK POLSKI SA		2019	
General cathegory	**Specific cathegory**	**Gross losses****	**Net losse*****
Internal frauds	Non-legitimated activities	0,46	0,06
	Thefts and frauds	2,04	0,83
Regulations of employment and work safety	Labour issues	3,48	1,40
	Inequality and discrimination	0,15	0,00
Client, products and operational practises	Customer service, disclosure of information about clients, responsibilities to clients	2,11	2,03
	Improper business or market practices	0,01	0,01
	Products malfunctions	574,70	574,65
	Customer classification and exposures	0,07	0,05
Disruption of bank operations and system failures	Systems	0,36	0,32
Making transactions, providing and managing operational processes	Recording in the system, making, calculating and servicing transactions	4,31	1,67
	Inflow and registering clients	0,06	0,01
	Managing client's bank accounts	0,22	0,04
	Counterparties who are not bank's clients (e.g. clearing houses)	0,87	0,00
	Sellers and suppliers	0,04	0,03
Losses related to fixed assets	Natural disasters and other events	1,34	0,91
External frauds	Thefts and frauds	21,82	4,93
Total		**612,04**	**586,94**

* The losses do not include losses from operational risk related to credit risk, which are recognized as losses from credit risk and are used to calculate minimum requirements for own funds.
** According to Recommendation M, as at 31.12.2019 gross losses include realized losses (e.g. provisions, write-downs, expenses), as well as unrealized (potential) losses, however, they do not include direct recoveries or recoveries from the risk transfer mechanism.

*** As at 31.12.2019, net losses include realized losses (e.g. provisions, write-downs, 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 identified sources of risk, eliminating reversible irregularities and recovering lost funds. Systemic activities comprise, among other things, securing IT systems, improving transaction authorization methods, blocking transfers to accounts identified as accounts associated with criminal activities, developing an anti-fraud system, processes improvement, internal control optimization, training, risk transfer (insurance, outsourcing).

The Bank is constantly increasing the 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, keeping track of the development of malware which attacks the Bank's customers, developing mechanisms of detecting infected customers' computers, as well as improving the rules and extending the scope of monitoring electronic transactions.

The 3D Secure verification implemented in 2016 significantly reduced the number of online transactions which are not authorized by the Bank's customers. In the event of a Chargeback complaint process arising, merchants who do not carry out such verification are obliged to return the funds disputed by the customer.

A specialist unit CERT 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 organization Trusted Introducer which operates with it. Joining international organizations allows the Bank's CERT team to respond more effectively and quickly to cyber security threats through operating cooperation and sharing experience and knowledge with similar entities around the world. The membership is also a confirmation of the high level of the services provided and the recognition of professionalism and skills in ensuring the Bank's IT security. As a result, the Bank is perceived as an organization which meets top national and international standards in cyber security.

Additionally, the Bank's representatives get involved in the work carried out as part of the Banking Cybersecurity Centre (BCC) operating as part of the Polish Bank Association. The BCC's objective is to carry out comprehensive and long-term activities at several levels: the intrasector level, the intersector level (among other things, cooperation with institutions in the telecommunications, transport or power sectors), the national level (cooperation with the state administration and law enforcement bodies) and the international level, aimed at increasing the level of security of mobile and electronic banking and preparing tools (structures, procedures, information exchange mechanisms) for managing emergency situations (e.g. in the event of a massive cyberattack on the banking sector).

As part of cooperation in exchanging information about threats, in 2019 the Bank used information on malware, incidents or phishing attacks, in particular data on trends and new threats from the CIRCL – the Computer Incident Response Center Luxembourg and the NICP – institutions participating in the NATO Industry Cyber Partnership of which PKO Bank Polski SA is a member as the only bank from Poland.

As regards the physical security of facilities, the monetary values they hold and the information they process, the Bank uses technical safeguards (construction, mechanical and electronic ones), stationary physical protection and remote protection in the form of monitoring of alarm signals with the arrival of an intervention team guaranteed. The Bank's current activities in the area of physical protection and monitoring of alarm signals as well as the implemented technical safeguards are aimed at minimizing the risks associated with storing substantial amounts of cash, such as robberies and burglaries as well as other threats to physical security, such as fires, property damage, vandalism and terrorism. Furthermore, technical safeguards and physical protection increase the security of the Bank's telecom infrastructure and the information processed at the Bank, especially the information which constitutes bank secrecy and personal data. The technical safeguards of the Bank's facilities, the stationary physical protection and monitoring of alarm signals ensure the level of security required by law and adequate to the assessment of operational risk. The security inside the facilities is ensured through physical restriction and control of people's access to protected areas in which monetary values and deposits are stored and the processing of protected data and the key elements of the Bank's IT Network, by using alarm systems, access control systems and CCTV systems.

In 2019:

1) the Bank complied with the recommendations of the PSD2 – changes were made for customers in the iPKO and Inteligo transactional systems, the mobile application IKO and the servicing of payment cards, among other things, by introducing additional authorization for certain transactions, masking one-time passwords or shortening sessions in the systems,
2) the functionality which consists of defining limits for payments ordered through online banking and which enables customers to manage them on their own at system level and automatic telephone service (IVR) level was expanded,
3) the systems for detecting incidents, anomalies and advanced types of malware, as well as the automation of many activities related to handling incidents were enhanced,
4) the Bank became a key service operator within the meaning of the Act on the national cybersecurity system and implemented the 24/7/365 operation mode in regard to responding to incidents.

The Bank has continued its efforts aimed at preparing the first comprehensive biometric solution in Polish banking. Its objective is to develop a system which enables safe and effective verification of a person based on his or her unique physical or behavioural features, using an innovative biometric technology. In 2019, work was carried out on the aspect of the solution for customer identification and verification in the Laboratory Departments, the Access Control System and the concept for the mobile customer, including the aspect of the Biometric Authorization Centre – the Laboratory Departments were responsible for running UATs, whereas the Biometric Access Control was introduced at the Bank's Head Office. Additionally, the Bank received a positive decision of the National Centre for Research and Development on financing, which allows more research to be undertaken on the use of biometrics in the ePUAP (BIOPUAP) application. The use of biometric data in banking will introduce a new quality in the approach to security, speed of authorization and customer service costs. The technology used is safe and resistant to forgery. Biometric data cannot be copied or used by third parties. The solution being prepared by the Bank will constitute an authorization method complementary to the existing solutions and a starting point for work on new technologies used in banking.

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 in the business environment, making bad decisions, incorrect implementation of the decisions made or failing to take appropriate action in response to changes in the business environment.

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

2.10.2. Business risk measurement and assessment

The identification of business risk consists of recognizing and determining factors, both current and potential ones, resulting from the current and planned activities of the Bank's Group, which may significantly affect the financial position of the Bank's Group, generating income 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 had an impact on significant deviations of the actual amounts of income 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 predetermined risk measures. The measurement of business risk covers:
1) calculation of internal capital,
2) conducting stress tests,
3) conducting reverse stress tests.

The level of business risk is assessed on a quarterly basis, based on the risk level resulting from:
1) level of calculated strategic tolerance limits,
2) qualitative assessment of business risk,
3) results of backtesting of internal capital for business risk.

2.10.3. Business risk control

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

2.10.4. Business risk monitoring

The objective of monitoring business risk is to diagnose the areas which require management activities. The monitoring of business risk includes, in particular:
1) strategic tolerance limits for business risk,
2) results of stress tests,
3) results of reverse stress tests,
4) internal capital level,
5) deviations of the actual business risk from forecasts,
6) results of a qualitative assessment of business risk.

2.10.5. Business risk reporting

The reporting of the business risk of the Bank's Group is performed on a quarterly basis. The users of business risk reports include the ALCO, RC, the Management Board, Risk Committee of the Supervisory Board, and the Supervisory Board. The reports include, among other things, the results of business risk measurement, in particular internal capital, the degree of utilization of the strategic tolerance limit for business risk, results of a qualitative assessment of business risk, forecast for internal capital to cover business risk, backtesting 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 utilization of the strategic tolerance limit for business risk.

2.10.6. Management actions 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 tolerance limit for business risk.

2.11. Model risk

2.11.1. Introduction

Model risk is the risk of incurring losses as a result of making incorrect 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 incorrect 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 regular, independent validation carried out by the validation unit of PKO Bank Polski SA.

2.11.2. Model risk identification, measurement and assessment

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 on a regular basis.

The assessment of model risk is aimed at determining the scale of threats relating to the existence of 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. Model risk control

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

2.11.4. Model risk monitoring and reporting

The objective of monitoring model risk is to diagnose the areas which require management activities. The monitoring of model risk includes:
1) updating the model risk level,
2) assessing the utilization of the strategic tolerance limit for model risk and model risk thresholds,
3) verifying the status of implementation and evaluating the effectiveness of model risk mitigation activities.

The results of the monitoring are presented periodically in reports intended for the RC, Management Board, Risk Committee of the Supervisory Board, and the Supervisory Board and they contain a comprehensive assessment of model risk, in particular:
1) information on the degree of utilization of the strategic tolerance limit for model risk,
2) information on the level of model risk (on an individual and consolidated basis),
3) model risk map,
4) evaluation 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 actions related to model risk

The objective of management activities is to influence 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. Macroeconomic risk identification and assessment

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 arises 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 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) calculation of the results of operations and their components as well as risk measures as part of comprehensive stress tests,
2) conducting reverse stress tests,
3) calculation of internal capital.

The level of macroeconomic risk is assessed on an annual basis, using the results of periodical comprehensive stress tests (scenarios for the assessment of macroeconomic risk). The level of macroeconomic risk is assessed as moderate, increased or high.

2.12.3. Macroeconomic risk control

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 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. Macroeconomic risk reporting

The monitoring of 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. Macroeconomic risk reporting

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

The report presents, in particular:
1) results of the assessment of macroeconomic risk, in particular internal capital,
2) level of macroeconomic risk,
3) results of comprehensive stress tests,
4) results of reverse stress tests.

2.12.6. Management actions related to macroeconomic risk

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

2.13. Risk management in PKO Bank Hipoteczny SA

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

Due to the specialist nature of a mortgage bank:
1) credit risk management relates mainly to competencies 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 competencies are focused in the area of the issue of instruments on the domestic and foreign secured debt markets.

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

PKO Bank Hipoteczny SA determines the MLV based on an appraisal of the mortgage lending value of a property, which is carried out with due diligence and prudence, taking into account only those features of the property and the expenditure necessary to build it that will be durable and, assuming reasonable operation thereof, will be possible to obtain by each owner of the said property. 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 a given property, 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 SA's business model assumes a large share of mortgage covered bonds in the bank's 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, this financing has to be replaced with more issues or an alternative source of financing. In managing liquidity, PKO Bank Hipoteczny SA pays special attention to matching cash flow dates and the opportunities to renew its sources of financing at the time of the 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 SA as at and for the year ended 31 December 2019 and in the Directors' Report of PKO Bank Hipoteczny as at and for the year ended 31 December 2019.

3. 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 relating to the CRR.

The own funds of the Bank's Group comprise Common Equity Tier I capital and Tier II capital. No elements of Additional Tier I capital are identified in the Bank's Group.

Common Equity Tier I capital comprises:
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 referred to as the "GM") and earmarked exclusively for offsetting accounting losses which may arise,
4) other accumulated total 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 GM and earmarked for unidentified banking risks,
6) retained earnings (unappropriated profits),
7) 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 recognized in own funds on condition that it is approved by the GM or, before being approved by the GM, the PFSA's consent to its recognition in own funds is obtained.

The Tier I capital is reduced by the following items:
1) losses for the current financial year,
2) intangible assets stated at their carrying amounts, net of the related deferred income tax provision, the deducted amount includes goodwill taken into account in the valuation of significant investments,
3) additional adjustments to assets measured at fair value, which result from compliance with the requirements for prudential valuation,
4) deferred income tax assets based on future profitability and not resulting from temporary differences,
5) additional fair value adjustments to liabilities and derivative instruments constituting liabilities, resulting from the Bank's own credit risk,
6) deferred income tax assets based on future profitability and resulting from temporary differences, exceeding 10% of the Common Equity Tier I capital of the Bank's Group (less the amounts specified in points 1-5 and 7),
7) direct and indirect capital 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 I capital instruments or Tier II instruments of these entities, provided that their total exceeds 10% of the Common Equity Tier I capital of the Bank's Group (less the amounts specified in points 1-5),
8) direct and indirect capital 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 I capital instruments of these entities, whose total exceeds 10% of the Common Equity Tier I capital of the Bank's Group (less the amounts specified in points 1-5 and 7),
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 I capital of the Bank's Group (less the amounts specified in points 1-5 and 7), and
   b) direct and indirect capital 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 I capital instruments of these entities, up to 10% of the Common Equity Tier I capital of the Bank's Group (less the amounts specified in points 1-5 and 7),

exceeds an equivalent of 17.65% of the Common Equity Tier I capital of the Bank's Group (less all the amounts specified in points 1-7), the amount below the threshold (17.65%) is recognized in risk-weighted exposures.

An amount below the threshold (17.65%) is recognized in risk-weighted assets.

Tier II capital comprises 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.

The Tier II capital is reduced by the following items:
1) direct and indirect capital exposures to financial sector entities in the form of Tier II capital instruments of these entities if the institution has made significant investments in these entities,
2) direct and indirect capital exposures to financial sector entities if the institution has not made significant investments in these entities, in the form of shares held or other Tier II capital instruments, provided that the total of these exposures exceeds 10% of the Bank's Common Equity Tier I capital.

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

Pursuant to Commission Implementing Regulation 1423/2013, Table 3.1 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 2019.

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Table 3.1. Reconciliation of the items in the statement of financial position used to calculate own funds to regulatory own funds

	2019				
	IFRS compliant financial report	De-consolidation of entities not subject to prudential consolidation	Prudential consolidation / CRR compliant financial report	Items not recognized in the regulatory own funds	Items recognized in the regulatory own funds
Assets					
Intangible assets	3 178	-164	3 014	-194	2 820
Liabilities					
Subordinated liabilities	2 730	0	2 730	-30	2 700
Capital					
Share capital	1 250	0	1 250	0	1 250
Supplementary capital	29 429	-1	29 428	0	29 428
Other reserves	3 237	-77	3 160	0	3 160
General banking risk reserve	1 070	0	1 070	0	1 070
Other income	469	0	469	-231	238
Revaluation capital related to assets avalable for sale	456	3	459	0	459
Revaluation capital related to cash flow hedging instruments	232	-1	231	-231	0
Exchange differences	-191	-2	-193	0	-193
Actuarial gains / losses	-15	-1	-16	0	-16
Share in other comprehensive income of an associated entity	-13	1	-12	0	-12
Net profit for the current period	4 031	19	4 050	-3 012	1 038
Previous years' result	2 101	316	2 417	0	2 417
Non-Controlling Interest	-9	9	0	0	0
Total own funds	41 578	266	41 844	-3 243	38 601
Additional deductions					936
Additional adjustments of assets measured at fair value					-94
Deferred tax assets reliant on future profitability excluding those arising from temporary differences					0
Adjustments resulting from IFRS 9 during the transition period					1 030
Own funds total used for calculation of capital adequacy ratio					39 417

Pursuant to Commission Implementing Regulation 1423/2013 Table 3.2 presents information on the nature and amounts of individual own funds used to calculate a Total Capital ratio as at 31 December 2019. The rows with values equal to 0 were left out.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 3.2. Own funds used to calculate capital adequacy ratios (consolidated basis)

2019			
Common Equity Tier I capital: Instruments and reserves		**(A) Value at the disclosure date**	**(B) Reference to the Article of Regulation (EU) No 575/2013**
1	Capital instruments and the related share premium accounts	1 250	Art. 26 par. 1 subpar. a) and b)
	of which: A-SERIES REGISTERED SHARES	313	
	of which: A-SERIES COMMON BEARER SHARES	198	
	of which: B-SERIES COMMON BEARER SHARES	105	
	of which: C-SERIES COMMON BEARER SHARES	385	
	of which: D-SERIES COMMON BEARER SHARES	250	
2	Retained earnings	3 455	Art. 26 par. 1 subpar. c), Art. 28
3	Accumulated other comprehensive income	33 057	Art. 26 par. 1 subpar. d) and e)
3a	Funds for general banking risk	1 070	Art. 26 par. 1 subpar. f)
6	Common Equity Tier I prior to regulatory adjustments	38 832	Art. 26
Common Equity Tier I capital: regulatory adjustments			
7	Additional value adjustment (negative value)	-84	Art. 34
8	Intangible assets (net of related deferred tax liabilities) (negative value)	-2 820	Art. 36 par. 1 subpar. b)
10	Deferred tax assets reliant on future profitability excluding those arising from temporary differences (net of related income tax liabilities providing the conditions in Article 38 (3) are met) (negative value)	0	Art. 36 par. 1 subpar. c), Art. 38
11	Fair value reserves related to gains or losses resulting from cash flow headging instruments	-231	Art. 33 par. 1 subpar. a)
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-10	Art. 33 par. 1 subpar. c)
20	Adjustments resulting from IFRS 9 during the transition period	1 030	0
26	Regulatory adjustments applied to Common Equity Tier I in respect of amounts subject to pre-CRR treatment	0	Art. 469 par. 1 subpar. a) and b), Art. 472 par. 5, Art. 468 par. 4, Art. 472 par. 2, Art. 478
26a	Regulatory adjustments relating to unrealised gains and losses pursuant to Article 467 and 468	0	Art. 467, Art. 468
	of which: ... filter for unrealised loss 1	0	Art. 467
	of which: ... filter for unrealized loss 2	0	Art. 467
	of which: ... filter for unrealised loss 3	0	Art. 467

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

28	Total regulatory adjustments to Common equity Tier I	-2 115	
29	Common Equity Tier I capital	36 717	Art. 50
Additional Tier I: regulatory adjustments			
45	Tier I capital (Tier I = Common Equity Tier I + Additional Tier I capital)	36 717	Art. 25
Tier II capital: instruments and provisions			
46	Capital instruments and the related share premium accounts	2 700	Art. 62 subpar. a), Art. 63
51	Tier II capital before regulatory adjustments	2 700	Art. 62
Tier II Capital: regulatory adjustments			
58	Tier II capital	2 700	Art. 71
59	Total capital (Tier I + Tier II capital)	39 417	Art. 72
60	Total risk weighted assets	214 006	0
Capital ratios and buffers			
61	Common Equity Tier 1 capital (expressed as a percentage of the total risk exposure amount)	17,16	Art. 92 par. 1 subpar. a)
62	Tier 1 capital (expressed as a percentage of the total risk exposure amount)	17,16	Art. 92 par. 1 subpar. b)
63	Total capital (expressed as a percentage of the total risk exposure amount)	18,42	Art. 92 par. 1 subpar. c)
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer expressed as a percentage of risk exposure amount)	6,39	
65	of which: capital conservation buffer requirement	2,50	
66	of which: countercyclical buffer requirement	0,01	
67	of which: systemic risk buffer requirement	2,88	
67a	of which: Global Systemically Important Institution (G-SII) or other Systemically Important Institution (O-SII) buffer	1,00	
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	9,16	
Amounts below the thresholds for deduction (before risk weighting)			
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investement in those entities (amount below 10% threshold and net of eligible short positions)	0	Art. 36 par. 1 subpar. h), Art. 46 par. 4
73	Direct and indirect holdings by the instittiution of the CET1 instruments of financial sector entities where the institution has a significant investement in those entities (amount below 10% threshold and net of eligible short positions)	897	Art. 36 par. 1 subpar. i), Art. 48 par. 1, Art. 470
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	2 453	Art. 36 par. 1 subpar. c), Art. 48 par. 1, Art. 470

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As at 31 December 2019, pursuant to Article 48 of the CRR, the capital exposures to financial sector entities on an individual basis have exceeded 10% of Common Equity Tier I capital and the surplus over the 10% is a reduction of the Bank's own funds, whereas on a consolidated basis they have not exceeded 10% of Common Equity Tier I capital, therefore, they do not constitute deductions from the own funds of the Bank's Group, and were recognized in risk-weighted assets.

A description of the main features of the instruments issued by the Bank and recognized in Common Equity Tier I capital and Tier II instruments is presented in Table 3.3. (the data is presented in PLN). The rows not related to the Bank's Group were left out.

Table 3.3. Capital instruments' main features (in PLN)

Capital instruments		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 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	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 and (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 (PLN, 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
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-offs	No	No	No	No	No	No	No
36	Non-compliant transitional features	No	No	No	No	No	No	No

As at 31 December 2019, the Bank's own funds calculated for capital adequacy purposes included the Bank's net profit for 2018 (of PLN 1 672.7 million, with PLN 1 662.5 million being earmarked for dividend payments to the shareholders), with a part of this amount (PLN 1 635 million) being already recognized in the Bank's own funds as at 31 December 2018 due to obtaining the PFSA's approvals for the recognition of the net profit for three quarters of 2018, less expected charges, in own funds. This profit increased the Bank's reserve capital by PLN 5 million, and the remainder (PLN 1 667.7 million) remained unappropriated in accordance with the resolution of the Annual General Meeting of Powszechna Kasa Oszczędności Bank Polski Spółka Akcyjna of 6 May 2019 on the appropriation of the PKO Bank Polski SA's profit earned in 2018.

Additionally, after obtaining the PFSA's relevant approvals, the Group recognized the net profit for the 1st half of 2019 subject to prudential consolidation, less expected charges (of PLN 1 038 million) in Common Equity Tier I capital.

4. Own funds requirements

Pursuant to the CRR, the Bank's Group calculates own funds requirements for the following types of risk:

1) credit risk – under the standardized approach (pursuant to Part III, Title II, Chapter 2 of the CRR), using the following formulas in respect of:
   a) on-balance sheet exposures – the product of a carrying amount (taking into account the value of adjustments for specific credit risk), the risk weight assigned to the exposure under the standardized method of calculation of the own funds requirement for credit risk and 8% (taking into account eligible collateral),
   b) off-balance sheet liabilities granted – the product of the amount of a liability (taking into account the value of adjustments for specific credit risk), the risk weight of a product, the risk weight assigned to an off-balance sheet exposure under the standardized method of calculation of the own funds requirement for credit risk and 8% (taking into account eligible collateral),
   c) off-balance sheet transactions (derivative instruments) – the product of the risk weight assigned to an off-balance sheet transaction under the standardized method of calculation of the own funds requirement for credit risk, the on-balance sheet equivalent of the off-balance sheet transactions and 8% (the value of the on-balance sheet equivalent is calculated using the mark-to-market method),
2) operational risk:
   a) under the AMA – in respect of the Bank's operations, including the operations of the foreign branch in Germany[10] and excluding 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 the Czech Republic 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) foreign exchange risk – calculated under the basic approach,
   b) commodities risk – calculated under the simplified approach,
   c) equity instrument 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) settlement/delivery risk – calculated under the approach specified in Title V, Part III of the CRR,
   b) counterparty credit risk – calculated using the mark-to-market method specified in Chapter 6, Title II, Part III of the CRR,
   c) credit valuation adjustment risk (CVA) – calculated under the standardized approach specified in Title VI, Part III of the CRR,
   d) large exposures limit risk – calculated under the approach specified in Article 395-401 of the CRR,
   e) own funds requirement for trade exposures and own funds requirement for pre-funded contributions to the default fund of a qualifying central counterparty (CCP) is calculated for exposures to a central counterparty, using the method specified in Part III, Title II, Chapter 6, Section 9 of the CRR).

The total own funds requirement for the Bank's Group comprises all of the above 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).

[10] As from 1 January 2019, the Bank introduced an extended AMA to cover the Branch in Germany in accordance with the criteria which are being developed for the allocation of the own funds requirement for operational risk under the AMA for the Branch in Germany.

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Information on the own funds requirements of the Bank's Group is presented in Table 4.1.

Table 4.1 Risk weighted assets of the Bank Group [template EU OV1]

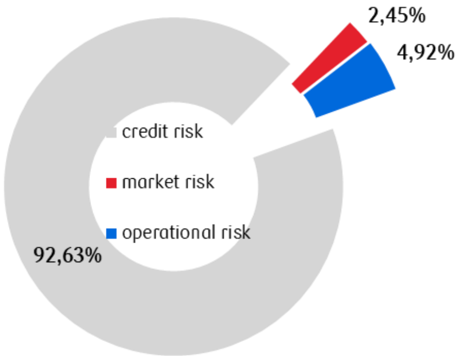
The Bank's Group			RWAs					Minimum capital requirements
			31.12.2019	30.09.2019	30.06.2019	31.03.2019	31.12.2018	31.12.2019
	1	Credit risk (excluding CCR)	195 614	194 999	189 022	187 741	184 709	15 649
Article 438 (c)(d)	2	Of which the standardised approach	195 614	194 999	189 022	187 741	184 709	15 649
Article 107 Article 438 (c)(d)	6	CCR	2 610	2 891	2 548	2 266	1 767	208
Article 438 (c)(d)	7	Of which mark to market	1 917	2 129	1 853	1 615	1 416	153
Article 438 (c)(d)	8	Of which original exposure	0	0	0	0	0	0
	9	Of which the standardised approach	0	0	0	0	0	0
	10	Of which internal model method (IMM)	0	0	0	0	0	0
Article 438 (c)(d)	11	Of which risk exposure amount for contributions to the default fund of a CCP and other exposures to the central counterparty	403	412	382	327	43	32
Article 438 (c)(d)	12	Of which CVA	290	350	313	324	308	23
Article 438 (e)	13	Settlement risk			1		0	
Article 438 (e)	19	Market risk	5 241	5 793	5 600	5 728	5 900	419
	20	Of which the standardised approach	5 241	5 793	5 600	5 728	5 900	419
	21	Of which IMA	0	0	0	0	0	0
Article 438 (e)	22	Large exposures	0	0	0	0	0	0
Article 438 (f)	23	Operational risk	10 540	9 849	9 287	8 513	8 066	843
	24	Of which basic indicator approach	3 277	3 277	3 277	2 849	2 623	262
	25	Of which standardised approach						
	26	Of which advanced measurement approach	7 263	6 572	6 010	5 664	5 443	581
Article 437 (2), Article 48 and Article 60	27	Amounts below the thresholds for deduction (subject to 250% risk weight)	8 375	7 872	7 840	7 941	7 893	670
Article 500	28	Floor adjustment	0	0	0	0	0	0
	29	**Total**	**214 006**	**213 532**	**206 458**	**204 248**	**200 442**	**17 120**

The key events affecting the level of risk-weighted assets:

1) increase in the value of exposures,
2) change in exchange rates,
3) repayment of foreign currency loans,
4) increase in the amount of insurance deductions (AMA) and recognition of the provision for reimbursement of expenses for early repayment of consumer loans resulting from the judgment of the Court of Justice of the European Union (advanced measurement method).

As at 31 December 2019, the own funds requirement for credit risk constituted the largest part of the total own funds requirement for the Bank's Group (92.63%) – chart 4.1. The credit risk shown in the chart includes credit valuation adjustment risk, whereas settlement/delivery risk is presented as part of market risk.

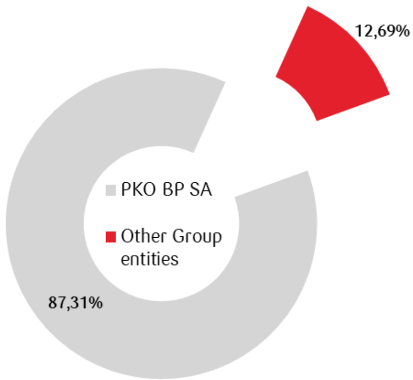
Chart 4.1. Structure of the own funds requirement by risk types



CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

The own funds requirement for the Bank constituted a significant part (87.3%) of the total own funds requirement for the Bank's Group (chart 4.2).

Chart 4.2. Structure of the own funds requirement – the Bank and entities in the Bank's Group



The Bank's Group comprises 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, including the assessment of compliance with the capital requirements for insurance companies.

As at 31 December 2019, the Bank did not have any instruments which should be disclosed as non-deducted shares in insurance companies in accordance with Article 49 of the CRR.

4.1. Credit risk

The own funds requirement for credit risk and counterparty credit risk as at 31 December 2019 by exposure class is presented in Table 4.2.

Table 4.2. Structure of the own funds requirement for credit risk* in the Bank's Group

	2019		2018	
Exposures to central governments or central banks	553	3,5%	511	3,4%
Exposures to regional governments or local authorities	176	1,1%	172	1,2%
Exposures to public sector entities	68	0,4%	13	0,1%
Exposures to multilateral development banks	0	0,0%	0	0,0%
Exposures to international organisations	0	0,0%	0	0,0%
Exposures to institutions	233	1,5%	219	1,5%
Exposures to corporates	4 166	26,3%	3 961	26,6%
Retail exposures	3 852	24,3%	3 787	25,4%
Exposures secured by mortgages on immovable property	5 459	34,5%	4 962	33,3%
Exposures in default	554	3,5%	605	4,1%
Exposures associated with particularly high risk	164	1,0%	133	0,9%
Exposures in the form of covered bonds	0	0,0%	0	0,0%
Items representing securitisation positions	0	0,0%	0	0,0%
Exposures to institutions and corporates with a short-term credit assessment	0	0,0%	0	0,0%
Exposures in the form of units or shares in collective investment undertakings ('CIUs')	0	0,0%	0	0,0%
Equity exposures	180	1,1%	166	1,1%
Other items	430	2,7%	366	2,5%
Total	**15 835**	**100,0%**	**14 893**	**100,0%**

* including the capital requirement for credit risk, counterparty credit risk (the mark-to-market method) and CCP risk

The Bank's Group is obliged to maintain the highest own funds requirement for covering the risk related to exposures secured with real estate (34.5%) and retail exposures (24.3%), which is due to the Bank's large exposure to these segments as well as corporate exposures (26.3%).

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4.2. Market risk

In 2019, the requirement for specific debt instrument risk had the largest share in the own funds requirement for market risk in the Bank's Group (71.0%). Another type of own funds requirement which is significant in terms of its share is the capital requirement for general debt instrument risk (23%) (Table 4.3.).

Table 4.3. Capital requirement for for market risk [template EU MR1]

		2019	
		a)	b)
		RWAs	Capital requirements
	Outright products		
1	Interest rate risk (general and specific)	4 871	390
2	Equity risk (general and specific)	351	28
3	Foreign exchange risk	0	0
4	Commodity risk	0	0
	Options		
5	Simplified approach	0	0
6	Delta-plus method	11	1
7	Scenario approach	7	1
8	Securitisation (specific risk)	0	0
9	**Total**	**5 241**	**419**

The own funds requirement for foreign exchange risk was zero, because the total currency position did not exceed 2% of the own funds of the Bank's Group.

As at the end of 2019, the Bank's Group did not have an open position for commodities risk, 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.

4.3. Operational risk

The division of the own funds requirement for operational risk according to the calculation method used is presented in Table 4.4.

Table 4.4. Capital requirement for operational risk

	The Bank Group		Other Group companies		Bank	
	2019	2018	2019	2018	2019	2018
Basic Index Approach - BIA	262	210	261	209	1	1
Advanced approach - AMA	581	435	0	0	581	435
Total	**843**	**645**	**261**	**209**	**582**	**436**

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5. Encumbered and unencumbered assets

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

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). As at 31 December 2018, 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.

Moreover, the Bank's Group held debt securities issued in the form of mortgage covered bonds and bonds secured with mortgage loans of PLN 21 739 million and bonds of PLN 1 983 million secured with receivables under lease contracts of PLN 1 983 million.

Table 5.1. Encumbered and unencumbered assets

		2019			
		Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
		010	040	060	090
010	**Assets of the Bank Group**	25 123		320 293	
030	Equity instruments	0		479	
040	Debt securities	441	381	77 304	63 918
050	of which: covered bonds	0	0	0	0
060	of which: asset-backed securities	0	0	0	0
070	of which: issued by general governments	441	381	71 076	59 066
080	of which: issued by financial corporations	0	0	1 239	1 301
090	of which: issued by non-financial corporations	0	0	3 989	2 551
120	Other assets	24 682		242 511	
121	of which: loans and advances other than loans on demand	24 463		208 775	
122	of which: loans on demand	220		12 836	
123	of which: other	0		20 899	

Table 5.2. Collateral received

		2018	
		Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
		010	040
241	**Own covered bonds and asset-backed securities issued and not yet pledged**		0
250	**TOTAL ASSETS, COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED**	25 123	

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Table 5.3. Encumbered assets/collateral received and related liabilities

		2019	
		Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
		010	030
010	Carrying amount of selected financial liabilities	18 268	25 096
011	of which: debt securities issued	18 222	25 053
012	of which: repurchase agreements	46	43

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 of derivative transactions constitutes a standard mechanism for securing the Bank's credit exposure resulting from the concluded security agreements and, as such, forms part of the Bank's business model related to transactional activity on the financial markets.

6. Capital buffers

Pursuant to the CRR and the Act on macroprudential supervision, financial institutions are obliged to maintain a combined buffer requirement above the minimum levels set out in the CRR for:
1) Total Capital Ratio (TCR),
2) Tier I capital ratio (T1),
3) Common Equity Tier I capital ratio (CET1).

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 I capital.

The capital conservation buffer is applicable to all banks. As at 31 December 2019, the capital conservation buffer was 2.5%.

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. The countercyclical buffer rate is set by the competent authority of the country in which the Bank has exposures. As at 31 December 2019, the countercyclical buffer rate was 2.5% for credit exposures in Sweden and Norway, 2% for Hong Kong, 1.75% for Iceland, 1.5% for Slovakia and the Czech Republic, 1% for Great Britain, Ireland and Lithuania, 0.5% for Bulgaria, and 0.25% for France.

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 2019, the countercyclical buffer specific for the Bank's Group was 0.01%.

Tables 6.1. and 6.2 are presenting information regarding geographical distribution of the relevant credit exposures and countercyclical buffer rate specific for the Bank's Group.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 6.1. Geographical distribution of credit exposures relevant for the calculation countercyclical capital buffer*

		2019											
		General credit exposures		Tradind book exposures		Securitisation exposure		Own funds requirements				Own funds requirements weights	Countercyclical buffer rate
		Exposure value for SA	Exposure value for IRB approach	Sum of long and short positions of trading book exposures for SA	Value of trading book exposures for the IMA	Exposure value for SA	Exposure value for IRB approach	of which: General credit exposures	of which: Trading book exposures	of which: Securitisation exposures	Total		
		010	020	030	040	050	060	070	080	090	100	110	120
010	Breakdown by country												
1	Poland	246 870	0	2 873	0	0	0	14 304	217	0	14 521	96,669216	0,00
2	Ukraine	1 789	0	0	0	0	0	143	0	0	143	0,952300	0,00
3	Luxembourg	1 669	0	0	0	0	0	134	0	0	134	0,889200	0,00
4	Spain	616	0	0	0	0	0	49	0	0	49	0,327900	0,00
5	Germany	479	0	0	0	0	0	38	0	0	38	0,254100	0,00
6	Norway	394	0	0	0	0	0	31	0	0	31	0,208500	2,50
7	Netherlands	249	0	0	0	0	0	20	0	0	20	0,132700	0,00
8	Bahamas	229	0	0	0	0	0	18	0	0	18	0,122000	0,00
9	Hungary	172	0	0	0	0	0	14	0	0	14	0,091500	0,00
10	Czech Republic	157	0	0	0	0	0	13	0	0	13	0,083300	1,50
11	Sweden	111	0	0	0	0	0	9	0	0	9	0,059500	2,50
12	Cyprus	82	0	0	0	0	0	6	0	0	6	0,040400	0,00
13	Liberia	81	0	0	0	0	0	7	0	0	7	0,043300	0,00
14	Great Britain	65	0	0	0	0	0	5	0	0	5	0,031400	1,00
15	France	64	0	0	0	0	0	5	0	0	5	0,032500	0,25
16	Malta	30	0	0	0	0	0	4	0	0	4	0,023600	0,00
17	Switzerland	25	0	0	0	0	0	2	0	0	2	0,014500	0,00
18	Estonia	18	0	0	0	0	0	1	0	0	1	0,009600	0,00
19	Irlandia	7	0	0	0	0	0	0	0	0	0	0,003300	1,00
20	United States of America	4	0	0	0	0	0	0	0	0	0	0,002400	0,00
21	Beligium	4	0	0	0	0	0	0	0	0	0	0,001800	0,00
22	Italy	3	0	0	0	0	0	0	0	0	0	0,001200	0,00
23	Denmark	2	0	0	0	0	0	0	0	0	0	0,001300	1,00
24	Australia	1	0	0	0	0	0	0	0	0	0	0,000600	0,00
25	Ecuador	1	0	0	0	0	0	0	0	0	0	0,000600	0,00

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

26	South Korea	1	0	0	0	0	0	0	0	0	0	0,000500	0,00
27	Central African Republic	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
28	Canada	0	0	0	0	0	0	0	0	0	0	0,000200	0,00
29	Russia	0	0	0	0	0	0	0	0	0	0	0,000300	0,00
30	Bulgaria	0	0	0	0	0	0	0	0	0	0	0,000200	0,50
31	Belarus	0	0	0	0	0	0	0	0	0	0	0,000200	0,00
32	Austria	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
33	Greece	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
34	United Arab Emirates	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
35	Georgia	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
36	Portugal	0	0	0	0	0	0	0	0	0	0	0,000200	0,00
37	Finland	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
38	Iceland	0	0	0	0	0	0	0	0	0	0	0,000100	1,75
39	Columbia	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
40	Kazakhstan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
41	Brazil	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
42	Moldova	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
43	Romania	0	0	0	0	0	0	0	0	0	0	0,000200	0,00
44	Hong Kong	0	0	0	0	0	0	0	0	0	0	0,000200	2,00
45	China	0	0	0	0	0	0	0	0	0	0	0,000100	0,00
46	Latvia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
47	Slovenia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
48	French Polynesia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
49	Lithuania	0	0	0	0	0	0	0	0	0	0	0,000000	1,00
50	India	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
51	Slovakia	0	0	0	0	0	0	0	0	0	0	0,000000	1,50
52	Armenia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
53	Iran	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
54	Uzbekistan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
55	Nepal	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
56	Philippines	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
57	Afghanistan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
58	Uganda	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
59	Turkey	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
60	Syria	0	0	0	0	0	0	0	0	0	0	0,000000	0,00

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

61	Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
62	Pakistan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
63	Iraq	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
64	Tajikistan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
65	Azerbajian	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
66	Jordan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
67	Bangladesh	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
68	Serbia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
69	Indonesia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
70	Venezuela	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
71	Vietnam	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
72	Israel	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
73	Tunisia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
74	Kyrgyzstan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
75	Egypt	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
76	South Georgia and the South Sandwich Islands	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
77	Thailand	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
78	Niue	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
79	South Africa	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
80	Nigeria	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
81	Algeria	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
82	New Zeland	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
83	Cuba	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
84	Albany	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
85	Senegal	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
86	Macau	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
87	Mongolia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
88	Kenya	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
89	Sri Lanka	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
90	Macedonia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
91	Mexico	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
92	Ethiopia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
93	Cameroon	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
94	Japan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

95	North Korea	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
96	Aruba	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
97	Zimbabwe	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
98	Malaysia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
99	Congo	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
100	Croatia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
101	Guernsey	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
102	Morocco	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
103	Yemen	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
104	Gibraltar	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
105	Taiwan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
106	Singapore	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
107	Ghana	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
108	Kuwait	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
109	Bosnia and Herzegovina	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
110	Panama	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
111	Turkmenistan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
112	Mali	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
113	Angola	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
114	Lebanon	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
115	Tanzania	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
116	New Caledonia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
117	Liechtenstein	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
118	Eritrea	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
119	Montenegro	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
120	Libya	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
121	Mozambique	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
122	Argentina	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
123	Sierra Leone	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
124	Laos	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
125	Falkland Islands	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
126	Paraguay	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
127	Bahrain	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
128	Oman	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
129	Peru	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
130	Namibian	0	0	0	0	0	0	0	0	0	0	0,000000	0,00

131	Qatar	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
132	Uruguay	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
133	Gambia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
134	Benin	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
135	Papua New Guinea	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
136	Botswana	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
137	Curacao	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
138	Bolivia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
139	Dominican Republic	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
140	Sudan	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
141	Surinam	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
142	Malawi	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
143	Zambia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
144	Guatemala	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
145	Ivory Coast	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
146	Djibouti	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
147	Somalia	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
148	British Indian Ocean Territory	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
149	Saint Kitts and Nevis	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
150	Andorra	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
151	Chile	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
152	Niger	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
153	Chad	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
154	Guinea	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
155	Bouvet Island	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
156	Monaco	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
157	Nicaragua	0	0	0	0	0	0	0	0	0	0	0,000000	0,00
020	**Total**	**253 130**		**2 873**				**14 804**	**217**		**15 021**		

* The value of an exposure equal to 0 under the standardized approach is the result of rounding amounts off to PLN million and does not mean that there is no exposure in a given country.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 6.2. Countercyclical buffer specific to the Bank's Group

		2019	2018
010	Total risk exposure amount	214 006	200 442
020	Institution specific countercyclical capital buffer rate	0,01%	0,01%
030	Institution specific countercyclical capital buffer rate requirement	18	11

The systemic risk buffer is used to prevent and mitigate a long-term, non-cyclical risk or macroprudential risk which may cause severe negative consequences for the financial system and economy of a given country. Pursuant to the Regulation of the Minister of Development and Finance on the systemic risk buffer, as from 1 January 2018 the systemic risk buffer applicable to exposures in the territory of Poland has been 3%. Due to the fact that not all of the exposures of the Bank's Group are in Poland, as at 31 December 2019, the systemic risk buffer for the Bank's Group was 2.88%.

The Other Systemically Important Institution (O-SII) buffer is an additional requirement for institutions which may generate systemic risk. The Bank was identified as a systemically important institution based on the PFSA's decision of 10 October 2016. In 2019, the PFSA maintained the level of the Other Systemically Important Institution (O-SII) buffer for the Bank, applicable in 2018, at an amount equivalent to 1% of the total risk exposure amount calculated in accordance with Article 92(3) of the CRR. The buffer must be maintained both on an individual and consolidated basis.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

7. 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 relation between the amount of Tier I capital and the total balance sheet assets and off-balance sheet liabilities granted of the Bank and its Group. The manner 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 Tax Department are responsible for assessing leverage risk.

The identification of leverage risk consists of recognizing the actual and potential risk sources and factors and determining its potential impact on the operations of the Bank and the Bank's Group. For the purposes of measuring leverage risk, a leverage ratio is expressed as a percentage calculated as Tier I capital divided by total exposure. As at 31 December 2019, a leverage ratio was calculated by reference to the temporary definition of Tier I capital (within the meaning of the transitional arrangements for mitigating the impact of the introduction of IFRS 9 on own funds). The Group also discloses (in chapter 7 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 and the costs associated with the suggested activities. The impact of the recommended management activities on the level of leverage risk is determined. The leverage ratio is forecasted 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 I capital or to adjust the structure of on-balance sheet and off-balance exposures (the denominator of the leverage ratio).

In 2019, the leverage ratio remained above the internal and external limits as well as above the minimum levels recommended by the PFSA.

Table 7.1. Summary reconciliation of accounting assets and leverage ratio exposures [template LRSum]

		Leverage ratio exposures as in Capital Requirements Regulation	
		2019	2018
1	Total assets as per published financial statements	348 044	324 255
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-2 624	-2 110
4	Adjustments for derivative financial instruments	2 581	2 435
5	Adjustments for securities financing transactions (SFTs)	7	7
6	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	18 374	14 089
7	Other adjustments	-1 764	-1 878
8	Total leverage ratio exposure	364 618	336 797

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

Table 7.2. Leverage ratio. Exposure for leverage ratio calculation as described in the CRR [template LRCom]

		CRR leverage ratio exposures	
		2019	2018
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	345 932	322 858
2	(Asset amounts deducted in determining Tier 1 capital)	-3 144	-2 902
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	342 788	319 957
Derivative exposures			
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	1 242	860
5	Add-on amounts for PFE associated with all derivatives transactions (mark- to-market method)	2 581	2 435
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-421	-567
11	**Total derivatives exposures (sum of lines 4 to 10)**	3 402	2 727
SFT exposures			
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	47	18
14	Counterparty credit risk exposure for SFT assets	7	7
16	**Total securities financing transaction exposures (sum of lines 12 to 15a)**	54	24
Other off-balance sheet exposures			
17	Off-balance sheet exposures at gross notional amount	66 749	57 610
18	(Adjustments for conversion to credit equivalent amounts)	-48 375	-43 520
19	Other off-balance sheet exposures (sum of lines 17 and 18)	18 374	14 089
Capital and total exposure mesure			
20	Tier 1 capital	36 718	35 149
21	Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)	364 618	336 797
Leverage ratio			
22	Leverage ratio	10,07%	10,44%
Choice on transitional arrangements and amount of derecognised fiduciary items			
EU-23	Choice on transitional arrangements for the definition of the capital measure	Transitional	Transitional
EU-24	Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) No 575/2013	0	0

Table 7.3. On balance sheet exposures [template LRSpl]

		CRR leverage ratio exposures	
		2019	2018
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**345 932**	**322 858**
EU-2	Trading book exposures	10 144	9 317
EU-3	Banking book exposures, of which:	335 788	313 541
EU-4	Covered bonds	0	0
EU-5	Exposures treated as sovereigns	74 970	66 144
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	11 885	10 726
EU-7	Institutions	3 117	6 965
EU-8	Secured by mortgages of immovable properties	105 396	91 670
EU-9	Retail exposures	68 603	66 897
EU-10	Corporate	47 330	47 223
EU-11	Exposures in default	5 740	6 403
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	18 746	17 512

Strategic decisions had an indirect impact on the leverage ratio in 2019. The factors affecting the leverage ratio:

1) increase in the value of exposure as a result of:
   a) increase in the value of loans and advances to customers,
   b) increase in the value of Treasury bonds,
2) increase in own funds as a result of appropriation of the Bank's profit for 2018 and the recognition of the profit for the first half of 2019 (less expected charges, after obtaining the relevant approvals of the PFSA).

8. Internal capital (Pillar II)

In 2019, the Bank's Group determined its internal capital in accordance with:
1) the CRR,
2) the Banking Law,
3) Regulation of the Minister of Development and Finance of 6 March 2017 on the risk management system and internal control system, the remuneration policy and a detailed method of estimating internal capital at banks,
4) the Act on macroprudential 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 anticipated 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 operations, 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 profitability of the invested capital.

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 specific 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. The ratio of correlation between the individual risk types and the individual entities in the Bank's Group is 1.

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, standardized approach to calculating the capital requirement for credit risk, set out in the CRR. 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.

The internal capital for the risk of foreign currency mortgage loans in the Bank is estimated on the basis of the latest PFSA decision available, concerning an additional capital requirement for the risk arising from mortgage-secured foreign currency loans and loans to households (the so-called add-on).

The internal capital for interest rate risk is calculated using the Value at Risk method, taking into account the results of stress tests, interest income sensitivity and the adopted limits and thresholds for interest rate risk.

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 in a manner 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 comprises the total estimated cost of selling 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 in a manner 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 forecasted amounts, in accordance with the Earnings at Risk concept and a qualitative assessment of business risk.

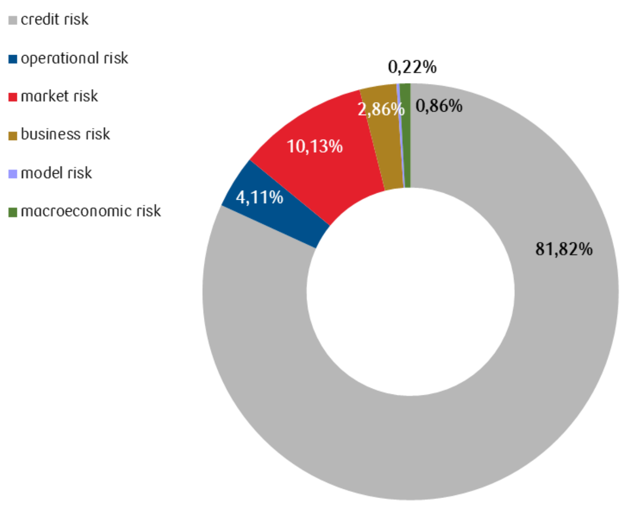
The internal capital to cover the business risk of the entities in the Bank's Group is adopted for the entities in the Bank's Group which assessed business risk as being material. The internal capital to cover the business risk of the Bank's Group is determined as the total of the Bank's internal capital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

The Bank and the Group entities in which macroeconomic risk is material determine the internal capital to cover macroeconomic risk on the basis of the results of comprehensive stress tests. It is equal to the arithmetic mean of the amounts of the total own funds requirement under a shock scenario which cause a decrease in the total capital ratio (TCR) 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 defining the amount of the internal capital to cover model risk, depending on the model risk level.

The chart below illustrates the structure of internal capital by risk type, estimated as at 31 December 2019 for the Bank's Group.

Chart 8.1. Structure of the internal capital of the Bank's Group as at 31.12.2019



The total internal capital is allocated by business area, customer segment and Group entity.

9. 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 operations may be covered with the available capital, taking into account a specific risk tolerance level and time horizon. The capital adequacy management process covers, in particular, complying with the applicable regulations of the supervisory and control authorities, as well as with the risk tolerance level defined in the Bank and the Bank's Group and the capital planning process, including the policy for raising capital.

The basic regulations applicable in the capital adequacy assessment process are as follows:
1) the CRR,
2) the Banking Law,
3) the Act on macroprudential supervision,
4) Regulation of the Minister of Development and Finance of 6 March 2017 on the risk management system and internal control system, the remuneration policy and a detailed method of estimating internal capital at banks.

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 business activities of the Bank and the Bank's Group on an ongoing basis.

Managing the capital adequacy of the Bank's Group covers:
1) defining and pursuing the capital objectives desired by the Bank,
2) identifying and monitoring material risk types,
3) measuring or estimating the internal capital to cover individual risk types and the total internal capital,
4) establishing internal capital adequacy limits,
5) forecasting, monitoring and reporting the level and structure of equity and capital adequacy,
6) managing the balance sheet structure in order to optimize the quality of the Bank's own funds,
7) capital emergency measures,
8) stress tests,
9) planning and allocating the own funds requirement and internal capital to the business areas and customer segments at the Bank and to the individual entities in the Bank's Group,
10) assessing the profitability of the business areas and customer segments.

The capital adequacy measures are as follows:
1) Total Capital Ratio (TCR),
2) Tier 1 capital ratio (T1),
3) Common Equity Tier 1 capital ratio (CET1),
4) own funds to internal capital ratio,
5) leverage ratio,
6) MREL ratio in relation to own funds and total liabilities.

The objective of monitoring the level of capital adequacy measures is to determine the degree of compliance with supervisory standards 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 as follows:
1) Total Capital Ratio (TCR) – 8.0%,
2) Tier 1 capital ratio (T1) – 6.0%,
3) Common Equity Tier 1 capital ratio (CET1) – 4.5%.

Pursuant to the CRR and the Act on macroprudential supervision, the Bank's Group is obliged to maintain a combined buffer requirement which is the total of the applicable buffers. Detailed information on capital buffers is presented in chapter 6 of this Report.

Additionally, the Bank and its Group are obliged to maintain own funds to cover an additional capital requirement in order to hedge the risk arising from mortgage-secured foreign currency loans and loans to households, the so-called add-on:

1) for a total capital ratio: 0.40% for the Bank and 0.36% for the Bank's Group,
2) for a Tier 1 capital ratio: 0.30% for the Bank and 0.27% for the Bank's Group, and
3) for a Common Equity Tier 1 capital ratio: 0.23% for the Bank and 0.20% for the Bank's Group.

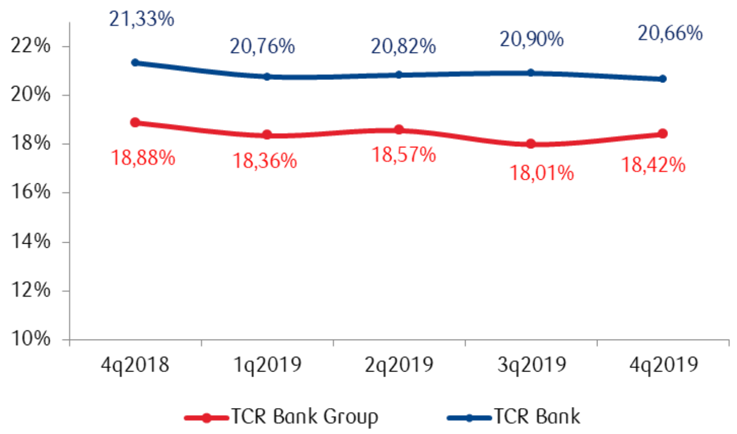
In addition, on November 4, 2019, the Capital Group received a letter from the Bank Guarantee Fund (BFG) regarding the plan to reach the minimum level of own funds and liabilities subject to redemption or conversion (MREL). The MREL level set for the Bank at the consolidated level is 14,376% of the total own funds and total liabilities ("TLOF"), which corresponds to 22,807% of the risk exposure amount ("TRE"). This requirement should be met from January 1, 2023. BFG indicated the path to reach the target MREL level, which shows that at the end of 2019, the MREL in relation to TLOF is 9.316% at the consolidated level, which corresponds to 14.779% TRE. At 31.12.2019, the value of the Bank's MREL ratio at the consolidated level was 11.665% in relation to TLOF and 18.419% in relation to TRE, significantly exceeding the transitional levels indicated by the Bank Guarantee Fund.

The Bank meets the PFSA's requirements for minimum capital ratios.

In 2019 and 2018, the Bank's Group maintained a safe capital base, above the supervisory and regulatory limits.

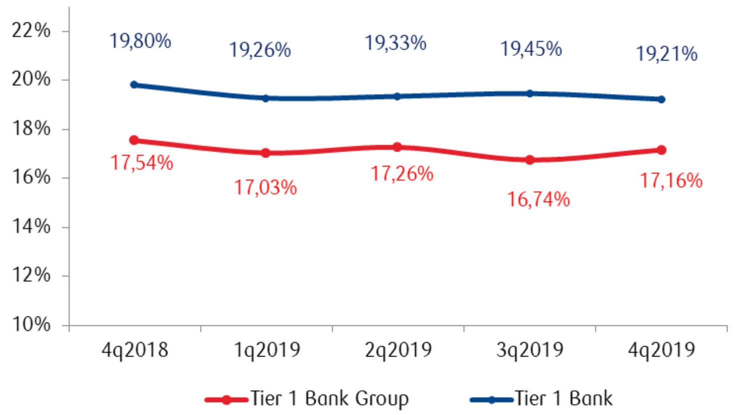
The chart below presents changes in the level of the total capital ratio of the Bank and the Bank's Group.

Chart 9.1. Total Capital Ratio (TCR)



The chart below presents changes in the level of the Tier I capital ratio (Common Equity Tier I capital ratio)[11] of the Bank and the Bank's Group.

Chart 9.2. Tier I (T1)/Common Equity Tier I capital ratio (CET1)



In 2019, the value of capital adequacy measures remained above internal and external limits.

[11] The Tier I capital ratio and the Common Equity Tier I capital ratio of the Bank and the Bank's Group are equal.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

9.1.The impact of IFRS 9 on capital adequacy

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

The impact of the implementation of IFRS 9 on own funds and capital adequacy measures is governed in Regulation 2017/2395[12] of the European Parliament and of the Council. 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 going down from period to period. The Bank 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.

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.

Table 9.1. Comparison of the institution's own funds as well as the capital ratio and the financial leverage ratio, taking into account and without taking into account the application of transitional arrangements concerning IFRS 9 and similar expected credit losses [template IFRS 9-FL.]

		31.12.2019	30.09.2019	30.06.2019	31.03.2019
Available capital (amounts)					
1	Common Equity Tier 1 (CET1) capital	36 717	35 748	35 643	34 792
2	Common Equity Tier 1 (CET1) capital as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	35 687	34 773	34 668	34 024
3	Tier 1 capital	36 717	35 748	35 643	34 792
4	Tier 1 capital as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	35 687	34 773	34 668	34 024
5	Total capital	39 417	38 448	38 343	37 492
6	Total capital as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	38 387	37 473	37 368	36 724
Risk-weighted assets (amounts)					
7	Total risk-weighted assets	214 006	213 532	206 463	204 250
8	Total risk-weighted assets as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	213 152	212 632	205 739	203 529
	Capital ratios				
9	Common Equity Tier 1 (as a percentage of risk exposure amount)	17,16%	16,74%	17,26%	17,03%
10	Common Equity Tier 1 (as a percentage of risk exposure amount) as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	16,74%	16,35%	16,85%	16,72%
11	Tier 1 (as a percentage of risk exposure amount)	17,16%	16,74%	17,26%	17,03%
12	Tier 1 (as a percentage of risk exposure amount) as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	16,74%	16,35%	16,85%	16,72%
13	Total capital (as a percentage of risk exposure amount)	18,42%	18,01%	18,57%	18,36%
14	Total capital (as a percentage of risk exposure amount) as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	18,01%	17,62%	18,16%	18,04%
Leverage ratio					
15	Leverage ratio total exposure measure	364 618	355 640	342 303	338 990
16	Leverage ratio	10,07%	10,05%	10,41%	10,26%
17	Leverage ratio as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	9,81%	9,80%	10,15%	10,06%

[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.

10. Remuneration policy

The Policy of remunerating the Employees of the Bank and the PKO BP Group (the Policy) adopted by resolution of the Bank's Management Board no. 303/C/2019 and approved by resolution of the Supervisory Board no. 70/2019 of 12 August 2019 is the basic internal regulation on the remuneration policy.

The Policy ensures a consistent remuneration system by:
1) using a remuneration system in line with market trends,
2) recruiting optimal job candidates,
3) tailoring the mechanisms of remuneration tools and levels to the strategy and objectives of the Bank and the Bank's Group,
4) taking into account the capabilities of the Bank's Group in shaping the desired remuneration mechanisms and levels,
5) shaping fixed pay based on job grading,
6) shaping the remuneration structure based on the employees' performance and the assessment of their competencies,
7) building the employees' responsibility for the tasks they carry out, on the basis of objectivized criteria,
8) guaranteeing that variable remuneration components are so parameterized 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,

ensuring that the monetary or non-monetary forms of remuneration do not encourage those 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.

The Collective Bargaining Agreement concluded on 28 March 1994 (as amended) with trade union organizations forms the basis for awarding the following remuneration components to the Bank's employees:
1) base remuneration,
2) additional remuneration for working overtime and under conditions which are particularly onerous and detrimental to health,
3) bonuses and rewards for special achievement in work.

The base remuneration and additional benefits provided to the employees are shaped on the basis of job grading (grading categories assigned to individual positions) and the analysis of market remuneration in the banking sector.

The Bank's remuneration policy is consistent with the principles of sound and effective risk management, which is confirmed each year by way of an assessment carried out in cooperation with an external advisor with a view to assess the achievement of the policy's objectives, in particular a long-term increase in shareholder value and the stability of the Bank's operations. The policy does not encourage excessive risk taking and, given the Bank's financial position, is balanced. It supports the pursuit of the Bank's strategic objectives and its long-term development. The above assessment is included in the Draft Report "Assessment of the Functioning of the Remuneration Policy at PKO Bank Polski SA", in 2019 it is presented to the Appointments and Remuneration Committee of the Supervisory Board of PKO Bank Polski.

In 2019, changes were made, which consisted of the adoption of the Policy of Remunerating the Employees of the Bank and the PKO BP SA Group by the Bank's Management Board and its approval by the Supervisory Board, in particular of:
1) introducing a quota for determining the remuneration of members of the Management Boards of the Bank and entities in the Bank's Group,
2) making changes in deferral parameters for particularly large amounts of variable remuneration of members of the Management Boards and MRTs,
3) specifying the method of calculating the maximum allowable variable remuneration for members of the Management Boards and MRTs working or acting for less than a year,
4) introducing resolutions according to which members of the Management Boards of the Bank and the Bank's Group entities have the right to PPE on the terms provided for employees,
5) adding a resolution excluding the right to severance pay in the event of employment or supply of services rendered to another entity of the Bank's Group. Similar resolutions have been added in the context of the lack of the right to compensation due to the non-competition clause.

10.1. Variable components of the remuneration of the Management Board members and key managers with a high impact on the Bank's risk profile (Material Risk Takers – MRTs)

In accordance with the requirements of CRD IV and Regulation No 604/2014 of 4 March 2014[13], and Regulation of the Minister of Development and Finance of 6 March 2017 on risk management system and the internal control system, remuneration and detailed procedures for estimating internal capital at banks, the Bank updates the rules for determining variable remuneration components (bonuses and rewards) implemented in 2012 for MRTs on a current basis, through the resolutions of:
1) the Supervisory Board on the "Policy of remunerating the Employees of the Bank and the PKO Bank Polski SA Group" and on the "Rules of employing and remunerating the members of the Management Board",
2) the Management Board on the "Rules of remunerating the employees whose activities have a material impact on the Bank's risk profile – Material Risk Takers at the Bank".

A list of the MRTs who are not members of the Management Board is drawn up by the Management Board based on qualitative and quantitative criteria for determining the categories of employees whose professional activities have a material impact on the risk profile, listed in Regulation 604/2014. On the basis of the above-mentioned criteria, MRTs are, in particular:
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, selected using criteria based on competence limits,

[13] Commission Delegated Regulation (EU) No 604/2014 of 4 March 2014 supplementing Directive 2013/36/EU of the European Parliament and of the Council with regard to regulatory technical standards with respect to qualitative and appropriate quantitative criteria to identify categories of staff whose professional activities have a material impact on an institution's risk profile (RTS).

4) positions in which the employees have received total remuneration exceeding the relevant threshold defined in the regulations (provided that the employees, in fact, have a material impact on the risk profile),
5) positions in which the employees are in the same remuneration bracket as senior management executives and persons taking operational risk (provided that they have a material impact on the risk profile).

In 2019, separate regulations defining the rules on variable remuneration components for Material Risk Takers employees also functioned in selected entities in the Bank's Group. The rules on variable remuneration components for the members of the Management Board were in force at PKO Bank Hipoteczny SA, PKO BP BANKOWY PTE SA, PKO Leasing SA, PKO Towarzystwo Ubezpieczeń SA and PKO Życie Towarzystwo Ubezpieczeń SA, PKO Faktoring SA, PKO Towarzystwo Funduszy Inwestycyjnych SA, KREDOBANK SA in Ukraine. Furthermore, the rules on variable remuneration components should be applied to employees in selected managerial positions whose professional activities have a material impact on the mentioned above company's risk profile and therefore also at Group.

10.1.1. The process of determination of variable components of remuneration of MRT

The Bank's internal regulations regarding variable remuneration components were designed with the participation of experts and management executives of the Bank from the Personnel and Effectiveness Management Department (the rules of granting bonuses and rewards), Personnel Affairs Department (labour law), and the Planning and Controlling Department (planning, setting and accounting for the achievement of financial objectives).

In preparing the first project of Policy, the Bank used the services of an external consultant, the consulting firm PwC Poland. In next updating the Policy, the Bank was supported by the consulting firm EY Poland. Currently, the Policy is assessed and modified by the Supervisory Board based on the recommendations of the Management Board and taking into account the opinions of the Appointments and Remuneration Committee and Risk Committee.

10.1.2. Appointments and Remuneration Committee of the Supervisory Board (SBARC)

The SBARC functions at the Bank to support the Supervisory Board in the performance of its statutory duties and tasks arising from legal regulations. The SBARC is composed of the members of the Bank's Supervisory Board (Table 10.1).

Table 10.1. Members of the Bank's Supervisory Board making up the SBARC

2019	
Name	**Function**
Piotr Sadownik	Chairman of the Committee
Grażyna Ciurzyńska	Vice-Chairman of the Committee
Wojciech Jasiński	Committee Member
Elżbieta Mączyńska-Ziemacka	Committee Member

The SBARC gives opinions on the Remuneration Policy, the levels and components of the remuneration of persons holding managerial positions at the Bank, including the base and variable remuneration of the Management Board members.

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 suggestions concerning the rules for remunerating the members of the Management Board to the Supervisory 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) giving opinions on the report on the review of implementation of the remuneration policies, carried out by the Internal Audit Department,
5) preparing a draft report on the assessment of the functioning of the remuneration policies at the Bank, which is presented to the General Meeting by the Supervisory Board.

In 2019, a total of 5 meetings of the Appointments and Remuneration Committee were held.

10.1.3. The most important information about the characteristics of the system of variable remuneration components of MRTs

The Policy of remunerating the Employees of the Bank and the Bank's Group as well as the remuneration regulations in force at the companies describe the procedure for granting MRTs variable remuneration components related to their performance and deliverables, including rewards for special achievements at work and bonuses.

The variable remuneration components are awarded primarily on the basis of the bonus objectives set as part of Management by Objectives (MbO).

The rules contained in the Policy indicate that the objectives set are to guarantee that the Bank's business cycle and the risks relating to its operations are taken into account. They may relate to, in particular, the performance of the Bank's Group, the C/I ratio of the Bank's Group, the ROE of the Bank's Group. Furthermore, MRTs' notes including the results of the business operations of the individual areas, and the implementation of projects which support the strategy. The risk is taken into account both by establishing the relevant, risk-sensitive criteria for the assessment of the effectiveness of work and as well as a reduction or lack of variable changes bonuses being granted in the event of deterioration in the Bank's performance, loss or deterioration in other variable ratios (including the application of the so-called malus in relation to portions of variable remuneration deferred for three years).

The criteria for assessing the achievement of objectives by an MRT, including a member of the Management Board, include:
1) the impact on the Bank's total capital ratio and equity so that the payment of variable remuneration does not limit the possibilities of strengthening them,
2) the Bank's results in the area of responsibility of a given person, taking into account the results of the entire Bank.

The structure of performance indicators combines different types of KPIs, in particular quantitative and performance indicators consistent with the specific nature of the organization. All performance indicators are parameterized and measurable. Due to the nature of a given managerial position, different proportion of the individual goals' shares in the overall assessment is determined by assigning weights to the abovementioned types of KPIs. assessment levels and weights of the above mentioned KPI types are defined. Responsibility for long-term results of operations adjusted for risk and costs with a different structure of objectives depending on the specific nature of the tasks performed was used. 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 variable remuneration components for a given assessment period (a calendar year) are awarded once the achievement of bonus objectives has been accounted for, in the following forms:
1) non-deferred form – in the amount of 60% of the variable remuneration (in the first year after the assessment period),
2) deferred form – in the amount of 40% of the variable remuneration (in equal instalments over the next three years after the first year following the assessment period),

with both non-deferred and deferred remuneration being awarded in equal parts in cash and in the form of a financial instrument, i.e. phantom shares (which are converted into cash at the updated price of the Bank's shares after the retention period, and in the case of deferred remuneration – after the deferment period).

In accordance with the Remuneration Policy, if variable remuneration for a given year should exceed PLN 700 thousand, PLN 280 thousand plus 60% of the excess over PLN 700 thousand is deferred.

As a rule, 50% of each variable remuneration component of MRTs is linked to the value of phantom shares based on the Bank's share price changing over time. In accordance with legal requirements, at PKO Bank Hipoteczny SA financial instruments are linked to the book value of net assets, in the KREDOBANK SA - with equity value, and at PKO TFI SA – to the value of investment fund units.

According to Remuneration Policy adopted in the Bank's Group, the variable remuneration in the PKO Bank Polski SA may not exceed 100% of the annual fixed remuneration, and in abovementioned entities of Bank's Group 50% of fixed remuneration.

Each of the accrued variable remuneration components may be reduced as a result of:
1) breach of employee duties,
2) non-compliance with legal regulations or customer service standards,
3) malperformance of the professional tasks assigned,
4) behaviour towards other employees which violates the principles of social coexistence.

The bonus amount:
1) for a member of the Management Board may be adjusted downwards or upwards by a specified rate – depending on the Bank's performance specified in the annual Note of the Bank (a set of key management indicators specified for a given calendar year),
2) for an MRT who is not a member of the Management Board may be adjusted upwards by a specified rate depending on the Bank's performance specified in the annual Note of the Bank.

In the case of the members of the Management Board, variable remuneration is granted and paid on condition that the financial statements for a given assessment period are approved by the General Shareholders' Meeting. Prior to each payment of variable remuneration, the Supervisory Board may also decide, in relation to the Management Board members, and the Management Board may decide in relation to persons holding managerial positions, to reduce the amount of funds for the said remuneration proportionally, taking into account the following:
1) the impact on the Bank's total capital ratio and equity so that the payment of variable remuneration does not limit the possibilities of strengthening them,
2) the impact on the cost of capital so that the payment of variable remuneration does not limit the possibility of maintaining an adequate capital base,
3) the Bank's desired risk profile,
4) the Bank's financial performance as regards its long-term development plans.

If:
1) the Bank's performance has deteriorated significantly,
2) it has been determined that there has been a material adverse change in equity,
3) an MRT has violated the law or committed material errors,
4) the implementation and the degree of achievement of an MRT's results or objectives have been adjusted,
5) the performance of the structures supervised or managed by the above-mentioned persons has deteriorated,
6) variable remuneration has been granted on the basis of incorrect, misleading information or as a result of fraud on an MRT's part,

a malus type solution may be employed – by the Supervisory Board or the Management Board, respectively – to reduce the amount of variable remuneration payable, deferred in the following accounting periods.

Material Risk Takers (excluding the members of the Bank's Management Board) may use the medical care and the Social Benefits Fund financed by the Bank. Material Risk Takers (including the members of the Bank's Management Board) may use the Employee Pension Scheme.

If an MRT is awarded severance pay related to dismissal from his or her position, which is coupled with the termination of his or her employment relationship (other than the severance pay arising from the generally applicable laws), its amount reflects the assessment of the MRT's performance over the last three years of employment, with the maximum amount of severance pay being defined in the Bank's regulations. A member of the Bank's Management Board is entitled to severance pay on condition that he or she has served as a member of the Management Board for a period of at least twelve months before the termination of the aforementioned contract. An MRT may be awarded severance pay on condition that he or she has held an MRT position for a period of at least twelve months before the termination of his or her employment contract.

The members of the Management Board and selected MRTs are also subject to non-competition agreements which provide for the payment of compensation for refraining from undertaking employment with a competitor after the termination of employment with the Bank, for a maximum period of six months, of up to 100% of the fixed remuneration under the employment contract.

The publication of quantitative data on variable remuneration components is scheduled for June 2020.

10.2. Variable remuneration components for employees other than Material Risk Takers

10.2.1. Bonuses

PKO Bank Polski SA has a bonus system in place, in which the bonus amount is linked to the level of achievement of the set objectives consisting of four pillars:

1) MbO (Management by Objectives) – covers managerial and expert positions in which the Bank's key objectives are pursued. MbO is a bonus dependent on the quality and degree of implementation of the assigned objectives,
2) PPBiz (Business Bonus Scheme) – is a bonus pillar in which the bonus depends on the degree of completion of specific sales or effectiveness tasks. It is intended for positions outside the branches and regional retail branches (ROD), in which financial products are sold or other business activities are carried out (in particular restructuring and debt collection), including positions in formations which are the Bank's units,
3) SPS (Sales Bonus System) – is intended for positions in retail branches in which banking products are sold,
4) SPW (Bonus Support System) – covers other employees whose positions are not covered by the MbO, PPBiz or SPS pillars.

Employee bonus objectives remain linked to the Bank's key management ratios taken into account in the bonus objectives set for the Bank's individual units. The cascade principle included in the bonus rules, whose observance is monitored, requires assigning objectives to employees working within individual structures.

Additionally, each objective is set in accordance with the SMART principle (S-specific, M-measurable, A-ambitious, R-realistic, T-time-bound), which is also subject to monitoring on a regular basis.

10.2.2. Rewards

Irrespective of the bonus system, there is a system for rewarding the Bank's employees. The Rules of Rewarding the Employees of PKO Bank Polski enables a rewards fund to be established at the Bank, to be used for:

1) individual discretionary rewards for the Bank's employees for outstanding performance or achievements which have produced results that are important for the Bank,
2) rewards for employees recommending candidates for jobs at the Bank,
3) activities related to the retention of employees holding important positions.

10.2.3. Non-financial benefits for the Bank's employees

Additional benefits offered at the Bank and in the Bank's Group are a sign of care for broadly understood employee satisfaction. The range of the additional benefits offered is wide. It is also important for the Bank to tailor the benefits offered to its employees to labour market trends because the activities in this area are closely linked to the creation of the Bank's image as an employer. The main additional benefits provided to the employees include:

10.2.3.1 Medical care

The Bank provides its employees with additional medical care to which they are entitled under various benefit packages for specific groups of positions. All employees have the opportunity to consult doctors of all specialties and have access to a wide range of diagnostic tests free of charge. The employees may also join the "Zdrowie jak w Banku" prevention programme aimed at the early detection of diseases and promoting a healthy lifestyle. As part of prevention activities at the Bank, its employees may undergo a medical check-up once a year. The employees are provided with additional materials on health care, and competitions promoting pro-health attitudes among the employees are organized in cooperation with a provider. The employer monitors the level of provision of medical services by the provider on a current basis in order to provide its employees with the best access possible to such services.

The other Group entities (operating in Poland) provide their employees with medical care under the terms and conditions negotiated with the service provider by the Bank, based on separately concluded agreements.

10.2.3.2 Employee Pension Scheme

Since 2013 the Bank has been operating an Employee Pension Scheme (PPE) under which the employees have the opportunity to save money in the long term to supplement the pension income received from the mandatory parts of the pension system. The Bank's Employee Pension Scheme has the form of an agreement on the Bank making the Base Contribution (representing 3.5% of an employee's remuneration) and an Additional Employee Contribution to the Investment Funds managed by PKO TFI SA.

As from December 2019, the provisions of the company Employee Pension Scheme agreement also allow the Members of the Bank's Management Board to join the Scheme.

The larger Group companies: PKO Życie Towarzystwo Ubezpieczeń SA, PKO Towarzystwo Ubezpieczeń SA, PKO BP Finat Sp. z o.o., the PKO Leasing SA Group, PKO BP BANKOWY PTE SA, and PKO TFI SA also provide Employee Pension Schemes to their employees.

10.2.3.3 Group insurance

The employees and their family members may take the opportunity to join group life insurance offered by PKO Życie Towarzystwo Ubezpieczeń SA, in return for payment made by the employees through the Bank.

The insurance company offers the employees the opportunity to choose one of the five options and two additional contributions. The amount of the benefits paid to the insured is dependent on the option selected.

Furthermore, PKO Życie Towarzystwo Ubezpieczeń SA provides its former employees with the individual continuation of insurance (IKU) up to the age of 70.

10.2.3.4 Company Social Benefits Fund

In order to provide the employees with the opportunity to choose their preferred additional benefits, the employees may use the MyBenefit cafeteria system as part of the Social Fund (Social Benefits Fund). An employee may use the allocated funds for leisure activities, sports activities, making purchases in many stores, for cultural events, as well as other activities according to his or her preference, including covering the costs of child care in crèches and kindergartens. The amount of the funds received under the cafeteria system depends on the gross income per person in the family.

Some Group companies also offer their employees the opportunity to use the MyBenefit platform, whereas other companies provide other benefits such as Sodexo vouchers or holiday bonuses.

In addition, as part of the Social Fund, the employees may obtain housing loans, relief and social benefits as well as funds for additional campaigns related to sport, culture, education and team building events.

10.2.3.5 Other benefits

A good practice at the Bank and the other Group companies is to provide employees with the possibility of using sports cards. In promoting a healthy lifestyle among its employees, the Bank offers them the opportunity to purchase several types of sports cards in order to provide benefits tailored to the users' needs in the best possible way and, consequently, to really support their pro-health activities.

The list of additional benefits offered at the Bank also includes offers and discounts for the Bank's employees, e.g. AutoNaBank.

It is also worth mentioning that under the programme "PKO after hours" (*PKO po godzinach*) the Bank supports the sports initiatives and activities (there is, among other things, a running section, a mountain sports section and a football section at the Bank) and charity activities of its employees.

CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP FOR THE YEAR ENDED 31 DECEMBER 2019 (IN PLN MILLION)

11. Glossary of terms and abbreviation

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.
CIRS (*Currency Interest Rate Swap*)	a currency interest rate swap transaction
CRD IV	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
Partial adjusted liquidity gap	the difference between total assets and total liabilities, calculated for each maturity range, tells about a mismatch between matured assets and matured liabilities in a given tenor, their real terms maturity date taken into account
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
Credit exposure	the sum of financial assets created as a result of providing the debtor with cash or providing services, including principal amounts and any related receivables (eg interest, bonuses, discounts), measured at amortized cost or in the amount due and financial and warranty obligations granted
FX Swap	a foreign currency exchange swap. Counterparties determine the interest rate that will apply in the future for a specified amount in the currency of the transaction for a predetermined period
IBNR *(incurred but not reported)*	a collection of credit exposures, for which an impairment has been recognized, with no individual impairment premises regarding specific exposures falling into this group
IRB (*Internal Ratings Based Approach*)	an internal ratings method used to determine the capital requirement for credit risk
ISDA (*International Swap and Derivatives Association*)	the 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's business activity and the effect of changes in its business environment, taking into account the anticipated risk level
Key Risk Indicators, KRI	simplified operational risk measure that is significant for a given area, application or process
Key Performance Indicators, KPI	financial and nonfinancial indicators used as measures in the process of measurements of the level in which objectives of an organisation are achieved
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 client's default
Total Capital Ratio (TCR)	the main measure of capital adequacy, calculated as the quotient of own funds and total own funds requirements multiplied by 12.5%.
Material Risk Takers (MRT)	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
NBP	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
PCBA	the Polish Classification of Business Activity.
Banking book	contains 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
Confidence level	the probability, expressed usually as a proportion, that the variable (bank's loss) under analysis will not exceed a specific value
Net carrying value	Net carrying value: for on-balance-sheet items, the net value is the gross carrying value of exposure less allowances/impairments. For off-balance-sheet items, the net value is the gross carrying value of exposure less provisions
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).
Cut-off point	the minimum number of points awarded as a result of client creditworthiness assessment made using the scoring system (for individual clients) or the client or joint rating class (for institutional clients), starting from which a loan transaction may be concluded with a specific client.
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, application or process
Business risk	the risk of loss resulting from unfavourable changes in the business environment, unfavourable decisions, improper implementation of decisions or a failure to take appropriate action in response to changes in the business environment, it specifically includes the strategic risk
Credit risk	the risk of incurring losses as a result of counterparty's default in settlement of liabilities towards the Bank or the risk of decrease in the economic value of the Bank's receivables as a result of deterioration of the clients ability to service its debt, credit risk comprises credit value adjustment (CVA) risk, which is the risk of loss as a result of changing market and credit conditions (in particular as a result of a change in the probability of a counterparty default)
Model risk	risk of suffering losses in 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, covering legal risk and does not include reputation risk and business risk
Liquidity risk	the risk of inability to timely discharge of liabilities due to non-availability of liquid means
Pre-settlement risk	the risk of the counterparty's losing creditworthiness while its transaction with the bank is pending
Interest rate risk	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 (FX) risk	risk of loss due to changes in the foreign exchange rates, generated through maintaining open currency positions in individual currencies
Macroeconomic risk	a risk of deterioration of the Bank's financial condition in result of adverse impact of changes in macroeconomic conditions
Funded credit risk protection	a credit risk mitigation technique, where the bank's credit risk related to exposure is reduced by that bank's right - in the case of the counterparty's default in the discharge of its liabilities insolvency, bankruptcy or another credit event affecting that counterparty and specified in the documentation of the transaction, and, if required for the depositary keeping the collateral – to liquidate,

	transfer, acquire, or retain specific assets or amounts
Accumulated contractual liquidity gap	Accumulated contractual liquidity gap
Accumulated realigned liquidity gap	Accumulated realigned liquidity gap
Unexpected Loss, UL	the maximum difference between the Bank's incurred loss at given probability during the year and the expected loss
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 clients, incurred when awarding or changing the essential terms of a loan transaction and in the period of performance of such transaction
Stress test	a risk management tool used for assessment of the potential impact on the bank's situation of a specific event and/or changes in the market parameters not described in the standard manner with statistical measures
Framework agreement	an agreement between parties regulating the principles of the Bank's co-operation with counterparties on the financial market with respect to forward financial transactions
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.
LCR indicator	liquidity coverage requirement describes relation of high-quality liquid assets to total net cash outflows (including cash inflows) over a 30-day period under stress scenario – European measure defined in CRDIV/CRR package
NSFR indicator	Net Stable Funding Ratio describes relation of total available stable funding to total required stable funding
LtV (*Loan to Value*)	ratio of the credit exposure amount to the value of the real property offered as collateral of that exposure
Gross Carrying Amount	In accordance with EBA Guidelines GL/2016/11 gross carrying value is the accounting value before any allowance/impairments but after considering write-offs, without CRM techniques in the application of Part Three, Title II, Chapter 4 of the CRR. Off-balance-sheet items should be disclosed for their nominal amount gross of any CCF applicable in accordance with Article 111 and 166 of the CRR or CRM techniques, and gross of any provision. In particular for: a) guarantees given (the maximum amount that the institution would have to pay if the guarantee were called) and b) loan commitments and other commitments (the total amount that the institution has committed to lend).
Tier I capital ratio	Capital adequacy measure, calculated as the ratio of Tier 1 capital and the sum of own funds requirements, multiplied by 12.5. No elements of additional Tier 1 capital are identified in the Bank and the Bank's Capital Group, consequently the Common Equity Tier 1 (CET1) ratio is equal to the Tier 1 capital ratio (T1)
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 IV
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
ZBP	The Polish Bank Association

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Declaration of the Management Board of PKO Bank Polski SA

The Management Board of PKO Bank Polski SA certifies that:

- To the best of its knowledge, information disclosed in accordance with section eight of the CRR was prepared in conformity with internal control processes,
- To the best of its knowledge, the adequacy of rules related to risk management in PKO Bank Polski SA - particularly with the liquidity risk, guarantees that the risk management systems utilized are well suited to the risk profile and strategy of the Bank and the Group,
- Approves the Report "Capital adequacy and other information subject to disclosure of the PKO Bank Polski SA Group as of 31 December 2019", which contains risk-related information, describes the general risk profile, including liquidity risk of the Bank and the Capital Group, related to their operational strategy, and contains key indicators and data, available to interested external parties, allowing for a comprehensive view of risk management in PKO Bank Polski SA and the Capital Group, including interaction between the Bank's risk profile and risk tolerance in the form of strategic tolerance limits, defined by the Management Board and accepted by the Supervisory Board.

Signatures of all members of the Management Board of PKO Bank Polski SA

11.02.2020	Zbigniew Jagiełło	President of the Management Board	.... (signature)
11.02.2020	Rafał Antczak	Vice-President of the Management Board	.... (signature)
11.02.2020	Rafał Kozłowski	Vice-President of the Management Board	.... (signature)
11.02.2020	Maks Kraczkowski	Vice-President of the Management Board	.... (signature)
11.02.2020	Mieczysław Król	Vice-President of the Management Board	.... (signature)
11.02.2020	Adam Marciniak	Vice-President of the Management Board	.... (signature)
11.02.2020	Piotr Mazur	Vice-President of the Management Board	.... (signature)
11.02.2020	Jakub Papierski	Vice-President of the Management Board	.... (signature)
11.02.2020	Jan Emeryk Rościszewski	Vice-President of the Management Board	.... (signature)