

# CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE

THE GROUP OF PKO BANK POLSKI SA

AS AT 31 DECEMBER 2015



#### **INTRODUCTION**

The Report "Capital Adequacy and Other Information Subject to Disclosure of the Group of Powszechna Kasa Oszczędności Bank Polski SA as at 31 December 2015" (hereinafter referred to as "the Report") was prepared in accordance with the provisions of Article 111a clause 1 of the Act of 29 August 1997 – Banking Law¹ (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 "CRR"), implementing acts under the CRR, the Act of 5 August 2015 on macroprudential supervision over the financial system and crisis management² (hereinafter referred to as the "Act on macroprudential supervision"), as well as Recommendation M of the Polish Financial Supervision Authority (*Komisja Nadzoru Finansowego*, hereinafter referred to as "PFSA") on the operational risk management in banks.

Pursuant to Article 13 par. 1 of the CRR, Powszechna Kasa Oszczędności Bank Polski SA ("PKO Bank Polski SA", "the Bank") being a European parent institution, discloses information on its capital adequacy in a separate document annually, as referred to in Part Eight of the CRR.

This Report was prepared in accordance with the principles of information policy of PKO Bank Polski SA regarding capital adequacy<sup>3</sup>, as adopted by the Bank, which contain detailed information related to disclosures concerning capital adequacy, rules of their verification, approval and publication.

The Report covers year 2015 and present data as of 31 December 2015 and was prepared in accordance with the principles described in the first paragraph as of 31 December 2015. Unless otherwise stated, the Report includes consolidated data<sup>4</sup> of the PKO Bank Polski SA Group (hereinafter referred to as the "Bank Group" or the "Group"). Since the risk profile of the Group is predominantly affected by PKO Bank Polski SA (93.93%<sup>5</sup> of the Group's consolidated balance sheet total and 94.42%<sup>6</sup> of its consolidated profit/loss on banking activities), some of the information contained in the Report refers specifically to individual data of PKO Bank Polski SA.

Unless otherwise stated, the figures presented in the Report have been expressed in PLN million. Any differences in the totals and proportions result from the rounding to PLN million and to one decimal place respectively.

The Report has been prepared taking into account all of the data available on 31 December 2015.

The Report has been prepared taking into account all obligations arising from the aforementioned regulations, relating to the Bank and the Group. Lack of reference to a particular article means that it has been deemed inapplicable.

This Report has been subject to internal verification by the Bank's internal audit.

<sup>&</sup>lt;sup>1</sup> Uniform text, Journal of Laws 2015, No. 128, 559, 978, 1166, 1223, 1260, 1311, 1348, 1357, 1513, 1634, 1830.

 $<sup>\</sup>frac{2}{2}$  Uniform text, Journal of Laws 2015, No. 1513

The principles of information policy of PKO Bank Polski SA regarding capital adequacy, as described in the art. 431 of the CRR, are available on the Bank's website (www.pkobp.pl).

Data provided only for entities subject to prudential consolidation.

<sup>&</sup>lt;sup>5</sup> The share PKO Bank Polski SA was calculated in relation in the consolidated balance sheet total of companies subject to prudential consolidation before consolidation adjustments and exclusions for the year ended 31 December 2015.

<sup>&</sup>lt;sup>6</sup> The share of PKO Bank Polski SA was calculated in relation to the consolidated profit/loss on banking activities of the Group companies subject to prudential consolidation before consolidation adjustments and exclusions for the year ended 31 December 2015.



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# CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE REPORT

#### CRR REQUIREMENTS REGARDING DISCLOSURES

	SOUJECT TO DISCESSORE RELOKT		
1.	Information on the Bank and the Group	Scope of application	Article 436
2.	Risk Management	Risk management objectives and policies	Article 435
2.5.6.	Exposure to counterparty credit risk	Exposure to counterparty credit risk	Article 439
2.5.7.	Credit risk adjustments	Credit risk adjustments	Article 442
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3.	Own funds	Own funds	Article 437
4.	Own funds requirements	Capital requirements	Article 438
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		Exposure to market risk	Article 445
		Operational risk	Article 446
5.	Unencumbered assets	Unencumbered assets	Article 443
6.	Capital buffers	Capital buffers	Article 440
7.	Leverage	Leverage	Article 451
10.	Remuneration policy	Remuneration policy	Article 450
	Not applicable	Indicators of global systemic importance	Article 441
	Not applicable	Exposure to securitisation positions	Article 449
	Not applicable	Use of the IRB Approach to credit risk	Article 452
	Not applicable	Use of Internal Market Risk Models	Article 455



#### INFORMATION ON THE BANK AND THE GROUP

Pursuant to the CRR, prudential consolidation is used for the purposes of capital adequacy, which unlike IAS-compliant consolidation, encompasses subordinated entities that can be defined as institutions, financial institutions or ancillary services undertakings only. Non-financial and insurance entities are not subject to prudential consolidation. Table 1.1 presents the differences in the scope of consolidation of Group's entities as of 31<sup>st</sup> December 2015.

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Table 1.1 SCOPE OF CONSOLDIATION

		TI	he Bank Group			
			2015			
		PRU	DENTIAL CONSOLIDA	TION		DECREASE OF
NAME OF ENTITY	RANGE OF ACTIVITY	FULL EQUITY METHOD CONSOLIDATION EVALUATION		DECREASE OF OWN FUNDS OF THE GROUP*	FULL CONSOLIDATION	OWN FUNDS OF THE BANK**
PKO Bank Polski SA	banking activities		parent company		parent o	company
Grupa Kapitałowa PKO Leasing SA	leasing and factoring services	Х		nd	х	х
Grupa Kapitałowa KREDOBANK SA	banking activities and financial services	Х		nd	Х	х
PKO Towarzystwo Funduszy Inwestycyjnych SA	investment funds management	X		nd	Х	Х
PKO BP BANKOWY PTE SA	pension funds management	Х		nd	х	х
Finansowa Kompania "Prywatne Inwestycje" Sp. z o.o	financial services	Х		nd	X	X
PKO Finance AB	acquisition of funds for PKO Bank Polski SA through issuance of bonds	x		nd	х	х
PKO Bank Hipoteczny SA	banking services	X		nd	х	X
PKO BP Finat Sp. z o.o.	services, including transfer agent services and outsourcing of IT specialists	x		nd	x	x
PKO Życie Towarzystwo Ubezpieczeń SA Group	life insurance		х	х	х	х
PKO Towarzystwo Ubezpieczeń SA	other personal and property insurance		х	х	x	х
Merkury - closed-end investment fund of non-public assets	placement of funds collected from fund members		х		x	
NEPTUN - closed-end investment fund of non-public assets***	placement of funds collected from fund members		х	х	х	х
"Inter-Risk Ukraina" Spółka z dodatkową odpowiedzialnością****	real estate development			х	х	x
Qualia Development Sp. z o.o. Group****	real estate development				х	

<sup>\*</sup> This item points at capital exposures of the Bank (other than in entities subject to prudential consolidation) taken into account during calculation of own and supplementary funds of the Group. Since the Group's exposure in Tier 1 instruments of financial sector companies did not exceed the thresholds defined in the CRR, own funds of the Group for prudential consolidation as of 31 December 2015 were not reduced by the aforementioned exposures. The Group did not have any exposures deduced from Tier 2 capital.

\*\* This item points at capital exposures of the Bank that are taken into account in deductions from own and reserve funds of the Bank. Since the Bank's exposure in Tier 1 instruments of financial sector companies did not exceed the

Pursuant to the art. 19 p. 1 of the CRR, entities, for which the total amount of assets and off-balance sheet items is lower than EUR 10 million, are excluded from the prudential consolidation the Group's entities. As of 31st December 2015, the aforementioned exemption applied to "Inter-Risk Ukraina" Sp. z o.o. and Bankowe Towarzystwo Kapitałowe SA.

The controlling entity of the Group is PKO Bank Polski SA, whose share in the consolidated balance sheet total amounts to 93.3%<sup>4</sup>, and 94.42%<sup>5</sup> in the consolidated profit/loss on banking activities.

The PKO Leasing SA Group (i.e. PKO Leasing SA together with its subsidiaries: PKO Bankowy Leasing Sp. z o.o., PKO Leasing Sverige AB and PKO BP Faktoring SA) operates in the leasing and factoring (as of June 2015) area in the territory of the Republic of Poland and Sweden In June 2015 PKO Leasing SA acquired all shares of PKO BP Faktoring SA7.. The share of PKO Leasing SA Group in the consolidated balance sheet total is  $2.41\%^4$ , and  $2.00\%^5$  in the consolidated profit/loss on banking activities.

KREDOBANK SA pursues banking operations in the territory of Ukraine and is subject to Ukrainian banking supervision. In March 2012 KREDOBANK SA become the sole shareholder of Finansowa Kompania "Idea Kapitał" Sp. z o.o. (which subject of business includes rendering of financial services) and established the capital group. The share of KREDOBANK SA Group in the consolidated balance sheet total is 0.48%<sup>4</sup>, and 1.48%<sup>5</sup> in the consolidated profit/loss on banking activities.

Remaining companies forming the Bank's Group (subject to prudential consolidation) operate almost exclusively on the territory of the Republic of Poland, Ukraine (Finansowa Kompania "Prywatne Inwestycje" Sp. z o.o.) and Sweden (PKO Finance AB).

PKO Bank Polski SA operates also in Germany through its corporate branch (PKO Bank Polski SA Niederlassung Deutschland).

Detailed information on all entities of the Group, subject to the Bank's share in the equity capital of individual entities is contained in the consolidated financial statements of the Group for the year ended 31 December 2015, published on 7 March 2016 (page 12).

On 1<sup>st</sup> of August 2015, pursuant to the decision of PFSA, PKO Bank Polski SA took over "Wesoła" Credit Union (SKOK Wesoła). The value of assets and liabilities, according to the

thresholds defined in the CRR, own funds of the Bank as of 31 December 2015 were not reduced by the aforementioned exposures. As of 31 December 2015 the Bank's own funds were reduced by the amount of the Bank's exposure

<sup>\*\*\*</sup> An indirect exposure, i.e. capital exposure of the Fund in Bankowe Towarzystwo Kapitalowe SA, is taken into account in deductions from own funds of the Bank and the Group.

<sup>\*\*\*\*</sup> Entity recognized as fixed asset available for sale (at fair value).

<sup>&</sup>lt;sup>7</sup> The above transaction took place within the framework of PKO Bank Polski SA Group - PKO BP Faktoring SA was a subsidiary of Bankowe Towarzystwo Kapitałowe SA - a direct subsidiary of the Bank.



financial statement of SKOK Wesoła for 31<sup>st</sup> July 2015, amounted to PLN 292.8 million and PLN 612.8 million respectively.

The Bank did not incur any payments in relation to the takeover of SKOK Wesoła. However, the aforementioned process involved financial support from the Bank Guarantee Fund (BFG). The Bank received support from the BFG in form of a dotation in the amount of PLN 278.9 million, covering the difference between acquired property rights and guaranteed deposit liabilities, as well as a guarantee covering losses arising from the risk related to the acquired property rights of SKOK Wesoła.

Within the Bank Group, some limitations exist (described below) in regard to premature settlement of liabilities by subordinated companies as well as to the transfer of funds in the form of dividend payments:

- In view of a difficult political and economic situation in Ukraine, together with related volatilities on the foreign exchange market, a series of administrative limitations introduced in 2014 have been prolonged, potentially influencing rapid transfer of funds and settlement of liabilities between Ukrainian entities of PKO Bank Polski SA Group and their parent company. Restrictions include a ban on premature repayment of FX liabilities.
- 2) In accordance with the resolution of the Extraordinary General Shareholders' Meeting of KREDOBANK SA commenced 29 January 2009 and continued 23 February 2009, a moratorium was introduced with respect to dividend payments. The moratorium is valid until revoked under an appropriate resolution. In 2015 the moratorium on dividend payment remained in force.
- The strategy of PKO Bank Hipoteczny SA for 2015-2017 (approved by the Supervisory Board) assumes no dividend payments during those years.
- Selected credit agreements signed by the Group companies involve additional covenants concerning restrictions on premature repayment or non-payment of dividend prior to the credit's maturity.

Moreover, in terms of dividend payments, PKO Bank Polski SA and its subordinated companies are bound by law and recommendations of the PFSA.

In December 2015 the PFSA announced its stand on the criteria regulating the payment of dividends for 2015 by the banks.

According to KNF's recommendation, a dividend for year 2015 could only be paid out by the banks:

- 1) which are not subject to recovery proceeding;
- with a BION (Research and Supervisory Assessment) score not lower than 2.5,
- 3) with a leverage ratio up to 5%,
- 4) with Tier I Capital ratio increased by the conservation capital<sup>8</sup>:
  - a) banks with over 5% market share in deposits from the non-financial sector with Tier I capital ratio (increased by the conservation capital) over 13.25%, plus 75% of eventual

<sup>8</sup> Conservation capital, for the purpose of the dividend payment policy, has been defined as additional 3 percentage points above the Tier I and Total Capital ratio levels recommended by the PFSA for the banks with over 5% share inf deposits from the non-financial sector, and 1 percentage point for the remaining banks. In accordance with the PFSA's letter dated 22nd October 2015, the recommended levels of Tier I and Total Capital ratios are equal to 10.25% and 13.25% respectively, forming the basis for additional, conservation capital increase of 3 or 1 percentage points.

capital measures related to foreign-denominated retail mortgages placed on the Bank by the PFSA on  $23^{\rm rd}$  October 2015 $^9$ .

b) remaining commercial banks - with Tier I capital ratio (increased by the conservation capital) over 11.25%, plus 75% of eventual capital measures related to foreign-denominated retail mortgages placed on the Bank by the PFSA on 23<sup>rd</sup> October 2015<sup>10</sup>.

PFSA recommends a dividend in the amount of up to 50% of achieved profit to be payable only by the banks meeting the supervisory criteria related to the Total Capital ratio, i.e. with TCR over 13.25% plus 100% of eventual capital measures related to foreign-denominated retail mortgages, placed on the bank by the PFSA on 23<sup>rd</sup> October 2015.

Supervisory expectations in terms of capital adequacy measures were described in detail in chapters: 6. Capital buffers and 9. Capital adequacy of this Report.

 $<sup>^9</sup>$  For instance, for a bank with over 5% market share in deposits from the non-financial sector, with 1 percentage point of capital measures related to foreign-denominated retail mortgages placed on it by the PFSA, the Tier I capital ratio over which the bank will be allowed to make dividend payments is equal to: 10.25% + 3 percentage points + (1 percentage point x 0.75) = 14.00%.

 $<sup>^{10}</sup>$  For instance, for a bank with less than 5% market share in deposits from the non-financial sector, with 1 percentage point of capital measures related to foreign-denominated retail mortgages placed on it by the PFSA, the Tier I capital ratio over which the bank will be allowed to make dividend payments is equal to: 10.25% + 1 percentage points +  $(1 \text{ percentage point} \times 0.75) = 12.00\%$ .



#### 2. MANAGEMENT SYSTEM

Pursuant to par. 9 p. 2 of the Banking Law, the management system is a set of principles and mechanisms related to the decision-making process taking place in the bank, as well as to the assessment of conducted banking activities.

The bank's management system comprises at least the risk management and internal control systems.

#### 2.1. RISK MANAGEMENT

Risk management is one the most substantial internal processes both in PKO Bank Polski SA, including the Bank's foreign branch, and in other entities of the Bank Group. Risk management aims at ensuring profitability of business activity, with ensuring control of the risk level and maintaining it within the risk tolerance and limits applied by the Bank and the Group, in the changing macroeconomic and legal environment. The level of the risk is an important factor in the planning process.

In the Bank Group, the following types of risk have been identified, which are subject to management: credit, interest rate, foreign exchange, commodity, price risk of equity securities, derivative instruments, liquidity, operational, compliance, business (including strategic risk), macroeconomic, model, loss of reputation, capital, leverage and insurance risks 11.

Risk management in the Group is based in particular on the following principles:

- 1) the Group manages all defined types of risk,
- the risk management process corresponds to the volume of activities and to significance, level and complexity of the risk concerned and it is adjusted to new risk factors and sources on an ongoing basic,
- risk management methods (in particular models and their assumptions) and risk measurement systems are adjusted to the volume and complexity of risk and they are verified and validated periodically,
- 4) organisational separation of the risk management process and debt recovery from business functions is maintained,
- 5) risk management is integrated with the planning and controlling systems,
- 6) the risk level is monitored and controlled on an ongoing basis
- the risk management process supports the pursuit of the Group's strategy while being compliant with the risk management strategy, in particular with regard to the risk tolerance level.

The risk management process in the Group includes:

 risk identification which consists in recognition of both current and potential risk sources and assessment of significance of potential impact of such type of risk on the activities of the Bank and the Group; risk identification includes defining of such types of risk that are considered to be significant in the activity of the Bank, an individual entity of the Group or the entire Group, risk measurement and assessment – risk measurement

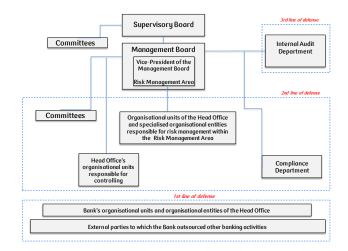
- 2) risk measurement and assessment risk measurement includes determining risk measures adequate to the type, significance of risk and data availability, as well as quantitative measurement of risk by means of defined measures and risk assessment in a form of a determination of volume or scope of risks from the perspective of risk management objectives; the risk measurements include risk assessment for price policy purposes and stress tests performed on the basis of assumptions ensuring reliable risk assessment.
- 3) risk control defining the tools used in diagnosis and mitigation of risk levels in individual business areas of the Bank and the Group. Risk control includes establishment of control mechanisms, tailored to the scale and complexity of the Bank's activities, in particular in the form of actively monitored tolerance limits for particular risk types and, in case they are exceeded, undertaking management actions,
- 4) risk forecasting and monitoring consisting of preparation of risk level forecasts and monitoring differences between execution and forecasts or assumed references (e.g. limits, thresholds, plans, previous measurements, issued recommendations and suggestions issued by the supervisory body), as well as of conducting of specific and comprehensive stress tests. Risk forecasting is subject to verification. Risk monitoring is performed at a frequency appropriate for significance and volatility of a given type of risk,
- 5) risk reporting informing the Bank's Management on a cyclical basis on results of risk measurements or assessment, activities undertaken and recommendations of activities. The reporting scope, frequency and form are adjusted to the management level of addressees. The Supervisory Board, in case of potential liquidity problems of the Bank is notified immediately on the Bank's liquidity level, threats and undertaken remedial actions, as well as in the case of significant operating events or security incidents,
- 6) risk management actions including in particular, issuance of internal regulations forming the management process of individual risk types, defining risk tolerance levels, defining limits and thresholds, issuing recommendations, including use of risk management tools. Management activities are aimed at designing risk management process and influencing the risk level.

Scheme2.1

# RISK MANAGEMENT PROCESS Identification Measurement and assesment Reporting Control

<sup>&</sup>lt;sup>11</sup> Insurance risk has been identified in PKO Życie Towarzystwo Ubezpieczeń SA and PKO Towarzystwo Ubezpieczeń SA, which are not subject to prudential consolidation, therefore the description of the risk management process related to the insurance risk is not part of this Report. Information in this regard is presented in the consolidated annual report for the Group for the end of 31st December 2015, published on 7th March 2016 (note no. 71 - Identification and assessment of insurance risk).





The risk management process takes place in all of the operational units of the Bank and operational units of the Head Office.

The risk management process is supervised by the Supervisory Board of the Bank, which regularly receives information on the risk profile of the Bank and of the Bank Group and on the most important activities undertaken within the risk management.

The Supervisory Board is supported among other by the following committees:

- 1) Remuneration Committee
- 2) Supervisory Board's Risk Committee (SBRC)
- 3) Supervisory Board's Audit Committee (SBAC)

The Remuneration Committee supports the Supervisory Board in its statutory duties and responsibilities arising from the law, regarding remuneration. The Remuneration Committee is described in detail in Chapter 11 – Remuneration Policy of this Report.

The Supervisory Board's Risk Committee was established in IV quarter 2015. It formulates opinions on the Bank's willingness to take risks, expressed in particular in the strategic limits of tolerance for risk. The Supervisory Board's Risk Committee's competencies involve supervision over the Management Board in regard to risk management system and assessment of its adequacy and efficacy, as well as support of the Management Board in supervision of the strategy of risk management.

In 2015, 11 sessions of KARN and 1 session of KRRN, after its establishment in 4Q2015 took place.

The Management Board is responsible for the strategic risk management, which includes the supervision and monitoring of activities taken by the Bank within the risk management. The Management Board takes major decisions affecting the Bank's risk profile and approves internal regulations which define the risk management system.

The risk management process is executed in three mutually independent lines of defence:

 first line of defence – internal functional control to ensure that the risk controls are used and actions comply with binding legal provisions; the function is performed in particular by all of the Bank's units, the Head Office units and entities of the Group and includes such aspects of activities of individual units and entities that may generate risk. The Bank's organisational units and the Group's entities are responsible for identification of risks, designing and implementing respective controls, if controls have not been implemented within the scope of activities undertaken in the second line of defence. At the same time the Bank Group's companies are obliged to comply with the principles of coherence and comparability of risk assessment and control in the Bank and Group entities, taking into account the specific nature of the company's business and market at which it operates,

- second line of defence the risk management system, including the risk management methods, tools, process and organisation; this function is performed in particular by the Risk Management Area, Compliance Department, Planning and Controlling Department, relevant committees as well as the other units of the Head Office responsible for controlling,
- third line of defence internal audit; the function performed within the scope of internal audit, including audit on the efficiency of the risk management system.

The independence of the lines of defence means that they remain organisationally independent as follows:

- the function of the second line of defence is independent from the first line of defence in regard to creation of system solutions,
- 2) the function of the third line of defence is independent from the first and second lines of defence.
- the compliance function is reporting to the President of the Management Board.

The Bank's Head Office units that are responsible for risk management within the scope of their respective competencies were grouped in 2015 in the Bank Risk Division, Department of Risk Integration, Restructuring and Debt Collection of the Corporate Client Division and the Credit Risk Assessment and Analysis Centre, as well as in the Restructuring and Debt Collection Centre. The unit responsible for the capital risk management is located in the Finance and Accounting Division, whilst the unit responsible for compliance risk and reputation risk management – in the President of the Management Board's Division.

The purpose of the Banking Risk Division is to create and implement systemic solutions for managing risks that have been defined as significant, such as credit, operational, interest rate, foreign exchange, liquidity, business, macroeconomic risk as well as capital adequacy.

The Bank Risk Division, in the context of risk management, is responsible in particular for:

- 1) identification of risk factors and its sources,
- risk measurement, assessment, control and cyclical monitoring and reporting of the risk level (significant risks),
- 3) measurement and assessment of capital adequacy,
- 4) preparing recommendations for the Management Board or committees as to the acceptable risk level,
- 5) developing and reviewing of internal regulations relating to risk and capital adequacy management,
- developing IT systems to support risk and capital adequacy management.

The Department of Risk Integration is, in particular, responsible for:

- 1) validation of risk models,
- 2) management of risk models, including implementation of risk management standards in the Group,
- initiation and coordination of implementation activities of the risk management system in the Group.



The Department of Restructuring and Debt Collection of the Corporate Client is responsible in particular for:

- recovery (and/or restructuring) of nonperforming receivables,
- 2) collateral foreclosure during recovery process,
- reviewing and classifying of receivables and off-balance sheet liabilities managed by the Department and defining the amount of write-downs for impairment.

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

- 1) preparation of systemic solutions, including internal regulations, applications and models utilized in the processes of non-performing debt monitoring
- 2) debt collection through restructuring, recovery, as well as improving effectiveness of those activities,
- outsourcing of monitoring and debt collection and management of collateral foreclosed as a result of recovering Bank's receivables, as well as efficient sale of non-performing debts,

interventions in the context of early monitoring of delays in repayment of debts of individual and institutional clients in the Retail Banking Area. The Credit Risk Assessment and Analysis Centre is responsible in particular for:

- assessment and mitigation of credit risk of individual credit exposures
- risk assessment of financial institutions and monitoring of limits on wholesale market related to the credit of financial institutions,
- Improvement and optimization of credit process utilized IT solutions.

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

- 1) compliance risk management,
- 2) loss of reputation risk management,
- creation of internal control standards, under the first line of defence principle.

The Planning and Controlling Department, in the context of risk management, is responsible in particular for:

- 1) capital risk management
- planning and monitoring of the Bank and the Group's financial and sales plans' realisation.

The Management Board, in the context of risk management, is supported by the following committees:

- 1) Risk Committee ('the RC'),
- 2) Assets & Liabilities Committee ('the ALCO'),
- 3) Bank's Credit Committee ('the BCC'),
- 4) Operating Risk Committee ('the ORC').

RC monitors the integrity, adequacy and efficiency of the risk management system, capital adequacy and implementation of the risk management principles, in compliance with the Bank's strategy, analyses and evaluates compliance with strategic risk tolerance limits defined in the risk management strategy of PKO Bank Polski SA. RC supports the Management Board in the process of banking risk management through preparation of recommendations and making decision on capital adequacy and efficiency of the risk control system. Four sessions of the Risk Committee took place in 2015.

ALCO manages the Bank's assets and liabilities by influencing the structure of Bank's balance and off-balance positions in

a way optimal in relation to profitability. The Committee supports the Bank's Management Board in the scope of both Bank and Group's activities related to the balance sheet structure, capital adequacy, profitability, as well as financial, market, liquidity, business, credit (both settlement and presettlement) risk and wholesale market transactions.

BCC issues opinions and takes credit decisions in respect of individual significant credit exposures or issues recommendations in this respect to the Management Board of the Bank, issues recommendations and makes decisions regarding non-performing debt management, as well as makes decisions related to approval of credit risk models, credit risk parameters and results of their validation, with representatives from the Area of Finance and Accounting included in the decision making process.

ORC supports the Management Board in operational risk management through decision taking, recommendations and opinions, for instance strategic tolerance limits and operational risk limits, key risk indicators (KRI), assumptions of stress tests, results of validation of operation risk measurement models, expansions and changes in AMA approach and by supporting all activities aimed at lowering of operational risk in all of the areas of the Group's activities. ORC formulates recommendations regarding operational risk management in Group's entities, which are forwarded to Group's entities as part of the Bank's ownership supervision over those entities. The Operational Risk Committee made decisions by circulation during ten sessions taking place in 2015.

The ALCO, BCC, OCR, RC SBRC, SBAC as well as Management and Supervisory Boards receive cyclical reports concerning individual risk types.

The Bank supervises the functioning of the Bank Group entities. Within this supervisory function, the Bank defines and oversees their risk management systems and supports the development of such systems; and also takes the risk level of the activity of individual subsidiaries into account as part of the risk monitoring and reporting system at the Group level.

Internal regulations on management of individual types of risk in the Bank Group entities are defined by internal regulations implemented by such companies upon consultation with the Bank and taking account of recommendations prepared by the Bank. Subsidiaries' internal regulations on risk management are implemented with coherence and comparability of assessment of individual types of risk in the Bank and the Bank Group entities, taking into account the scope and type of relationships between entities of the Group, specific nature and scale of the company's business and market at which it operates. Risk management in the companies of the Group involves in particular:

- 1) involvement of the units of Risk Management Area as well as relevant Committees of the Bank in a review process of significant transactions of the Group companies,
- review (by relevant units from the Risk Management Area and a unit from the President of the Management Board's Area) of internal regulations related to risk management in respective companies of the Group,
- Group companies' risk reporting to relevant Bank's Committees or Management Board,
- 4) monitoring of strategic limits for risk tolerance for the Group.

The priority of the Bank Group in 2015 was to keep its strong capital position and develop its funding to ensure the basis for



stable development of business activities, having maintained at the same time the priorities related to business efficiency and efficient cost control and appropriate risk assessment.

As a consequence, in 2015 the Bank:

- in February, May and November 2015, exchanged its maturing short-term bonds for bonds with a maturity period ranging from 3 to 6 months, in the amounts ranging from PLN 800 million to PLN 1 billion,
- 2) acquired EUR 200 million. from issuance of short-term bonds with a maturity period of 6 months in October 2015,
- 3) reduced the risk weighted assets levels. Improvement of the quality of data (i.a. inclusion of SME exposures meeting the segmentation criteria in the retail category) as well as review of off-balance sheet commitments, together with verification of risk weights attributed to the product, proved to be the primary sources of optimization.
- 4) Transferred, pursuant to the Management Board's recommendation, the Bank's profit (PLN 3,079 million) for 2015, as well as retained profits from previous years (PLN 132 million) to supplementary and reserve capital and retained PLN 1,250 million, without committing any sums for dividend payments.

In 2015, in the context of risk management, the Bank took preparatory actions necessary for the establishment of a foreign branch in the Federal Republic of Germany, which begun its operations in December 2015. As a part of aforementioned actions, the Bank received the PFSA's approval for a combined use of both AMA and BIA approaches for calculation of own funds requirements for operational risk. The BIA approach will be utilized for the purpose of own funds requirements calculation for operational risk related to the activities of the foreign branch in Germany. Within the Group, the mortgage loan portfolio will be gradually transferred to PKO Bank Hipoteczny SA. Value of the portfolio transferred in 2015 (the transfer itself took place in December 2015) amounted to PLN 429.5 million.

In 2015, PKO Bank Hipoteczny SA (part of the PKO Bank Polski Group) made the first issue of mortgage bonds in the amount of PLN 30 million with a maturity period of 5 years.

Takeover of "Wesoła" Credit Union (located in Mysłowice) in the  $2^{nd}$  part of t2015 had no effect on the profile risk of the Group

In 2<sup>nd</sup> part of 2015, the PKO Leasing SA Group continued its risk management integration with PKO Bank Polski SA through adjustments to its internal regulations. Moreover, PKO Leasing SA and PKO BP Faktoring SA took actions necessary for unification of processes and management. PKO Leasing SA Group utilizes the Bank's rating model scores used for the assessment of client's creditworthiness.

The Bank monitors on a cyclical basis the level of risk and develops appropriate methods for its measurement.

# 2.2. ASSESMENT OF MEMBERS OF THE MANAGEMENT BODY

Assessment of members of the management body is carried out on a rolling basis by the Supervisory Board, starting from the time of recruitment, throughout the term of office.

Selection of members of the Management Board by the Supervisory Board is pursuant to: binding legal provisions (in particular Commercial Companies Code and the Banking Law), supervisory regulations and market standards (in particular

resolutions of the PFSA and best market practices of companies listed on the Warsaw Stock Exchange) and the Bank's Articles of Association. The Bank uses the competition procedure. The Supervisory Board defines the competency requirements for the purpose of the competition procedure, i.a.:

- 1) strategic planning skills,
- 2) risk assessment skills and the ability to take action under complex and adventurous circumstances,
- 3) analytical skills,
- 4) decision-making, personnel and time management skills,
- 5) foreign languages skills.

Moreover, candidates must meet the following requirements in regard to:

- 1) education (higher),
- work experience (at least ten years, of which at least 5 years of management experience in financial institutions or consulting firms),
- 3) guarantee of prudent and stable management,
- not being subject to any legally binding restrictions or bans from holding the position of management board member in in a bank incorporated as a joint-stock company,
- 5) not having their civil rights revoked and having full legal capacity.

Additionally, a candidate must provide statements:

- regarding owned shares in companies, functions performed on management and supervisory boards or other governing bodies of commercial entities, including information on discharge procedures related to functions performed,
- 2) regarding penal-fiscal, disciplinary and foreclosure proceedings aimed at the candidate, administrative proceedings in which the candidate was or is present as a party, administrative proceedings in which an entity, in which the candidate holds or held managerial positions, was or is present as a party, in relation to the responsibilities of the candidate as well as court proceedings in civil cases, in which the candidate was or is present as a party and which may have a negative impact on its financial situation.

The information above refers to the current state as well as the past 5 years.

In 2015 an assessment of the members of the governing body was performed by an external consulting firm. Both individual competencies as well as competencies of the Management Board as a whole are assessed.

The competency model for the managers comprises two groups of competencies:

- company-wide competencies, which include consistency with the Bank's values, goal orientation, customer focus, involvement in the development and openness to change,
- leadership skills such as: influence, team leadership, enforcement of obligations, development of subordinates, strategic orientation, leadership in a changing environment.

Each of the positions has a required level of competence in the aforementioned areas, expressed in a 4 grade scale.

In the course of carrying out the function a of a member of the Management Board, pursuant to art. 395 par. 2 p. 3 of the Commercial Companies Code, the general assembly gives a discharge to each of the members of the Management Board, on a yearly basis. Said discharge constitutes an assessment of each member, irrespective of the approval of the Management



Board's report on the operations of the Company, and a lack of the aforementioned discharge constitutes a negative assessment of a member of the Management Board and in consequence can form a basis for his/her removal from the Management Board.

#### 2.3. IDENTIFYING SIGNIFICANT TYPES OF RISKS

The significance of individual types of risk is defined at the level of the Bank and the Group entities.

The following type of risks was deemed to be significant in the Bank:

- 1) credit risk,
- 2) foreign exchange risk,
- 3) interest rate risk,
- 4) liquidity risk,
- 5) operational risk,
- 6) business risk,
- 7) macroeconomic risk,
- 8) model risk,
- 9) compliance risk.,
- 10) capital risk,
- 11) loss of reputation risk,
- 12) derivatives risk,
- 13) leverage ratio risk.

Moreover, operational, compliance and business risks have all been recognized as significant in the Group.

While determining the criteria of considering particular risk to be significant, an impact of such risk on the Bank's, the Group companies' and the whole Group's activities is taken into account, and there are three types of risk:

- risks that are deemed permanently significant in advance - that are subject to active management,
- 2) potentially significant risks in this case a periodical monitoring of significance is performed,
- 3) other undefined risks or kinds of risks that do not exist in the Bank or in the Group (insignificant or unmonitored).

On the basis of quantitative and qualitative data, at least once per year, a risk significance monitoring is performed in the Bank and Group's entities with a significant risk profile. As the result of the assessment, each type of risk is categorized as "significant" or "non-significant". Said monitoring is performed in particular in case of a significant change in the scope or profile of the Bank's or the Group's activities.

Risks deemed as significant as of 31 December 2015 in the Group's entities subject to prudential consolidation are presented in Table 2.1.

Table 2.1

#### SIGNIFICANT RISKS

				2015							
			Risks ident	ified as signifi	cant				Permane	ently signifi	cant risks
NAME OF ENTITY	Credit risk	Currency risk	Interest rate risk	Liquidity risk	Reputational risk	Risk of macroeconomic changes	Model risk	Derivatives risk	Operational risk	Business risk	Compliance risk
Grupa Kapitałowa PKO Leasing SA	Х	Х	Х	Х	Х		Х	Х	Х	х	Х
Grupa Kapitałowa KREDOBANK SA	x	х	Х	х			х		х	х	Х
PKO Towarzystwo Funduszy Inwestycyjnych SA					x				х	х	Х
PKO BP BANKOWY PTE SA									х	х	Х
Finansowa Kompania "Prywatne Inwestycje" Sp. z o.o.	x								х	х	Х
PKO Finance AB									x	х	x
PKO Bank Hipoteczny SA	Х			Х		x	Х		х	х	Х
PKO BP Finat Sp. z o.o.									х	х	Х

#### 2.4. INTERNAL CONTROL

PKO Bank Polski SA's internal control system ensures efficiency and efficacy of the Bank's operations, financial reporting reliability, compliance with Bank's risk management principles, generally applicable laws, internal regulations and supervisory recommendations as well as market standards adopted by the Bank.

Within the Bank's internal control framework, risk related to each operation, transaction, product and process as well as risks relating to the Bank's and the Group's organizational structure are identified; the risk of not meeting the targets set out in the internal control system is also calculated.

As part of its internal control system, PKO Bank Polski SA distinguishes a control function responsible for compliance with control mechanisms relating in particular to risk management in the Bank, compliance unit responsible, in cooperation with other organizational units of the Bank, for identification, assessment control and monitoring of compliance risk related to generally applicable laws, internal regulations and market standards adopted by the Bank, as well as an independent audit unit, responsible for an objective evaluation and assessment of adequacy and efficacy of risk

management and internal control system, except for the internal audit unit.

In order to reduce irregularities and fraud, ensure the quality and accuracy of performed tasks, compliance with the principles of risk management in the Bank, compliance with generally applicable law, internal regulations and market standards adopted by the Bank, as well as reliability of accounting and financial reporting, the Bank utilizes control mechanisms tailored to the specifics of its operations. Utilization of said control mechanisms by the employees falls under internal, functional control and internal audits. Internal functional control comprises tasks and activities performed by the Bank's organizational units, including utilization of the control mechanisms by the employees.

Important issues, operations and transactions are identified in selected areas of the Bank's activities and are selected for monitoring within the internal functional control framework.

Important issues regarding the internal functional control and control mechanisms are presented in a periodical executive report to the Risk Committee, Management Board, Supervisory Board's Audit Committee and Supervisory Board.



#### 2.5. CREDIT RISK

#### 2.5.1. INTRODUCTION

Credit risk is understood as the risk of incurring losses as a result of client's default or the risk of decrease in the economic value of the Bank's receivables as a result of deterioration of the client's credibility.

The purpose of credit risk management is to limit losses arising from the credit portfolio and minimise risk of occurrence of credit exposures which may be subject to impairment, while maintaining the expected level of profitability and value of the credit portfolio.

The Bank and the companies of the Group apply the following credit risk management principles:

- a credit transaction requires a comprehensive credit risk assessment, expressed as an internal rating or scoring,
- credit risk transactions is measured at the application stage and on a cyclical basis as part of monitoring, and takes into account both the changing external conditions and changes in the financial standing of the borrowers,
- the credit risk assessment of exposures significant for their risk level or value is executed by credit risk assessment units, irrespective of business units,
- 4) the terms and conditions of credit transactions offered to clients depend on the assessment of credit risk level generated by the transaction concerned,
- 5) credit decisions may be taken only by authorised persons,
- credit risk is diversified by geographical areas, industries, products and clients,
- the expected level of credit risk is mitigated by legal collateral accepted by the Bank, credit spreads charged to clients as well as by impairment allowance for credit exposures.

#### 2.5.2. CREDIT RISK MEASUREMENT AND ASSESSMENT

#### 2.5.2.1. CREDIT RISK MEASUREMENT METHODS

In order to assess the level of credit risk and credit portfolio profitability, the Bank uses various credit risk measurement and assessment methods, including the following:

- 1) probability of default (PD),
- 2) expected loss (EL),
- 3) unexpected loss (UL),
- 4) loss given default (LGD),
- 5) credit value at risk (CVaR),
- 6) share and structure of loans with recognized impairment (according to IAS),
- coverage ratio for impaired loans (according to IAS) with write-downs,
- 8) cost of risk.

PKO Bank Polski SA systematically improves the scope of its credit risk measures, taking into account the requirements of the IRB approach, as well as the scope of application of risk measures so as to fully cover the Bank's credit portfolio with those methods.

The portfolio credit risk measurement methods allow, among other things, to include credit risk in the price of products; to determine the optimum conditions of financing availability; and to determine level for making impairment write-downs.

The Bank performs analysis and stress-tests regarding the influence of potential changes in macroeconomic environment on the quality of Bank's loan portfolio. The test results are reported to the Bank's authorities. The above mentioned

information enables the Bank to identify and take measures to limit the negative influence of unfavourable market changes on the Bank's performance.

#### 2.5.2.2. RATING AND SCORING METHODS

Risk assessment of individual credit transactions is made by the Bank using scoring and rating methods developed, enhanced and supervised by the Banking Risk Division. The functioning of those methods is supported by specialised IT applications. The manner of credit risk assessment is defined in the Bank's internal regulations whose main purpose is to ensure uniform and objective credit risk assessment in the process of granting credit facilities.

The Bank assesses credit risk for individual clients at two levels: client's borrowing capacity and creditworthiness. Client's borrowing capacity assessment consists in verifying the financial standing of a prospective borrower, while creditworthiness assessment covers the client score and credit history obtained from the Bank's internal databases and from external databases.

In case of corporate customers from the small and medium enterprise segment, that meet certain criteria, the Bank assesses credit risk using the scoring method. Such assessment is dedicated to the low-value, plain vanilla loans and is performed in two dimensions: customers' borrowing capacity and creditworthiness. The borrowing capacity assessment involves examination of the customer's economic and financial situation, whereas the creditworthiness assessment involves scoring and evaluation of the customer's credit history obtained from internal databases of the Bank as well as external databases.

In other cases, the credit rating method is used.

The scoring method used assess the credit risk associated with corporate clients is performed in two dimensions: client's and the transaction's. The measures of said scoring being: client's creditworthiness, i.e. rating and scoring of the transaction, i.e. the ability to repay the debt in a given amount and time.

Since credit rating models used for individual clients are developed on the basis of the Bank's internal data, they are tailored to the client's risk profiles. The models are based on the statistical dependency analysis between defaulted debt and client's scoring. The scoring itself comprises financial indicators, as well as qualitative and behavioural factors analysis. The risk assessment is dependent on segmentation of the entity, for which the assessment is made.

A periodical evaluation of methods utilized for the assessment of credit risk related to individual credit exposures is performed in order to ensure their validity.

The rating and scoring information is used widely by the Bank in the process of credit risk management, within the system of competencies in the area of credit decisions and within the system for credit risk measurement and reporting.

#### 2.5.3. CREDIT RISK MONITORING

Credit risk monitoring is performed on the individual credit exposure and portfolio levels.

Monitoring of the individual exposure's credit risk is defined by the Bank's internal regulations in particular related to:

 a) principles regarding creation of impairments related to credit exposures and impairments related to outstanding forward transactions,



- b) principles regarding operation of the Early Warning System,
- c) early monitoring of delays in debt repayment,
- d) principles regarding classification of credit exposures and establishment of specific provisons.

In order to reduce the response time to the observed warning signs indicating an increase of the credit risk level, the Bank uses and develops IT application of the Early Warning System (EWS).

Monitoring of the portfolio's credit risk is defined by the Bank's internal regulations in particular related to:

- 1) control over the portfolio's credit risk on the basis of:
  - a) adopted credit risk measurement tools, including identified sources of the credit risk,
  - b) analysis of results and actions taken under the systemic risk management framework,
- 2) recommendations regarding remedial actions to be taken in case of an increased credit risk level.

#### 2.5.3.1. RISK CONCENTRATION

The Group monitors the exposures' risk concentration in respect of:

- 1) exposures to individual clients or groups of related clients,
- 2) exposures to groups of clients or credit portfolios exposed to a single risk factor.

The Group analyses the concentration in relation to:

- 1) geographical region,
- 2) currencies,
- 3) industries,
- 4) mortgage-backed credit exposures,
- 5) largest entities,
- 6) largest capital groups.

The risk of concentration of exposures to individual clients or groups of related clients is monitored in relation to the exposure concentration limit, where individual exposure may not exceed 25% of consolidated own funds (according to CRR's definition of eligible own funds) or equivalent of EUR 150 mio. translated into PLN using the average rate published by the National Bank of Poland prevailing as at the last reporting date.

Table 2.2 EXPOSURE TOWARDS THE 10 BIGGEST CLIENTS\*

		The Ban	k Group	
	201	15	201	14
No.	exposure	% of own funds	exposure	% of own funds
1	4 107	15.2%	3 194	12.9%
2	2 722	10.0%	2 474	10.0%
3	2 080	7.7%	2 267	9.2%
4	1 910	7.1%	2 173	8.8%
5	1 842	6.8%	2 080	8.4%
6	1 669	6.2%	1 643	6.6%
7	1 594	5.9%	1 266	5.1%
8	1 217	4.5%	1 178	4.8%
9	1 213	4.5%	1 131	4.6%
10	1 008	3.7%	1 008	4.1%
Total	19 361	71.5%	18 414	74.4%

 $<sup>^{\</sup>star}$  Total (balance sheet and off-balance sheet) exposure to non-banking sector clients for comparison to the exposure concentration limit

As at 31 December 2015 and 31 December 2014 the concentration limits were not exceeded. As at 31 December 2015, the largest exposure to an individual entity amounted to 15.2% of consolidated own funds. The group of the 10 biggest borrowers of the Group consist of clients of PKO Bank Polski SA only.

As at 31 December 2015 the level of concentration risk of the Bank Group towards any group of entities was small and amounted to 15.7% of the consolidated own funds.

Table 2.3

EXPOSURE TOWARD THE 5 BIGGEST CAPITAL GROUPS\*

		The Bank Group								
	2	015	201	4						
No.	exposure	% of own funds	exposure	% of own funds						
1	4 248	15.7%	3 498	14.1%						
2	3 289	12.1%	3 194	12.9%						
3	2 926	10.8%	2 972	12.0%						
4	2 746	10.1%	2 315	9.3%						
5	2 046	7.6%	2 190	8.8%						
Total	15 254	56.3%	14 170	57.2%						

<sup>\*</sup> Total (balance sheet and off-balance sheet) exposure to non-banking sector clients for comparison to the exposure concentration limit

The credit concentration risk in respect of geographical regions is monitored in relation to:

- 1) financial institutions by the country of origin of the counterparty's head office,
- 2) other clients by regional division of the Bank's organisational units extending the loan.

In order to ensure geographical diversification of the Bank's exposures to financial institutions, the Bank applies limits of total exposure for individual countries.

As at 31 December 2015, there was no significant geographical concentration level in the Group's credit portfolio (Table 2.4).



Table 2.4
GEOGRAPHICAL STRUCTURE OF EXPOSURES\*

The Bank Group 2015

								No. o	of exposure	class**								
Country / region —	Α	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	Total
Poland, including:	46 770	10 255	224	0	0	4 993	46 855	86 906	42 496	8 263	471	0	0	0	0	2 314	14 634	264 180
Mazovia	0	492	3	0	0	100	4 104	14 590	10 146	324	0	0	0	0	0	0	0	29 758
Opole-Silesia	0	780	2	0	0	0	1 801	12 029	4 298	150	0	0	0	0	0	0	0	19 061
Greater Poland	0	320	0	0	0	0	1 157	9 340	4 812	32	0	0	0	0	0	0	0	15 660
Lesser Poland / Świętokrzyskie	0	1 158	66	0	0	0	1 846	7 937	3 898	83	0	0	0	0	0	0	0	14 988
Lower Silesia	0	209	0	0	0	0	646	7 362	3 844	56	0	0	0	0	0	0	0	12 118
Lubelsko-Podkarpackie	0	856	7	0	0	0	924	7 179	2 269	35	0	0	0	0	0	0	0	11 272
West Pomerania	0	469	1	0	0	0	1 836	4 925	2 767	119	0	0	0	0	0	0	0	10 117
Łódzkie	0	803	9	0	0	0	3 057	5 868	1 962	96	0	0	0	0	0	0	0	11 796
Pomerania	9	303	0	0	0	0	1 049	5 652	3 648	26	0	0	0	0	0	0	0	10 687
Kujawsko-Pomorskie	0	629	5	0	0	0	1 018	4 601	1 880	40	0	0	0	0	0	0	0	8 173
Warmińsko-Mazurskie	0	92	0	0	0	0	385	3 746	1 428	44	0	0	0	0	0	0	0	5 695
Podlaskie	0	158	29	0	0	0	517	2 622	757	38	0	0	0	0	0	0	0	4 121
Other***	46 761	3 986	101	0	0	4 894	28 516	1 053	786	7 219	471	0	0	0	0	2 314	14 634	110 734
United Kingdom	0	0	0	0	0	605	10	58	50	3	0	0	0	0	0	0	0	727
Norway	0	0	0	0	0	2	441	9	4	0	0	0	0	0	0	0	0	457
Liberia	0	0	0	0	0	0	315	0	0	0	0	0	0	0	0	0	0	315
Luxembourg	0	0	0	0	0	30	274	0	1	0	0	0	0	0	0	0	0	305
Ukraine	0	0	0	0	0	247	0	1	0	41	0	0	0	0	0	0	0	289
Germany	0	0	0	0	0	243	12	11	16	2	0	0	0	0	0	0	0	284
France	0	0	0	0	0	244	0	4	5	1	0	0	0	0	0	0	0	253
Netherlands	0	0	0	0	0	105	9	2	4	0	0	0	0	0	0	0	0	120
Sweden	0	0	0	0	0	1	110	2	2	0	0	0	0	0	0	0	0	115
Switzerland	0	0	0	0	0	99	0	2	7	0	0	0	0	0	0	0	0	108
The Bahamas	0	0	0	0	0	0	106	0	0	0	0	0	0	0	0	0	0	106
Cyprus	0	0	0	0	0	0	91	4	0	0	0	0	0	0	0	0	0	95
Czech Republic	0	0	0	0	0	1	63	0	0	0	0	0	0	0	0	0	0	64
Other	0	0	0	0	0	90	50	26	19	4	0	0	0	0	0	0	0	188
Total (PKO BP SA)	46 770	10 255	224	0	0	6 659	48 336	87 026	42 603	8 315	471	0	0	0	0	2 314	14 634	267 606
Group subsidiaries	1 016	74	0	0	0	7 802	7 406	869	178	89	0	0	0	0	16	0	748	18 197
Adjustments and exclusions	0	0	0	0	0	-8 500	-6 964	-2	0	-39	17	0	0	0	0	-1 131	33	-16 585
Total	47 786	10 329	224	0	0	5 962	48 778	87 893	42 780	8 364	488	0	0	0	16	1 183	15 415	269 218

<sup>\*</sup> The value of balance sheet exposures and the balance sheet equivalent of liabilities and off-balance sheet transactions prior to application of credit risk mitigation techniques \* The value of balance sheet exposures and the balance sheet equivalent of liable 
\*\* Classification of exposures occurding to Regulation (EU) 575/2013 (CRR)
A - Exposures to central governments or central banks
B - Exposures to regional governments or local authorities
C - Exposures to regional governments or local authorities
C - Exposures to multilateral development banks
E - Exposures to multilateral development banks
E - Exposures to international organisations
G - Exposures to institutions
G - Exposures to corporates
H - Retail exposures
I - Exposures secured by mortgages on immovable property

The credit concentration risk is monitored also with respect to industry sectors determined based on the PCBA (Polish Classification of Business Activity), maintained for institutional clients. In the case of industry sectors with higher risk levels, the Bank applies limits restricting its exposure to those sectors.

As at 31 December 2015, there was no significant concentration level in any industry sector (Table 2.5).

J - Exposures in default
K - Exposures associated with particularly high risk
L - Exposures in the form of covered bonds - non-occurring in the Bank Group and / or the Bank
M - Items representing securitisation positions - non-occurring in the Bank Group and / or the Bank
N - Exposures in institutions and corporates with short-term credit criting - non-occurring in the Bank Group and / or the Bank
O - Exposures in institutions and corporates with short-term credit criting - non-occurring in the Bank Group and / or the Bank
O - Exposures in of units or shares in collective investment undertakings (CLUs')
P - Equity exposures
Q - Other Items

<sup>\*\*\*</sup> Exposures managed at the Head Office level including the following, among other items: cash, tangible fixed assets, intangible assets, assets from securities valuation, securities



Table 2.5

#### EXPOSURE STRUCTURE BY INDUSTRY\* The Bank Group 2015

T 0 5 4 /1 1									No. of e	xposure class	**								Total
Type of client / branch	А		В	С	D	E	F	G	Н	- I	J	К	L	М	N	0	Р	Q	rotai
Corporate clients, including:		0	7 315	175	0	0	0	43 659	9 706	620	5 313	0	0	0	0	0	0	0	66 787
Industrial processing		0	0	0	0	0	0	2 394	335	18	133	0	0	0	0	0	0	0	2 879
Wholesale and retail trade, repair of motor vehicles, motorcycles		0	0	0	0	0	0	596	57	6	63	0	0	0	0	0	0	0	722
Activities related to real estate management		0	12	0	0	0	0	0	12	1	1	0	0	0	0	0	0	0	25
Construction		0	0	0	0	0	0	384	504	19	109	0	0	0	0	0	0	0	1 017
Public administration and national defence, obligatory social security		0	8	2	0	0	0	485	50	3	30	0	0	0	0	0	0	0	578
Generation and supply of power, gas, water steam, hot water and air for air-conditioning systems		0	1	0	0	0	0	11 352	1 253	75	737	0	0	0	0	0	0	0	13 418
Other exposures		0	7 295	173	0	0	0	28 447	7 496	498	4 240	0	0	0	0	0	0	0	48 149
Banks		0	0	0	0	0	6 659	0	0	0	0	0	0	0	0	0	0	0	6 659
Governments	46	770	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46 770
Individuals		0	0	0	0	0	0	1 592	77 116	42 033	2 914	0	0	0	0	0	0	0	123 654
Other****		0	2 940	49	0	0	0	3 085	203	-50	88	471	0	0	0	0	2 314	14 634	23 735
Total (PKO BP SA)	46	770	10 255	224	0	0	6 659	48 336	87 026	42 603	8 315	471	0	0	0	0	2 314	14 634	267 606
Group subsidiaries	1 (	016	74	0	0	0	7 802	7 406	869	178	89	0	0	0	0	16	0	748	18 197
Adjustments and exclusions		0	0	0	0	0	-8 500	-6 964	-2	0	-39	17	0	0	0	0	-1 131	33	-16 585
Total	47	786	10 329	224	0	0	5 962	48 778	87 893	42 780	8 364	488	0	0	0	16	1 183	15 415	269 218

<sup>\*</sup> The value of balance sheet exposures and the balance sheet equivalent of liabilities and off-balance sheet transactions prior to application of credit risk mitigation techniques

\*\*\* Classification of exposures according to Regulation (EU)

\*\*\*Classification of exposures according to Regulation (EU)

\*\*\* Exposures managed at the Head Office level including the following, among other items: securities, other assets

Tabela 2.6

#### SME EXPOSURE STRUCTURE\* BY INDUSTRY

The Bank Group	
Type of client / branch	2015
Industrial processing	552
Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods	85
Real estate activities	12
Construction	700
Public administration and national defence, obligatory social security	68
Generation and supply of power, gas, water steam, hot water and air for air-conditioning systems	2 016
Other exposures	14 564
Total (PKO BP SA)	17 997
Other Group companies	123
Adjustments and exclusions	0
Total	18 120

Table 2.7 EXPOSURE STRUCTURE\* BY ORIGINAL MATURITY

The Bank Group

			PKO Bank P	-1-11 OA	2013				
			PKO Bank P	OISKI SA			Other Group	Adjustments and	Total
Exposure class	0 - 1 Month	1 - 3 Months	3 - 12 Months	1 - 5 Years	Over 5 years	Other**	companies	exclusions	Total
Exposures to central governments or central banks	10 817	824	5	2	34 995	127	1 016	5 0	47 78
Exposures to regional governments or local authorities	5	25	230	348	9 643	4	74	4 0	10 32
Exposures to public sector entities	0	0	6	20	197	0	(	) 0	22
Exposures to multilateral development banks	0	0	0	0	0	0	(	) 0	
Exposures to international organisations	0	0	0	0	0	0	(	) 0	
Exposures to institutions	2 196	2 623	90	665	147	938	7 802	2 -8 500	5 96
Exposures to corporates	586	325	13 557	11 390	22 331	147	7 406	6 -6 964	48 77
Retail exposures	6	5	9 837	8 641	68 651	-114	869	9 -2	87 89
Exposures secured by mortgages on immovable property	0	0	64	48	42 541	-50	178	3 0	42 78
Exposures in default	19	37	1 498	1 329	5 433	0	89	9 -39	8 36
Exposures associated with particularly high risk	0	0	0	0	0	471	(	) 17	48
Exposures in the form of covered bonds	0	0	0	0	0	0	(	) 0	
Items representing securitisation positions	0	0	0	0	0	0	(	) 0	
Exposures to institutions and corporates with a short-term credit assessment	0	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	16	5 0	1
Equity exposures	0	0	0	0	0	2 314	(	0 -1 131	1 18
Other items	4 934	0	0	0	12	9 687	748	8 33	15 41
Total	18 563	3 839	25 286	22 443	183 951	13 524	18 197	7 -16 585	269 21

he value of balance sheet exposures and balance sheet equivalents of liabilities and off-balance sheet transactions prior to the application of credit risk mitigation techniques

Exposures with a maturity date of up to 1 year constitute a significant portion (57.1%) of the Bank's total exposures, with 72.4% of exposures having a maturity date higher than 5 years.

As at 31 December 2015, the share of exposures in convertible currencies other than PLN in the Group's total portfolio

amounted to 25.3% - a 1.0 p.p. drop in relation to 31 December 2014.

The biggest portion of the Group's currency exposure is the exposure in CHF pertaining to the Bank's credit portfolio. The share of credits denominated in CHF constituted 64% of total currency portfolio of the Group. In the case of the companies

<sup>575/2013 (</sup>CRR)

<sup>/2013 (</sup>CRR)

- Exposures to central governments or central banks

- Exposures to regional governments or local authorities

- Exposures to public sector entities

- Exposures to inditional development banks

- Exposures to international organisations

- Exposures to institutions

- Exposures to institutions

- Exposures to corporates

- Exposures to corporates

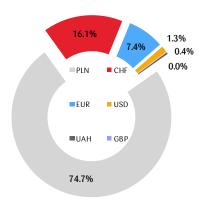
J - Exposures in default
K - Exposures societed with particularly high risk
L - Exposures in the form of covered bands - non-rocurring in the Bank Group and / or the Bank
M - Emar representing securitisation positions - non-occurring in the Bank Group and / or the Bank
N - Exposures to institutions and corporates with short-term credit rating - non-occurring in the Bank Group and
/ or the Bank
O - Exposures in the form of units or shares in collective investment undertakings (CULs')
P - Equity exposures
Q - Other items



of the Group, exposures in other currencies prevail in the currency portfolio, with EUR constituting ca. 64% of currency portfolio of the PKO Leasing SA Group and USD denominated loans constituting a majority of exposures in the Group of KREDOBANK SA and Finansowa Kompania "Prywatne Inwestycje" Sp. z o.o. (i.e. entities pursuing activity in the territory of Ukraine).

Chart 2.1

#### CURRENCY STRUCTURE OF THE CREDIT PORTFOLIO THE BANK GROUP



#### 2.5.4. CREDIT RISK REPORTING

The Bank prepares monthly and quarterly credit risk reports. Credit risk reporting comprises periodical information on the exposure level to the credit portfolio risk. Beside information on the Bank, the reports also include the credit risk data for the Group entities in which significant credit risk level was identified (for instance the KREDOBANK SA Group, PKO Leasing SA Group).

Moreover, the Bank prepares daily, weekly, monthly and quarterly reports on credit exposures related to derivatives risk, and the quarterly reports refer to the whole Bank Group. The reports comprise information on the risk exposure of derivatives and information on the use of risk limits. The recipients of the reports are mainly: BCC, ALCO, RC the Management Board and the Supervisory Board.

#### 2.5.5. CREDIT RISK RELATED MANAGEMENT ACTIONS

The main credit risk management tools used by the Bank are as follows:

- minimum transaction conditions (risk parameters) defined for a given type of transaction (e.g. the minimum value of the LTV rate, the maximum loan amount, the required collateral).
- the principles to determine crediting availability, including cut-off points - the minimum number of points awarded during the creditworthiness assessment made using the scoring system (for individual) or the rating class (for institutional), from which the loan transaction can be made with a given client,
- 3) concentration limits,
- industry limits -defining the risk level related to financing of institutional clients that conduct their businesses in industries characterized by a high level of credit risk,

- 5) limits related to the credit exposures of the Bank's clients resulting for instance from recommendations S and T,
- credit limits defining the maximum Bank's concentration in case of a specific counterparty or country in relation to wholesale market transactions, settlement limits and tenor limits.
- 7) competence limits defining the maximum level of powers required to take credit decisions with respect to the Bank's clients; the limits depend mainly on the Bank's credit exposure amount to a given client (or a group of related clients) and the period of credit transaction; the competence limits depend on the credit decision-making level (within the Bank's organisational structure),
- 8) minimum credit spreads credit risk spreads related to a specific credit transaction executed by the Bank with a given corporate client, and the interest rates offered to a client may not be lower than the reference rate plus credit risk spread.

The credit risk collateral policy plays particular role in determination of minimum conditions of transactions.

The purpose of the collateral policy of the Bank and the Group is to properly hedge the credit risk, including through establishing securities characterized by a maximum potential recovery value, in the event of debt collection.

#### 2.5.6. EXPOSURE TO COUNTERPARTY CREDIT RISK

PKO Bank Polski SA cooperates on the wholesale market with financial institutions headquartered in over 50 countries. The Bank, within previously set limits, can enter into transactions with over 370 counterparties, including local and foreign banks, insurance companies, pension and investment funds. The scope of executed transactions includes deposits, securities transactions, currency exchange and derivatives.

The Bank has access to two clearing houses (one: as a direct participant, second: as an indirect participant) through which EMIR-regulated interest rate derivative transactions, with selected local and foreign counterparties, are settled.

In order to limit credit risk relating to derivative and securities transactions, the Bank enters into framework agreements with its counterparties (according to ISDA, ICMA and The Polish Bank Association). Those agreements enable off-setting of due liabilities (mitigation of settlement risk) and non-due liabilities (mitigation of pre-settlement risk), arising from derivative transactions as well as utilisation of close-out netting at the moment of termination of the agreement due to infringement or event warranting termination in relation to one or both parties.

Additionally, the Bank enters into collateral agreements (CSA – Credit Support Annex – standard developed by ISDA or PBA collateral agreement) with its counterparties, on the basis of which, each of the parties, after meeting certain criteria specified in the agreement, undertakes to establish appropriate collateral along with the right to set it off.

The Bank utilizes international Loan Market Association standards when entering into credit transactions with financial institutions headquartered outside of the Republic of Poland.

Entering into a framework agreement with counterparty is the basis for verification of internal limit per counterparty and of the length of period of the Bank's exposures to forward or repurchase agreement transactions.



The Bank regularly monitors the financial situation of its counterparties and sets risk-adequate limits for pre- and postsettlement exposures for single counterparties.

Assessment of counterparty credit risk forms a basis for CVA and DVA adjustments.

In order to mitigate counterparty credit risk, the Bank establishes credit and settlement limits. The credit limit defines the Bank's maximum exposure to a given counterparty or country arising from wholesale market transactions. The settlement limit defines a maximum daily cash flow value from a single counterparty or country.

Pursuant to the Bank's methodology, the value of limits for credit institutions is depended on counterparty's rating as well as own funds level of the Bank and the counterparty, and in case of non-financial institutions: additionally on a treasury survey, determining the client's demand for heading transactions.

The amount of inner capital for the risk of default of financial institution, country or central bank counterparties is calculated on the basis of on-balance sheet equivalent of the on- and offbalance sheet transactions. Depending on the rating, the exposure is assigned a relevant credit quality step and risk weight, calculated using the internal methods.

Credit risk collateral policy plays a particular role in defining the transaction's minimum conditions. The purpose of the collateral policy of the Bank and the Group is to properly hedge the credit risk, including through establishing securities characterized by a maximum potential recovery value, in the event of debt collection. The policy concerning debt collateral is defined in the internal regulations of the Bank Group entities.

The specific types of collateral that are actually established depend on the product and client type.

As of 31 December 2015, the CSA collateral agreements existed between the Bank and its counterparties, for which the collateral value depended on the bank's credit rating. In case of a downgrade of the Bank's rating below the level defined in the agreement, the value of the collateral (deposited on a daily basis) may be modified according to the methodology described in the agreement and/or additional margin may be required.

As of 31 December 2015, a positive gross value of derivative transactions with financial institutions amounted to PLN 3,888 million.

The above amount was calculated as the total of positive market values of all open transactions. The net credit exposure, after taking into account the netting of transactions, for counterparties with framework agreements was ca. PLN 806 million (excluding centrally-cleared transactions). Therefore, the profits from netting amounted to PLN 3,082 million. The value of collaterals received on the basis of CSA and PBA collateral agreements amounted to ca. PLN 823 million.

As of 31 December 2015 the Bank recognized credit value adjustments in the valuation of financial derivatives concluded with non-financial business entities based on a performed analysis of recoverability of the exposures. The Bank's adjustment included the market value of credit risk as assessed by the Bank. The analysis covered all significant exposures with the positive valuation of financial derivatives contracted with non-financial business entities. In particular, the adjustment included the risk of non-performance of agreements executed with a counterparty, on the basis of i.a.

analysis of entity's financial situation, probability of default of selected contracts as well as the value of the amounts received from collaterals.

The Bank enters into transactions with financial institutions characterized by a diverse external credit rating, ranging from A to CCC (table 2.8).

Table 2.8 THE QUALITY OF EXPOSURES\* TO FINANCIAL INSTITUTIONS\*\*

PKO Bank Polski SA Rating 2015 76.6% 19.4% 1.7% 0.0% 2.3%

100.0%

The above listing is based on external rating granted by Moody's, Standard & Poor's and Fitch rating agencies, mapped to a uniform rating scale.

#### 2.5.7. CREDIT RISK ADJUSTMENTS

Α

BBB

ВВ

CCC

Total

No rating

#### 2.5.7.1. IMPAIRMENT OF CREDIT EXPOSURES

The Bank Group reviews each month the credit exposures to identify impaired credit exposures; measures the impairment of its credit exposures; and establishes write-downs and provisions. The process of establishing write-downs and provisions comprises the following stages:

- 1) identification of the conditions of impairment and of events significant for such identification,
- recording in the Group's IT systems the events significant for identification of the conditions of impairment of credit exposures,
- defining the method for impairment measurement,
- measuring the impairment and deciding on a write-down or provision,
- verification of the and aggregation impairment measurement results,
- 6) recording of the impairment measurement results.

The method for defining the amount of the write-downs depends on the type of impairment sources identified and the individual significance of the credit exposure concerned. The following events are specifically treated as the conditions of individual impairment:

- 1) delay in repayment of principal or interest longer than 90
- 2) significant financial difficulties of the customer (small probability of full repayment of debt towards the Bank without such actions as collateral foreclosure by the Bank),
- 3) entering into restructuring agreement or granting a discount concerning debt repayment (the indication of impairment is recognized, if the convenience granted to the consumer is a result of its difficult legal or economic position).

<sup>\*</sup> Exposure is the total of the nominal exposure on account of bank deposits and securities and the total of derivatives valuations after netting them for counterparties with whom there have been concluded currently binding framework agreements for set-off

<sup>\*\*</sup> Exposures to institutions from outside the Group



In determining the past due period of the credit, the outstanding amounts of interest or principal instalments above defined thresholds are taken into account.

The Bank Group uses three methods for impairment assessment:

- the individual method for individually significant loans which meet the condition of individual impairment or require individual assessment due to the specific nature of a transaction and events that condition their repayment,
- the portfolio method, applied in the case of individually insignificant loans for which the condition of individual impairment has been identified,
- the collective method (IBNR), used in the case of loans where no conditions of individual impairment have been identified, but there is the possibility of occurrence of incurred but not identified losses.

The write-down for impairment of the balance sheet value of a credit exposure is the difference between the balance sheet value of that exposure and the current value of the expected future cash flows from that exposure:

- when defining the write-down under the individual method, the expected future cash flows are assessed for each credit exposure individually, the possible scenarios of performance of the agreement taken into account and weighed with the probability of their fulfilment,
- 2) the write-down for credit exposure impairment defined under the portfolio or collective method equals the difference between the balance sheet value of those exposures and the current value of the expected future cash flows, assessed with statistical methods on the basis of historical monitoring of exposures from homogeneous portfolios.

The provision for off-balance sheet credit exposures is established in the amount equal to the expected (assessable) loss of economic benefits resulting from such exposures.

The provision is set as the difference between the expected value of the balance sheet exposure to arise from the off-

balance sheet liability (from the date as at which the assessment is made to the date of occurrence of the overdue debt that is identified as the condition of individual impairment) and the current value of the expected future cash flows generated from the balance sheet exposure arising from the off-balance liability.

When determining the provision under the individualised method, the expected future cash flows are assessed for each credit exposure individually.

When determining the provision under the portfolio or collective method, portfolio parameters are used that are assessed by means of statistical methods on the basis of historical exposures of the same characteristics.

For the accounting purposes, a financial assets item is considered as past-due, in case a counterparty failed to execute payment upon its maturity.

Impaired exposures are defined as exposures, in case of which a trigger of default has been identified and, in an assessment of future cash flow, impairment in value has been recognized.

Exposures are considered to be at risk and classified as such, in case exposures for which one or both of below events occur:

- the Bank decides that there is a small probability of full repayment towards the Bank or any of the Group's entities of debt towards the Bank without such actions as collateral foreclosure by the Bank (for retail exposures, the above conditions are verified on the level of the exposure, not the debtor).
- 2) the delay in repayment of any significant debt towards the Bank or any Group's entity by the debtor exceeds 90 days.

The definition of exposures at risk among the companies of the Group is similar to the one adopted by the Bank.

In terms of adjustments for specific credit risk, the Bank uses the impairment related to value loss of assets, which was recognized in the Bank's Tier 1 capital, pursuant to the CRR and its implementing acts.



Table 2.9

#### TOTAL CREDIT AND COUNTERPARTY RISK EXPOSURE BY CLASS

		The Bank Group	
	20	015	2014
Exposure class	Total Exposure*	Average Exposure**	Total Exposure*
Exposures to central governments or central banks	47 786	40 039	34 826
Exposures to regional governments or local authorities	10 329	10 253	10 025
Exposures to public sector entities	224	384	641
Exposures to multilateral development banks	-	-	-
Exposures to international organisations	=	=	-
Exposures to institutions	5 962	7 263	5 878
Exposures to corporates	48 778	56 262	59 193
Retail exposures	87 893	82 690	76 421
Exposures secured by mortgages on immovable property	42 780	43 126	44 322
Exposures in default	8 364	8 243	8 799
Exposures associated with particularly high risk	488	584	496
Exposures in the form of covered bonds	-	-	-
Items representing securitisation positions	=	=	-
Exposures to institutions and corporates with a short-term credit assessment	-	-	-
Exposures in the form of units or shares in collective investment undertakings ('CIUs')	16	17	18
Equity exposures	1 183	955	1 160
Other items	15 415	15 128	16 437
Total	269 218	264 943	258 216

 $<sup>\</sup>star$  The value of balance sheet exposures and balance sheet equivalents of liabilities and off-balance sheet transactions prior to the application of credit risk mitigation techniques.

In 2015, retail (62.6%) and corporate (18.1%) exposures constituted the biggest part of the Group' exposures. Remaining exposure's share ranged from 0.1% to 17.7% (table 2.9).

The structure of the credit portfolio, value adjustments and provisions related to original exposures of the Group is shown in Table 2.3.

Below are presented credits and loans and revaluation writedowns by industry (Table 2.10) and geographical (Table 2.11) structure.

Table 2.10

STRUCTURE OF EXPOSURES'\* REVALUATION WRITE-DOWNS\*\* AND EXPOSURES IN DEFAULT BY CLIENT TYPE/INDUSTRY

		PKO Bank Polski SA 2015	
Type of client / branch	Impairment write- downs	Exposures in default	Specific and general credit risk adjustments
Institutional clients***, of which:	7 943	2 753	4 338
Construction	1 911	571	1 239
Wholesale and retail trade, repair of motor vehicles, motorcycles and personal and household goods	1 452	755	814
Real estate market activities	1 117	132	378
Industrial processing	1 114	385	672
Real estate activities	692	102	294
Professional, scientific and technical activities	440	362	224
Other exposures	1 217	446	717
Banks	0	0	0
Governments	6	-	6
Individuals	4 345	3 233	2 849
Other***	108	-	64
Total	12 402	5 986	7 256

<sup>\*</sup> Including financial lease receivables

 $<sup>^{**}</sup>$  Average Exposure was calculated as arthmetic mean of exposures for each quarter of 2015.

 $<sup>^{**}</sup>$  Applies to exposures with identified condition of individual impairment (without IBNR)

<sup>\*\*\*</sup> Sum includes iFRS income in amount of 703,9 K PLN

 <sup>\*\*\*\*</sup> Exposures managed at the Head Office level including the following, among other items: securities, other assets a securities of the results of the securities of the results of th



Table 2.11 EXPOSURES'\* REVALUATION WRITE-DOWNS\*\* AND EXPOSURES IN DEFAULT BY REGION

PKO Bank Polski SA

	2015							
Region	Impairment write- downs	Exposures in default	Specific and genero credit risk adjustments					
oland (PKO Bank Polski)***, including:	12 387	6 070	7 281					
Mazovia****	3 326	1 453	1 865					
Łódzkie	1 110	560	607					
Opole-Silesia	930	616	585					
Lesser Poland / Świętokrzyskie	890	467	533					
Greater Poland	803	467	473					
Pomerania	779	443	497					
Kujawsko-Pomorskie	748	479	451					
Lower Silesia	706	376	420					
Western Pomerania	683	430	419					
Podlaskie	515	301	313					
Central Macroregion	482	37	322					
Lubelsko-Podkarpackie	367	223	212					
Northern Macroregion	278	72	161					
Western Macroregion	257	26	180					
Southern Macroregion	225	41	122					
North Eastern Macroregion	150	51	77					
South Eastern Macroregion	60	13	20					
Other****	50	5	8					
South Western Macroregion	30	10	16					

Including financial lease receivables

Table 2 12

#### RECONCILLIATION OF CHAGES IN ADJUSTMENTS FOR IMPAIRED EXPOSURES

PKO Bank Polski SA

		Decre	ases		
	Balance as at Write-off from Other		Other	Balance as at	Change in the
	31.12.2014	balance sheet	adjustments	31.12.2015*	period
On-balance sheet exposures	6 320	1 428	-482	7 267	947
Off-balance sheet exposures	22	0	-8	14	-8
Total	6 342	1 428	-490	7 281	939

<sup>\*</sup> When calculating exposure amount, Bank includes in the calculation only those amounts of general and specific credit risk adjustments by which Common Equity Tier I capital of the Bank has been reduced in order to reflect losses exclusively related to credit risk according to the applicable accounting framework and recognised as such in the profit or loss account, irrespective of whether they result from impairments, value adjustments or provisions for off-balance sheet items.

#### 2.5.8. USE OF CREDIT RISK MITIGATION TECHNIQUES

As of December 2015 no netting of on- or off- balance sheet items pursuant to art. 205 of the CRR was used, therefore the provisions of art. 205 p. a) of the CRR, regarding 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 of 31 December 2015, the Bank utilized provisions laid out in art. 298 of the CRR, regarding effects of recognition of netting agreements, for the purpose of calculation of onbalance sheet equivalent of derivatives. Said agreements are entered into primarily with institutional counterparties. They allow for a settlement of all the transactions covered by the agreement, even in an event of default of one of the parties, with a total sum of market value of individual transactions. Utilized agreements regarding netting meet the requirements laid out in art. 295-297 of the CRR.

The market value forms the basis for assessment of value of immovable property, collateral and rights. Pursuant to regulations regarding the appraisal of collateral, including immovable property, the market value is set on the basis of the Bank's assessment or evaluation of an independent appraiser.

- property, economic and financial or social and financial situation of entities providing personal collateral,
- the state and the market value of the collateral objects and their susceptibility to the depreciation during of the life of collateral (the impact of technological wear of the collateral on its value),
- 3) the potential economic benefits of the Bank arising from a particular method of securing debts, in particular, the ability to deduct write-downs related to impairment losses.
- method of collateral establishment, including: the typical duration and complexity of formal operations, as well as necessary costs (cost of upholding the collateral and debt enforcement from the collateral), using the Bank's internal regulations relating to collateral evaluation,
- complexity, time-intensity as well as economic and legal conditions related to the effective enforcement from the collateral, in the context of limitations and existing rules of execution related to distribution of amounts received from individual execution and/or bankruptcy proceedings, debt seniority.

<sup>\*</sup>Applies to exposures with identified condition of individual impairment (without IBNR and exposures assessed on individual basis with insignificant write-off) as of 31st Dec 2014

<sup>\*\*\*</sup>Sum includes IFRS income in amount of 703.9 K PLN

<sup>\*\*\*\*</sup> Includes the region of Warsaw and the "Head Office"

<sup>\*\*\*\*\*</sup> Unallocated portfolio



Particular types of collateral are established based on the product and segment of the client.

For credits for residential and commercial real estate, a collateral in a form of a mortgage on immovable property is obligatory.

Until an effective (based on the type and amount of the credit) collateral is established, the Bank may apply the increased credit margin or accept temporary collateral in another form.

When granting retail loans to individual clients, the Bank usually accepts personal collateral (a guarantee under civil law or a bill of exchange) or establishes pledge on the client's bank account, car or securities.

Collateral on loans financing small and medium enterprises as well as corporate clients is established, among other things, on business liabilities, bank accounts, movables, immovable property or securities (in case of SME financing – primarily so called *de minimis* guarantees).

In case of Credit Union "Wesoła" in Mysłowice a collateral in the form of default guarantee has been accepted.

The value of exposures secured with recognized financial collateral allowing for reduction of own funds requirement amounted to PLN 4,648 million as of 31 December 2015 (tables 2.13 and 2.14).

Table 2.13
EXPOSURES COLLATERALISED WITH RECOGNIZED FINANCIAL COLLATERAL
The Bank Group

	2015	2014
TOTAL	1 642	1 620
Exposures to central governments or central banks	0	0
Exposures to regional governments or local authorities	0	0
Exposures to public sector entities	0	0
Exposures to multilateral development banks	0	0
Exposures to international organisations	0	0
Exposures to institutions	521	0
Exposures to corporates	688	998
Retail exposures	61	50
Exposures secured by mortgages on immovable property	3	27
Exposures in default	369	545
Exposures associated with particularly high risk	0	0
Exposures in the form of covered bonds	0	0
Items representing securitisation positions	0	0
Exposures to institutions and corporates with a short-term credit assessment	0	0
Exposures in the form of units or shares in collective investment undertakings ('CIUs')	0	0
Equity exposures	0	0
Other items	0	0

Table 2.14

#### EXPOSURES COLLATERALISED WITH GUARANTEES

The Bank Group

2015

2014

OTAL		3 006	3 546
	Exposures to central governments or central banks	0	0
	Exposures to regional governments or local authorities	0	0
	Exposures to public sector entities	11	343
	Exposures to multilateral development banks	0	0
	Exposures to international organisations	0	0
	Exposures to institutions	0	0
	Exposures to corporates	993	1 493
	Retail exposures	1 725	1 400
	Exposures secured by mortgages on immovable property	1	102
	Exposures in default	275	209
	Exposures associated with particularly high risk	0	0
	Exposures in the form of covered bonds	0	0
	Exposures to institutions and corporates with a short-term credit assessment	0	0
	Exposures in the form of units or shares in collective investment undertakings ('CIUs')	0	0
	Equity exposures	0	0
	Other items	0	0
	Items representing securitisation positions	0	0

As part of the credit risk mitigation techniques, the Bank uses guarantees and financial collateral as funded credit protection (mainly registered pledges on securities, irrevocably blocked funds on a bank account or a deposit account at the Bank or payment of cash to the account of the Bank). The Bank applies the Financial Collateral Comprehensive Method, which makes use of collateral haircuts. Apart from financial collateral and guarantees, the Bank uses mortgages to classify its exposures as belonging to the class of exposures secured by mortgages on immovable property as well as for the purpose of preferential risk weight assignment.

The tables below (table 2.15 and 2.16) represent information on the value of the exposures (before and after utilization of risk mitigation techniques) of the Bank, by exposure category and credit quality steps as of 31 December 2015. Over 80.4% of Bank's exposures have no assigned credit quality step. The above is due to a low number of entities operating on the Polish market possessing the creditworthiness rating by recognized rating agencies. The exposures that involve the credit quality rating are mainly: securities of and receivables to the State Treasury of Poland and the National Bank of Poland as well as transactions with other banks.

Table 2.15

VALUE OF EXPOSURES\* BEFORE APPLICATION OF THE CREDIT RISK MITIGATION TECHNIQUES

he Bank Gro

	2015									
		Co	unterparty'	s credit quo	lity rating			Other Group	Adjustments	Total
•	1	2	3	4	5	6	none	companies	and exclusions	
Exposures to central governments or central banks	24	45 646	0	0	0	0	1 100	1 016	0	47 786
Exposures to regional governments or local authorities	938	0	0	0	0	0	9 317	74	0	10 329
Exposures to public sector entities	0	0	0	0	0	0	224	0	0	224
Exposures to multilateral development banks	0	0	0	0	0	0	0	0	0	0
Exposures to international organisations	0	0	0	0	0	0	0	0	0	0
Exposures to institutions	1 131	2 471	284	171	0	323	2 279	7 802	-8 500	5 962
Exposures to corporates	0	0	1 399	0	0	0	46 937	7 406	-6 964	48 778
Retail exposures	0	0	0	0	0	0	87 026	869	-2	87 893
Exposures secured by mortgages on immovable property	0	0	0	0	0	0	42 603	178	0	42 780
Exposures in default	0	0	0	0	0	0	8 315	89	-39	8 364
Exposures associated with particularly high risk	0	0	0	0	0	0	471	0	17	488
Exposures in the form of covered bonds	0	0	0	0	0	0	0	0	0	0
Items representing securitisation positions	0	0	0	0	0	0	0	0	0	0
Exposures to institutions and corporates with a short-term credit assessment	0	0	0	0	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	0	16	0	16
Equity exposures	0	0	0	0	0	0	2 314	0	-1 131	1 183
Other items	0	0	0	0	0	0	14 634	748	33	15 415
Total	2 094	48 117	1 683	171	0	323	215 218	18 197	-16 585	269 218

<sup>\*</sup> The value of balance sheet exposures and balance sheet equivalent of liabilities and off-balance sheet transactions before application of the credit risk mitigation techniques



Table 2.16

#### VALUE OF EXPOSURES\* AFTER APPLICATION OF THE CREDIT RISK MITIGATION TECHNIQUES

The Bank Group

	20	)15								
			PKO Ba	nk Polski S	A			011 0	A. Postar value and	
		Cou	ınterparty's	credit quali	ty rating			Other Group companies	Adjustments and exclusions	Total
	1	2	3	4	5	6	none	companies	exclusions	
Exposures to central governments or central banks	24	45 646	0	0	0	0	3 862	946	0	50 479
Exposures to regional governments or local authorities	794	0	0	0	0	0	9 572	71	0	10 438
Exposures to public sector entities	0	0	0	0	0	0	213	0	0	213
Exposures to multilateral development banks	0	0	0	0	0	0	0	0	0	0
Exposures to international organisations	0	0	0	0	0	0	0	0	0	0
Exposures to institutions	970	2 268	193	108	0	312	2 287	7 802	-8 500	5 441
Exposures to corporates	0	0	1 080	0	0	0	45 959	7 432	-6 964	47 508
Retail exposures	0	0	0	0	0	0	85 354	925	-2	86 278
Exposures secured by mortgages on immovable property	0	0	0	0	0	0	42 599	178	0	42 776
Exposures in default	0	0	0	0	0	0	7 922	152	-39	8 035
Exposures associated with particularly high risk	0	0	0	0	0	0	471	0	17	488
Exposures in the form of covered bonds	0	0	0	0	0	0	0	O	0	0
Items representing securitisation positions	0	0	0	0	0	0	0	0	0	0
Exposures to institutions and corporates with a short-term credit assessment	0	0	0	0	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	0	16	0	16
Equity exposures	0	0	0	0	0	0	2 314	0	-1 131	1 183
Other items	0	0	0	0	0	0	14 634	748	33	15 415
Total	1 788	47 914	1 273	108	0	312	215 188	18 271	-16 585	268 269
* The value of belongs short exposures and belongs short equivalent of liabilities and off-belongs short			- £ 4b 124 -	ent market areas	to be to be					

<sup>\*</sup> The value of balance sheet exposures and balance sheet equivalent of liabilities and off-balance sheet transactions before application of the credit risk mitigation technique

#### 2.6. INTEREST RATE RISK

#### 2.6.1. INTRODUCTION

Interest rate risk is the risk of loss on the Bank's balance sheet and off-balance sheet items sensitive to interest rate changes, resulting from unfavourable interest rate changes on the market.

The purpose of interest rate risk management is to mitigate the possible losses due to changes in the market interest rates to an acceptable level through appropriate shaping of the structure of the balance sheet and off-balance sheet items.

# 2.6.2. INTEREST RATE RISK MEASUREMENT AND ASSESSMENT

In order to determine the level of interest rate risk, the Bank uses the value at risk model (VaR), price sensitivity measure (BPV), interest income sensitivity measure, stress tests and repricing gaps.

The value at risk (VaR) is the potential loss resulting from maintained structure of balance sheet and off-balance sheet items and changes in interest rates or as potential value of loss on the maintained currency positions due to changes in interest rates or foreign exchange rates, with an assumed probability level and taking account of a correlation between risk factors.

VaR for market risk management purposes is calculated with the 99% confidence level and 10-day holding. For interest rate risk management purposes, the following, among other things, are applied: the VaR value determined for individual financial instruments and for the Bank's portfolios, and by individual types of business activity of the Bank. In 2015 the historic method of VaR calculation has been introduced in PKO Bank Polski SA.

Price sensitivity measure (Basis Point Value - BPV) is defined as change of the financial instrument fair value caused by parallel upward movement of the profitability curves by one basis point.

The interest income sensitivity is a measure defining a change in the interest income resulting from stepwise interest rate changes. The measure takes into account the different repricing dates of individual interest items in each of selected time horizons.

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

Stress tests for interest rate risk are used to assess potential losses resulting from the maintained structure of the balance sheet and off-balance sheet items where market situation occurs that is not described in a standard manner using the statistical measures.

The following scenarios are applied at the Bank:

- hypothetical scenarios within which fluctuations in interest rates are assumed arbitrarily: parallel movement of the interest rate curves for the individual currencies by ±50 bps, by ±100 bps and by ±200 bps and deflection scenarios (nonparallel peak- and twist- type deflections) of profitability curves.
- 2) historical scenarios within 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, the biggest historical nonparallel movement of interest rate curves for securities and for derivatives hedging those securities.

In the process of interest rate risk measurement, in relation to credit and deposit balances with indefinite repricing, the Bank assumed the approach based on replicated interest rate profiles, while taking account of instability of balances of this products (defined on the basis of their past structure).

#### 2.6.3. MONITORING THE INTEREST RATE RISK

In 2015, interest rate risk of the Bank Group was determined mainly by the risk of mismatch of dates of repricing of assets and liabilities.

As at 31 December 2015 the mismatch of reassessment dates of the Bank Group in case of PLN interest rate and and CHF interest rate comprised mainly the Bank's mismatch. The mismatch of interest rate repricing dates for these currencies that was generated by the other Group entities had no significant impact on the interest rate risk for the entire Group and consequently, it did not change its risk profile significantly. The mismatch of the Group's EUR and USD repricing dates comprised mainly the Bank's exposures and the mismatch of



the Group entities. The mismatch of the Bank Group entities in USD reduced the mismatch of the Group in the range of 0 up to 6 months and over 2 years. In case of EUR, the mismatch of the Group entities reduced the mismatch of the Group in the range of 0 up to 6 months and in the range of 1 up to 5 years.

As far as the other ranges are concerned, the mismatch of the Group entities increased the mismatch of the Group.

The Tables 2.17 - 2.20 present the repricing gaps of the Bank and the Group as at 31 December 2015 by currencies.

**Table 2.17** 

#### PLN REPRICING GAP (IN PLN MILLION)

2015	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	Over 5 years	Total
PKO Bank Polski SA								
Periodic gap	41 811	47 418	-21 008	-22 235	-9 122	-18 072	3 091	21 882
Cumulative gap	41 811	89 229	68 220	45 985	36 863	18 792	21 882	
Group subsidiaries								
Periodic gap	-264	228	73	84	14	28	25	187
Cumulative gap	-264	-36	37	121	134	162	187	
TOTAL - Periodic gap	41 547	47 646	-20 935	-22 151	-9 108	-18 044	3 116	22 070
TOTAL - Cumulative gap	41 547	89 192	68 257	46 106	36 998	18 954	22 070	

**Table 2.18** 

#### USD REPRICING GAP (IN USD MILLION)

2015	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	Over 5 years	Total
PKO Bank Polski SA								
Periodic gap	374	-392	-56	127	12	-21	-134	-89
Cumulative gap	374	-18	-74	54	66	44	-89	
Group subsidiaries								
Periodic gap	-74	16	4	10	3	4	6	-32
Cumulative gap	-74	-58	-54	-44	-42	-38	-32	
TOTAL - Periodic gap	300	-376	-52	137	15	-18	-127	-121
TOTAL - Cumulative gap	300	-76	-128	9	24	6	-121	



**Table 2.19** 

#### EUR REPRICING GAP (IN EUR MILLION)

2015	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	Over 5 years	Total
PKO Bank Polski SA								
Periodic gap	-135	675	218	-187	-382	-838	212	-438
Cumulative gap	-135	539	757	570	188	-650	-438	-
Group subsidiaries								
Periodic gap	113	-196	-3	-4	1	9	0	-82
Cumulative gap	113	-84	-87	-91	-91	-82	-82	_
TOTAL - Periodic gap	-23	478	215	-192	-382	-828	212	-519
TOTAL - Cumulative gap	-23	456	670	479	97	-732	-519	-

**Table 2.20** 

#### CHF REPRICING GAP (IN CHF MILLION)

2015	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	Over 5 years	Total
PKO Bank Polski SA								
Periodic gap	-371	3 658	124	-1 808	-75	-417	-716	396
Cumulative gap	-371	3 287	3 411	1 603	1 528	1 111	396	-
Group subsidiaries								
Periodic gap	1	-7	0	0	0	0	0	-6
Cumulative gap	1	-6	-6	-6	-6	-6	-6	-
TOTAL - Periodic gap	-370	3 651	124	-1 808	-75	-417	-716	390
TOTAL - Cumulative gap	-370	3 281	3 405	1 597	1 522	1 106	390	-

The VaR and analysis of stress test scenarios of the Group's exposure to the interest rate risk as at 31 December 2015 and 31 December 2014 respectively are presented below:

Table 2.21

### SENSITIVITY OF FINANCIAL ASSETS EXPOSED TO INTEREST RATE RISK

	20	14	2013		
	10-day VaR	Stress-test ±200 base points*	10-day VaR	Stress-test ±200 base points*	
PKO Bank Polski SA	272	2 040	282	2 370	
Group subsidiaries	-	2 025	-	2 380	

<sup>\*</sup>The table presents the absolute value of most adverse stress test among all scenarios: shift of FX rates in particular currencies by 200 BPS up and by 200 BPS down, both separately and jointly for the Bank and Group subisidiares

As at 31 December 2015, the 10-day VaR on the interest rate was PLN 272 million for the Bank, which accounted forca. 1.0% of the Bank's own funds. As of 31 December 2014, the Bank's VaR was PLN 282 million, which accounted for approx. 1.1% of the Bank's own funds.

The results of stress tests showing changes in the market value resulting from shifts of the yield curves by individual currencies are presented in Table 2.22:

Table 2.22

STRESS TESTS RESULTS\* - PARALLEL SHIFT OF INTEREST RATE

CURVES BY ±200 BASE POINTS

	Banl	Group subsidiaries Total			ol	
Currency	2015	2014	2015	2014	2015	2014
PLN	-1 617	-1 877	-9	-3	-1 626	-1 880
EUR	-195	-236	0	-6	-195	-242
USD	-24	-2	-7	-12	-31	-14
CHF	-199	-266	0	0	-199	-266
GBP	-2	-1	0	0	-2	-1

 $<sup>^{\</sup>star}$  Main foreign currency values have been shown in PLN equivalents

Given the nature of business activity of the other entities of the Group generating significant interest rate risk and the specific nature of the market on which they operate, the Group does not determine the consolidated VaR. The companies use their own risk measures to manage interest rate risk. The 10-day VaR measure for interest rate for main currencies is used by KREDOBANK SA, its value as at 31 December 2015 was PLN 11.5 million, while as at 31 December 2014 – ca. PLN 9.5 million.



#### 2.6.4. INTEREST RATE RISK REPORTING

The Bank prepares daily, weekly, monthly and quarterly interest rate risk reports, but the quarterly reports refer also to the Group. The reports contain information on interest rate risk exposure and on the risk limits utilisation. Assessment of interest rate risk for the Bank is prepared on a daily basis. The recipients of such reports are mainly ALCO, RC, the Management Board, Supervisory Board's Risk Committee and Supervisory Board.

# 2.6.5. MANAGEMENT ACTIONS RELATED TO INTEREST RATE RISK

The basic interest rate management tools used in the Group are as follows:

- 1) interest rate risk management procedures,
- 2) limits and threshold values by individual market risk types,
- 3) defining characteristics and level of exposure for the interest rate risk for particular types of products,
- defining the allowed types of transactions exposed to interest rate risk.

The Group defined limits and thresholds for interest rate risk, that is among other, price sensitivity, interest income sensitivity, as well as limits and thresholds of losses, and limits for instruments sensitive to interest rate fluctuations.

The methods of interest rate management in the Group entities are defined by internal regulations that are implemented by companies in which the interest rate risk is significant. Such provisions are developed with consultations with the Bank and taking account of the recommendations of the Bank.

#### 2.7. FOREIGN EXCHANGE RISK

#### 2.7.1. INTRODUCTION

FX risk is the risk of loss due to changes in the foreign exchange rates, generated through maintaining open currency positions in individual currencies.

The purpose of FX risk management is to mitigate possible losses resulting from changes of FX rates to an acceptable level through appropriate structuring of balance sheet and off-balance sheet items.

# 2.7.2. FOREIGN EXCHANGE RISK MEASUREMENT AND ASSESSMENT

In order to determine the level of FX rate risk, the Bank uses the value at risk model (VaR) and stress tests. In 2015 the historic method of VaR calculation related to foreign exchange risk has been introduced in PKO Bank Polski SA.

Stress tests and crash tests for FX risk are used to assess potential losses on taken currency positions where extraordinary market situation occurs that is not described in a standard manner using the statistical measures.

The following two scenarios are applied at the Bank:

- hypothetical scenarios within which the historical appreciation or depreciation of foreign exchange rates is assumed (by 20% and 50%),
- 2) historical scenarios scenarios of fluctuations in exchange rates observed in the past.

#### 2.7.3. MONITORING OF THE FOREIGN EXCHANGE RISK

In 2015, the FX risk of the Bank Group was low as it is the Bank's policy to close currency positions in the main currencies, that is EUR, USD, CHF and GBP. 10-day VaR for FX position of the Bank at the end of 2015 amounted to PLN 25 million, which accounted for approx. 0.09% of the Bank's own funds. The VaR and stress-test analysis in respect of the Bank's and the Group's financial assets (total for all currencies) exposed to FX risk as at 31 December 2015 and 31 December 2014 respectively was as follows:

Table 2.23

# SENSITIVITY OF FINANCIAL ASSETS EXPOSED TO FX RISK

	20	15	20	14
	VaR 10-dniowy	Stress-test ±20%*	VaR 10-dniowy	Stress-test ±20%*
PKO Bank Polski SA	25	62	6	16
Group subsidiaries	-	49	-	28

<sup>\*</sup> The table presents the absolute value of most adverse stress test among all scenarios: PLN appreciation bu 20% and PLN depreciation bu 20%

As in the case of interest rate risk, given the nature of business activity of the Bank Group entities generating significant FX risk and the specific nature of the market on which they operate, the Bank does not determine the consolidated VaR sensitivity measure. The companies use their own risk measures to manage FX risk. The 10-day VaR measure is used by KREDOBANK SA, as at 31 December 2015 its value was ca. PLN 4.8 million while as at 31 December 2014 – ca. PLN 3.7 million.

#### 2.7.4. REPORTING OF THE FOREIGN EXCHANGE RISK

The Bank prepares daily, weekly, monthly and quarterly FX risk reports, but the quarterly reports refer also to the Group. The reports contain information on FX risk exposure and on the use of these risk limits. The recipients of such reports are mainly ALCO, RC, the Management Board, Supervisory Board's Risk Committee and Supervisory Board.

# 2.7.5. MANAGEMENT ACTIONS RELATED TO FOREIGN EXCHANGE RISK

The basic FX risk management tools used in the Group are as follows:

- 1) FX risk management procedures,
- 2) limits and thresholds for FX risk,
- 3) defining the allowed types of FX transactions and FX rates used in such transactions.

The Bank Group defined limits and thresholds for FX risk, that is among others, FX positions, 10-day VaR and daily losses on the FX market.

The methods of FX risk management in the Group entities are defined by internal regulations implemented by companies in which FX risk is significant. Such regulations are prepared after consultation with the Bank and taking into account recommendations of the Bank.

#### 2.8. LIQUIDITY RISK

#### 2.8.1. INTRODUCTION

Liquidity risk is the risk of inability of timely discharge of liabilities due to absence of liquid cash and equivalents. The lack of liquidity may result from an improper balance sheet



structure, cash flows mismatch, non-payment by contractors, and sudden withdrawal of funds by the clients or other market events.

The purpose of liquidity risk management is to secure necessary means to discharge the current and future (also potential) liabilities to the nature of business activity and any needs that may result from a changing market environment, through structuring of balance sheet and off-balance sheet items.

Liquidity risk management in the Bank includes:

- financing risk management, which includes the risk of loss of financing, the risk of inability of renewal of financing and loss of access to new sources of financing,
- product liquidity risk, for calculation of which, the cost of sale of liquid securities is assessed.

The Bank monitors the liquidity risk in the Group. Treasury functions and liquidity risk management are centralized in selected Group entities. Internal liquidity transfer within the Group is restricted to the level of reported need for financing and limits granted to Group companies.

#### 2.8.2. LIQUIDITY RISK MEASUREMENT AND ASSESSMENT

The Bank Group's liquidity policy is based on maintenance of adequate level of liquidity surplus by increase in the liquid securities portfolio and stable financing sources (in particular stable deposit base). Moreover, money market instruments, including operations of the open market of the National Bank of Poland are used for liquidity risk management.

The Bank Group uses, for instance the following liquidity risk measures:

- 1) contractual liquidity gap listing of all balance sheet items by their maturity,
- 2) adjusted liquidity gap listing of individual balance sheet categories by their adjusted maturity,
- liquidity reserve the difference between the most liquid assets and expected and potential liabilities that mature in a given period,
- liquidity surplus a measure defining the Bank's ability to maintain liquidity for each day of the "survival horizon" period, in adverse conditions, taking into account scenarios of various severity and probability,
- stable financing to non-liquid assets ratio indicator ratio of stable deposits, own funds and stable market financing sources to loans, fixed assets and non-liquid securities,
- 6) stability measures of deposit and loan portfolio,
- early warning indicators monitored with a purpose of early detection of adverse events of probable negative impact on liquidity of the Bank or the financial sector,
- 8) liquidity stress tests.

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

The following scenarios are applied at the Bank:

- 1) survival horizon stress tests,
- scenarios of mass withdrawal of deposits by non-financial clients,
- scenarios of sensitivity of in- and outflows to changing market conditions,
- 4) stress tests for expected losses on mortgage portfolio,
- 5) scenarios of forecasted liquidity risk in shock conditions,
- 6) inverted stress tests,

Results of stress tests are used in particular in the:

- 1) monitoring of Bank's exposure to liquidity risk,
- process of establishment of limits and threshold values set on the liquidity risk measures,
- 3) control over liquidity for each day of the "survival horizon" period (defines as a period of up to 7 and up to 30 days),
- planning process in the Bank,
- 5) determination of symptoms triggering liquidity contingency plans in the Bank.

#### 2.8.3. MONITORING THE LIQUIDITY RISK

The adjusted liquidity gaps presented below include a list of matured assets, payable liabilities, and selected balance sheet items for a proper presentation of the liquidity status of the Bank and the companies of the Bank Group.

Subject to adjustment were the following:

- the core deposits (interbank market excluded) and their payability - clients' deposits (current accounts, savings accounts and fixed term deposits) have been classified to appropriate tenors according to their stability (maintenance of an appropriate balance or revolving after payability),
- the core deposits on the current accounts of non-financial entities and their maturity - overdrafts have been classified to appropriate tenors according to their possibility of revolving,
- 3) liquid securities and their maturity liquid securities have been classified into the tenor of up to 7 days according to the possible date of their liquidation (pledging, sale).

The table below presents data concerning periodic gap and cumulative periodic gap of the Bank and of the companies of the Group as at 31 December 2015 and 31 December 2014 respectively.



Table 2.24

#### ADJUSTED LIQUIDITY GAP\* - ASSETS AND LIABILITIES

2015	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	14 039	16 783	53	3 643	8 518	7 597	11 794	-62 428
Cumulative gap	14 039	30 822	30 875	34 518	43 037	50 634	62 428	-
Group subsidiaries								
Periodic gap	-149	299	-384	-50	-539	542	749	-469
Cumulative gap	-149	151	-233	-283	-823	-280	469	-
TOTAL - Periodic gap	13 890	17 083	-331	3 593	7 979	8 140	12 543	-62 897
TOTAL - Cumulative gap	13 890	30 973	30 642	34 235	42 214	50 354	62 897	0

2014	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	12 717	11 081	1 212	1 328	1 405	11 330	12 837	-51 909
Cumulative gap	12 717	23 798	25 009	26 337	27 742	39 072	51 909	-
Group subsidiaries								
Periodic gap	-71	-6	-600	-50	-306	703	565	-234
Cumulative gap	-71	-77	-677	-728	-1 034	-331	234	-
TOTAL - Periodic gap	12 646	11 075	611	1 278	1 099	12 033	13 402	-52 143
TOTAL - Cumulative gap	12 646	23 721	24 332	25 610	26 708	38 741	52 143	0

<sup>\*</sup> Set as a sum of real-terms liquidity gap of PKO Bank Polski SA and contractual liquidity gaps of the other companies of the Group

In all tenors, the cumulative adjusted liquidity gap of the Group showed positive values. This means a surplus of matured assets over matured liabilities.

Table 2.25 presents data concerning contractual off-balance sheet liquidity gap of derivatives of the Group.

Table 2.25

CONTRACTUAL OFF-BALANCE SHEET LIQUIDITY GAP FOR DERIVATIVES

				The Bank	Group			
2015	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	Over 5 years	Total
TOTAL - Periodic gap	28	241	123	133	252	109	287	1 174
TOTAL - Cumulative gap	28	269	392	525	777	887	1 174	

2014	0-1 month	1-3 months	3-6 months	6-12 months	1-2 years	2-5 years	Over 5 years	Total
TOTAL - Periodic gap	94	191	-140	25	201	383	368	1 124
TOTAL - Cumulative gap	94	286	146	171	372	756	1 124	



The table below presents the Bank's liquidity reserve as at 31 December 2015 and 31 December 2014:

Table 2.26

#### LIQUIDITY RESERVE UP TO 1 MONTH

PKO Bank Polski SA

Sensitivity measure	2015	2014
PKO Bank Polski SA	30 186	21 075

In 2015 the minimum level of liquidity surplus for a 30 day period amounted to PLN 14,411 million. Liquidity surplus measure defines the Bank's ability to cover the liquidity needs for a given period, in case of realisation of previously defined stress tests conditions.

The table below represents additional liquidity measures as of 31 December 2015 and 31 December 2014.

Tabela 2.27

ADDITIONAL LIQUIDITY MEASURES

PKO	Bank	Polski	SA

Measure	31.12.2015	31.12.2014
M1	18 907	15 859
M2	1.65	1.65
M3	9.87	7.01
M4	1.15	1.16
LCR	129.50%	132.70%

During the period ranging from 31 December 2014 to 31 December 2015 values of supervisory measures remained above the supervisory limits.

The structure of the Bank's funding has been described in the Financial Statement for 2015, published on the 7<sup>th</sup> of March 2016 (51.2 "Forecasting and monitoring of liquidity risk").

#### 2.8.4. LIOUIDITY RISK REPORTING

The Bank prepares daily, weekly, monthly and quarterly liquidity risk reports, but the quarterly reports refer also to the Group. The reports contain information on liquidity risk exposure and on the risk limits utilisation. The recipients of such reports are mainly ALCO, RC, the Management Board, Supervisory Board's Risk Committee and the Supervisory Board.

#### 2.8.5. MANAGEMENT ACTIONS RELATED TO LIQUIDITY RISK

The basic liquidity risk management tools used by the Bank Group are as follows:

- liquidity risk management procedures including contingency plans,
- 2) limits and threshold values for liquidity risk,
- deposit, investment, derivative transactions, including structured FX transactions and security sell and buy transactions,
- transactions ensuring long-term financing of credit activities.

In order to ensure proper liquidity level in the Bank and the Bank Group entities, limits and thresholds were adopted for measures of the current as well as mid- and long-term liquidity.

Liquidity risk management methods in the Group's entities are defined in the internal regulations introduced by the companies for which the liquidity risk is significant.

These regulations have been developed after consultations with the Bank and after considering the recommendations of the Bank.

# 2.9. PRICE RISK OF EQUITY SECURITIES AND COMMODITY PRICE RISK

#### 2.9.1. INTRODUCTION

The price risk of equity securities is defined as a risk of loss related to changes in prices of equity securities on the public market or stock exchange indices that is generated through open positions in the instruments that are sensitive to changes of such market parameters.

The price risk of equity securities is generated as a result of operations conducted in respect to trading (Dom Maklerski PKO Bank Polski SA), investment activities and in result of other operations in the banking activity that generate positions in equity securities.

The aim of equity securities risk management is to reduce possible losses related to changes in prices of equity securities in the public market or exchange market indices through an optimisation of positions in instruments that are sensitive to changes of such market parameters.

Commodity price risk is defined as the risk of incurring losses due to changes in commodity prices, generated by maintaining open positions on particular types of goods.

The aim of commodity price risk management is to reduce potential losses resulting from changes in commodity prices to the acceptable level by influencing the structure of balance sheet and off-balance sheet commodity positions.

Taking account of other price risks, as of the end of 2015 the Bank was exposed to the price risk of participation units in collective investment funds. Influence of this risk to the Bank's financial situation is immaterial – an own funds capital requirement, pursuant to the CRR, to cover the above mentioned risk amounted to approximately PLN 1.2 million at the end of the 2015.

# 2.9.2. MEASUREMENT AND ASSESSMENT OF PRICE RISK OF EQUITY SECURITIES AND COMMODITY PRICE RISK

The impact of the price risk of equity securities and other price risk on the Bank's financial conditions was defined as insignificant. Positions in equity securities and indexed instruments reduced and their significant increase is not expected.

In 2015 positions in transactions generating commodity price risk were closed as at end of the day.

The Bank Group's banking book equity exposures are qualified into following groups depending on their type and purpose of their acquisition:

- equity exposures in subsidiary companies not subject to prudential consolidation— said entities comprise companies providing services supplementary to the Bank's basic financial offer related to insurance services and providing debt collection services to other Group entities as well as close-end investment funds established for optimization of sales and managerial activities related to supervised funds,
- Bank's exposures towards financial and financial market infrastructure companies - investments in joint-ventures, associated and minority-interest companies, providing



financial services or services supporting the development of financial markets,

- Bank's exposure to *The 2020 European Fund for Energy,*  Climate Change and Infrastructure, established with the purpose of realization of investment projects related to energy and road infrastructure sectors in Poland and other European Union countries,
- 4) other exposures investments which are mostly intended for sale, made by the Bank and its subsidiaries subject to prudential consolidation. This group includes i.a. assets acquired during debt restructuring process and collaterals taken over by the Bank,
- 5) participation units in investment funds covering investments of PKO Towarzystwo Funduszy Inwestycyjnych SA (PKO TFI SA) in participation units of the new investment funds under its management. Assets are acquired with the purpose of providing financing required for establishment of said investment funds.

Table 2.28

CAPITAL EXPOSURES - BANKING BOOK

	The Bank Group				
	2015			2014	
	carrying amount	fair value*	carrying amount	fair value	
Total	1 734	1 753	1 281	1 286	
Investments valued under the equity method**	958	977	793	798	
Shares in entities listed on regulated market	24	26	-	-	
Shares in other entities	174	174	169	169	
Equity securities	389	389	115	115	
Shares in entities listed on regulated market	57	57	31	31	
Shares in entities not listed on regulated market***	332	332	84	85	
Participation units in PKO TFI SA investment funds	16	16	18	18	
Participation units in collective investment undertakings of PKO Banku Polski $\mathrm{SA}^{****}$	197	197	186	186	

<sup>\*</sup> Assessed fair value of shares listed on regular market - market value

# 2.9.3. MONITORING OF PRICE RISK OF EQUITY SECURITIES AND COMMODITY PRICE RISK

Stocks and shares in other entities are subject to periodic valuation.

Investments in subsidiaries not subject to prudential consolidation, joint-ventures and associates are valued using equity method, unless categorized as fixed assets for sale.

At the end of each reporting period, an assessment of impairment for investments in subsidiaries not subject to prudential consolidation, joint-ventures and associates is made. If impairment is identified, an assessment is made of the higher of the investment's value in use and fair value less selling expenses (impairment test). The forecast of the value in use is assessed using the discounted cash flow method under the assumption that the stocks or shares will continue to be held. Forecasts concerning cash flows are developed on the basis of financial plans of entities using varied discount rates adjusted to the specific nature of business activity of individual companies.

Additionally, impairment tests are performed at the end of every year regardless of whether impairment conditions exist for those investments.

Investments is subsidiaries not subject to prudential consolidation, joint-ventures and associated companies recognized as fixed assets for sale are presented as carrying amount or goodwill net cost of sales – depending on which one is smaller.

Stocks and shares in other companies are valued:

- at fair value, based on the market value for those stocks, for which there is an active market - according to an external valuation or based on the purchase price offered - for companies for which no active market is present,
- 2) at acquisition cost reduced by an impairment allowance for stocks and shares which fair value cannot be assessed.

Changes in the value of stocks and shares are recognized in the revaluation fund, except for impairments recognized in the profit and loss account.

Participation units in investment funds as well as creation units in joint financing institutions are priced according to fair value and recognized in the revaluation fund.

In 2015, the Group (under prudential consolidation) realised a cumulative gross loss on the sale of securities representing banking book equity exposures in the amount of PLN 113.7 million.

The Group's total unrealised cumulative gross loss resulting from revaluation of the banking book equity exposures (shown i.a in the revaluation reserve) amounted to PLN 263.3 million as of the end of 2015. The aforementioned value includes unrealised profit of the Group in the amount of PLN 178.5 million related to revaluation to fair value of the purchase price of the shares of one of the companies as well as an appraisal of shares of Visa Europe Limited in the amount of PLN 327.5 million, resulting from a shares purchase agreement by Visa Inc. from November 2015. Execution of the aforementioned transaction is subject to supervisory consent.

In 2015, PKO Polish Bank SA received a dividend related to shares held and shares representing equity exposures in the total gross amount of 33.9 million.

# 2.9.4. REPORTING PRICE RISK OF EQUITY SECURITIES AND COMMODITY PRICE RISK

The Bank prepares monthly and quarterly reports including price risk of equity securities and commodity prices. The reports contain information on exposure and on the use of these risk limits. The recipients of such reports are mainly ALCO, RC, the Management Board, Supervisory Board's Risk Committee and Supervisory Board.

# 2.9.5. MANAGEMENT ACTIONS RELATED TO PRICE RISK OF EOUITY SECURITIES AND COMMODITY PRICE RISK

The equity securities risk is managed through limits imposed on the activities of Brokerage House of PKO Bank Polski and own investments portfolio, monitoring of their use and reporting risk levels.

Commodity price risk is managed by imposing limits on the Treasury Department's activity, monitoring their use and reporting the risk level.

#### 2.10. DERIVATIVES RISK MANAGEMENT

The derivatives risk is the risk of loss as a result of the Bank's position in financial instruments that satisfy all of the following conditions:

- 1) the value of an instrument changes together with a change of underlying instrument,
- 2) they do not require any net initial investments or they require only minor net initial investments, as compared to

<sup>\*\*</sup> Equity investments in subsidiaries not subject to prudential consolidation, joint-ventures and associated entities

<sup>\*\*\*</sup> This line includes also shares that are not listed on the regular market of public companies

<sup>\*\*\*\*</sup> This item presents participation units in entities other than the Bank's subsidiaries, recognized as "investments accounted for using the equity method"



other types of agreements that respond to changes of market conditions in a similar way,

3) their settlement will take place in the future.

The derivatives risk management process is integrated in the Bank with the management of interest rate risk, foreign exchange risk, liquidity risk and credit risk, but due to the specific nature of derivatives, it is subject to particular monitoring defined in the Bank's internal regulations.

Within the scope of its activities the Bank uses various types of financial derivatives for the purposes of management of the risks related to the activities performed.

As of 31<sup>st</sup> December 2014, PKO Leasing SA was the only Group company (except for the Bank) utilizing derivatives as part of their (core-business related) risk management activities.

The majority of derivatives used by the Group for the purpose of risk management and offered to clients are: IRS, FRA, FX Swap, CIRS, FX Forward, Options.

#### 2.10.1. DERIVATIVES RISK MEASUREMENT

Derivatives risk is measured i.a. with a Value at Risk model (Var), described in the chapter on interest rate risk or in the chapter on currency risk, depending on the factor determining the value of the instrument.

Derivatives risk for Group entities is measured on the basis of the information regarding the entities' position related to particular derivatives, selected by the Bank.

#### 2.10.2. DERIVATIVES RISK MONITORING

Monitoring of derivatives risk is performed withing the framework of monitoring of other types of financial risk as well as credit risk. The Bank pays particular attention to the monitoring of financial risk related to currency options portfolio as well as credit risk of its customers, related to the amount due to the Bank related to derivatives.

#### 2.10.3. DERIVATIVES RISK REPORTING

The Bank prepares daily, weekly, monthly and quarterly reports on credit exposures related to derivatives risk, and the quarterly reports refer to the whole Bank Group. The reports comprise information on the risk exposure of derivatives and information on the use of risk limits.

#### 2.10.4. MANAGEMENT ACTIONS RELATED TO DERIVATIVES

The main tools used in derivative risk management are as follows:

- 1) written procedures for derivative risk management,
- 2) limits and thresholds set for the risk related to derivative instruments,
- 3) master agreements specifying, i.a. settlement mechanisms.

Risk management is carried out by imposing limits on the derivative instruments, monitoring limits and reporting risk level.

Master agreements concluded by the Bank with the major business partners based on the standards developed by the Polish Banks Association (domestic banks) and ISDA (foreign banks and credit institutions), which allow offsetting mutual liabilities, both due (mitigation of settlement risk) and not yet due (mitigation of pre-settlement risk), are particularly

important for mitigating the risk associated with derivative instruments.

Additional collateral for exposures, resulting from derivative instruments are collateral deposits escrowed by counterparties as a part of CSA agreement (Credit Support Annex).

Methods of derivative risk management in the Group subsidiaries are defined by internal regulations implemented by these entities which take up a position in derivative instruments or plan to take positions in such instruments. These regulations are developed after consultation with the Bank and take into account the recommendations issued by the Bank for the Group entities.

Positions taken by the other Group entities in particular derivative instruments are determined using similar methods to those used for positions taken by the Bank in such derivative instruments, taking into account the specific nature of the business conducted by the Group entities.

#### 2.11. OPERATIONAL RISK

#### 2.11.1. INTRODUCTION

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events; includes legal risk and does not include reputation risk and business risk.

The purpose of operational risk management is to increase the security of Bank's operational activity through improvement of effective, adjusted to the profile and volume of activity, mechanisms of identification, assessment and measurement, control, as well as monitoring, mitigation and reporting on operational risk.

Operational risk profile of the Bank and of the Bank Group is defined as the volume and structure of exposure to operational risk, determined by strategic limits for operational risk tolerance.

The Bank's internal regulations clearly define the distribution of duties and competencies in the area of operational risk management. In accordance with these regulations, all issues related to operational risk management are supervised by the Management Board that:

- 1) sets the objectives of operational risk management,
- shapes operational risk management strategy,
- 3) adopts resolutions on operational risk management principles, strategic limits for operational risk tolerance and the extensions and changes for the AMA
- accepts the value of the management adjustment of the own funds requirement for operational risk according to the AMA
- 5) accepts reports and information related to operational risk.

The Bank Group entities manage operational risk in accordance with the principles of managing operational risk of the Bank, taking into account the scope and type of connections between entities belonging to the Bank Group as well as the specific nature and scale of activity these entities.



# 2.11.2. OPERATIONAL RISK MEASUREMENT AND ASSESSMENT

# 2.11.2.1. METHODS OF OPERATIONAL RISK MEASUREMENT AND ASSESSMENT

Operational risk measurement in the Bank is aimed to define the scale of threats related to the operational risk by using defined risk measures.

Operational risk measurement includes:

- 1) calculation of key operational risk indicators (KRI),
- calculation of own funds requirement for operational risk under the BIA approach in activities of the Bank's branch in the Federal Republic of Germany and AMA with respect to the other activity of the Bank,
- 3) stress tests,
- 4) calculation of internal capital for the Group.

For the purpose of operational risk management, the Bank gathers internal and external data on operational events together with causes and results of their occurrence, data on business environment factors, KRI and data on the quality of functional internal control.

Operational risk self-assessment includes identification and assessment of operational risk arising in the products, processes and IT applications of the Bank, as well as resulting from organisational changes. Self-assessment is conducted periodically before the introduction of new or changed products, processes and applications of the Bank by using collected data on operational events and information obtained during the measurement, monitoring, reporting of this risk (including internal audit and audit security reports) or through cooperation with the Bank Group's entities.

The BIA requirement regarding operations conducted by the Bank, falling under BIA approach, is calculated in accordance with the CRR (Part III, Title III) and applies only to the part of the Bank's activities, for which the PFSA's consent for a joint AMA and BIA calculation of own funds requirements related to operational risk has been granted.

The Bank assesses parameters of distributions used for measurement of the operational risk on the basis of internal and external information on operational events. The estimating algorithm of these parameters takes account of existing thresholds of losses for which information on operational events are gathered. The value of a threshold for internal events was established by taking into account the economic costs related to gathering information on operational events and their added-value for operational risk measurement. Used external data on operational events come for instance from the consortium database (called ZORO)maintained by the Polish Association. Moreover, the operational measurements include macroeconomic data and data related to the volume of the Bank's operational and business activities.

Own funds requirement for operational risk according to the AMA corresponds to the VaR in respect to operational risk plus the result of scenario analysis and corrected by the value of adjustments related to changes in quality of internal functional audit and management adjustment according to the following formula:

AMA = (LDA + SbAMA) \* (1+IC) + MA

where:

AMA - own funds requirement for operational risk according to the AMA,

LDA - value at risk,

SbAMA - scenario based AMA,

IC - adjustment related to changes in quality of

internal control,

MA - management adjustment.

The AMA captures potentially severe tail events, achieving a soundness standard comparable to a 99,9% confidence interval over a one year period.

Calculations of value at risk are made under a loss distribution approach (LDA) framework. On the basis of historical internal and external information on operational events and about business environment, this approach measures potential loss that is not to be exceeded within coming year.

The purpose of the scenario based AMA is to extend the AMA calculation to capture operational risk related to operational events that have not been covered with the LDA.

Adjustment related to the changes in quality of internal control allows to assess the potential deterioration of the quality of Bank's internal control that would result in an increase of the frequency or severity of operational risk events.

The purpose of management adjustment is to cover the requirement of extraordinary events in the AMA calculation, if due to their specific nature such events were not included into LDA or AMA calculation..

In July 2015 the Bank received the permission from the PFSA for a joint utilization of AMA and BIA for calculation of own funds requirements for operational risk. The BIA approach will be utilized for calculation of operational risk requirements related to operations of the Bank's foreign branch in the Federal Republic of Germany.

Risk measurement includes stress tests referring to potential consequences of extremely unfavourable, yet possible, scenarios. Its aim is to define the sensitivity of the Bank's results to the fulfillment of a test scenario and to determine if the AMA covers the total amount of losses resulting from the accomplishment of such scenarios.

The previous results of stress tests do not challenge the sufficient conservatism of the AMA.

Moreover, the Bank performs backtesting of the AMA calculation. Backtest results confirm the sufficient conservatism of the AMA.

Furthermore, the AMA is validated by an independent organisational unit of the Head Office (Risk Integration Department). The validation is aimed to ensure that the operational risk measurement and management systems in the Bank with their essential components comply with the assumptions. Validation include the verification of accuracy, objectivity, correctness and conservatism of the AMA model applied by the Bank.

#### 2.11.2.2. THE BANK'S INSURANCE POLICY

To minimize negative financial impact of operational events, PKO Bank Polski SA has an insurance policy that requires that a continuing and effective insurance cover is granted in return for an acceptable cost.

PKO Bank Polski SA endeavours to apply uniform insurance principles to the whole Bank Group, in order to optimise the scope of the cover and make use of effects of scale.

The Bank's insurance programme is regularly monitored in order to identify needs of essential changes.



#### 2.11.2.3. IMPACT OF INSURANCE

While calculating the own funds requirement for operational risk, the Bank includes the impact of insurance.

The insurance policies used by the Bank to reduce own funds requirement for operational risk, fulfill the criteria defined in Article 323 of CRR and also comply with internal regulations regarding calculation of own funds requirement reduction due to insurance. The Bank's insurance policies refer mainly to all risk property insurance and the Bank's civil liability insurance.

While calculating deductions related to purchased insurance policies, the Bank takes account of deductibles.

In compliance with Article 323 of CRR the reduction in own funds requirements from the recognition of insurances shall not exceed the maximum value equal to 20% of the own funds requirement for operational risk before the recognition of risk mitigation techniques are taken into account.

#### 2.11.3. OPERATIONAL RISK CONTROL

Operational risk control comprises

Control of operational risk includes setting tailored to the scale and complexity of the Bank's and the Group's activities risk controls in the form of limits on operational risk.

The objective of operational risk management is striving for maintaining the level of operational risk of the Bank and Group at fixed level.

The Management Board defines, and the Supervisory Board approves, the levels of utilization of the strategic tolerance limits for operational risk for both the Bank and Group, which, when exceeded, serve as a signal for potential measures aimed at ensuring that strategic limits for operational risk are not exceeded.

A system of local limits assigned to selected organizational or functional units of the Bank or its Head Office functions in the Bank, which defines the maximum operational risk allocated to said selected organizational or functional units of the Bank or its Head Office, ensuring that the strategic limits for operational risk are not exceeded.

#### 2.11.4. MONITORING OF OPERATIONAL RISK

The purpose of operational risk monitoring is diagnose areas requiring management actions.

The Bank regularly monitors in particular:

- 1) utilisation of strategic limits for the Bank and the Group and of risk tolerance and operational risk limits for the Bank,
- 2) operational events and their consequences,
- 3) results of operational risk self assessment,
- 4) own funds requirement for operational risk according to the BIA in respect to the Bank's foreign branch in the Federal Republic of Germany and according to AMA for the remaining activities of the Bank and own funds requirement for operational risk according to the BIA (basic indicator approach) for other Group's entities,
- 5) results of stress tests,
- 6) KRI values against threshold and critical values,
- The level of risk for the Bank, areas and operational risk management tools,
- 8) efficiency and timeliness of the activities undertaken in relation to operational risk reduction or transfer,

 management activities undertaken because of increased or high level of operational risk and their effectiveness in reducing the operational risk level.

#### 2.11.5. OPERATIONAL RISK REPORTING

Reporting on operational risk is carried out for the purpose of senior management, ORC, RC, Management Board and Supervisory Board.

The recipients of monthly information are members of the Management Board, the Head Office units and specialized organizational units responsible for systemic operational risk management. Monthly information includes in particular information about:

- the Bank's operational risk profile resulting from to the process of identification and threat assessment for products, processes and applications used in the Bank, LDA measurement and KRI levels,
- 2) Operational risk levels for the Bank, areas and operational risk management tools,
- 3) results of operational risk measurements and monitoring,
- 4) activities undertaken to mitigate the operational risk and assessment of efficiency of activities undertaken in order to reduce the operational risk level.

The scope of information varies and is adjusted to the scope of responsibility of individual recipients of the information.

## 2.11.6. MANAGEMENT ACTIONS RELATED TO OPERATIONAL PISK

Operational risk management process is conducted at the Bank's level as well as at the particular areas of systemic operational risk management.

Systemic operational risk management consists in developing solutions, which enable the Bank to exercise control in order to achieve its objectives. Main areas of systemic operational risk management are:

- 1) security,
- 2) IT.
- 3) settlements,
- 4) human resources,
- 5) business processes,
- 6) administration,
- 7) support (in particular: insurance management, outsourcing, creation and implementation of internal operational risk models and systems of identification, assessment, monitoring and limiting of operational risk, etc.).

Current operational risk management is carried out by each employee of the Group in the scope of their duties and obligations and consist in preventing the materialization of operational events arising in servicing products, conducting processes, using IT applications and reacting on operational events occurrence. Reacting includes:

- identifying operational events and explaining reasons for their occurrence.
- 2) defining consequences of operational events,
- 3) recording data on operational risk events and their consequences,
- monitoring information on operational events and their consequences,
- minimizing the negative consequences of operational risk events.
- 6) implementation of corrective and preventive actions.



A significant role in operational risk management is performed by the Banking Risk Division, which coordinates the identification, measurement, control, monitoring and reporting of operational risk in the entire Bank Group.

The Risk Integration Department is providing support for the Bank Group entities in the field of operational risk management by supervising them in the process of creation and development of the risk management system in accordance with the solutions adopted in the Bank.

In 2015 a dominant influence on the operational risk profile of the Bank Group have had PKO Bank Polski SA, the PKO Leasing SA Group and the KREDOBANK SA Group. Other companies of the Bank Group, due to a considerably lower scale and specific type of their businesses, generate only limited operational risk.

Management activities are taken in the following cases:

- as a response to the initiative of ORC or the Management Board.
- 2) as a response to the initiative of Bank's organizational units responsible for managing operational risk,
- when the operational risk has exceeded the levels set out by the Management Board or the ORC.

In particular, if the operational risk level is considered as increased or high, the Bank uses the following approaches and operational risk management tools:

- 1) risk reduction mitigating impact of risk factors or results of risk materialization by implementation or reinforcement of various operational risk management tools, such as:
  - a. Control instruments (i.a .authorization, internal control, functions separation),
  - Human resources management instruments (personnel selection, increase in qualifications of employees, motivational systems)
  - definition or verification of OCR's thresholds and critical values of KRIs,
  - d. definition and verification of operational risk level
  - e. contingency plans,
- risk transfer a transfer of responsibility for coverage of potential losses to an external party:
  - a. Insurances
  - b. Outsourcing
  - c. financial instruments related to operational risk,
- 3) risk avoidance resignation from a risk generating activity or elimination of a possibility that a risk factor occurs.

Operational risk management process is validated through:

- reviewing strategy and operational risk management process,
- self- assessment of compliance with the AMA requirements,
- 3) validation of the AMA.
- 4) internal audit.

# 2.11.7. INCURRED LOSSES AND OPERATIONAL RISK MANAGEMENT ACTIONS

In the 2015 events related to operational risk, excluding losses from credit process, were disclosed in the Bank and amounted to ca. PLN 17 mio. net and PLN 40 mio. gross (Table 2.29).

Table 2.29

GROSS LOSSES\* RELATED TO DISCLOSURED EVENTS
PKO Bank Polski SA

2015		
Specific cathegory	Gross losses**	Net losses**
Non-legitimated activities	0.14	0.07
Thefts and frauds	1.33	1.12
Labour issues and work environment safety	5.54	0.88
Diversity and discrimination	0.06	0.02
Customer service, disclosure of information about clients, responsibilities to clients	0.31	0.10
Products malfunctions	0.01	0.01
Improper klient and exposure classification	0.03	0.00
Systems	0.11	0.11
Recording in the system, making, calculating and servicing transactions	1.51	0.57
Monitoring and reporting	0.07	0.00
Inflow and registering clients	0.23	0.04
Managing clients' bank accounts	0.20	0.00
Sellers and suppliers	7.79	7.18
Natural disasters and other events	0.58	0.50
Thefts and frauds	22.03	6.79
	39.95	17.38
	Specific cathegory  Non-legitimated activities Thefts and frauds Labour issues and work environment safety Diversity and discrimination Customer service, disclosure of information about clients, responsibilities to clients Products malfunctions Improper klient and exposure classification Systems Recording in the system, making, calculating and servicing transactions Monitoring and reporting Inflow and registering clients Managing client's bank accounts Sellers and suppliers Natural disasters and other events	Specific cothegory Gross losses**  Non-legitimated activities 0.14 Thefts and frauds 1.33 Labour issues and work environment safety 5.54 Diversity and discrimination 0.06 Customer service, disclosure of information about clients, responsibilities to clients Products malfunctions 0.01 Improper klient and exposure classification 0.03 Systems 0.11  Recording in the system, making, calculating and servicing transactions 0.07 Inflow and reporting 0.07 Inflow and registering clients 0.23 Managing clients' bank accounts 0.20 Sellers and suppliers 7.79 Natural disasters and other events 0.58 Thefts and frauds 0.14

<sup>\*</sup> Gross losses do not include losses from operational risk related to credit risk, which are recognised as losses from credit risk and are used to calculate minimum capital requirements.

The Bank takes systemic and current management actions in order to limit losses from operational risk. Current actions include direct reacting on identified risks, eliminating irregularities when it is possible as well as recovering financial losses. Systemic actions consist of, among others, securing IT systems, improving transaction authorization methods and non-execution of transfers to accounts identified as associated with criminal activity.

In particular, the Bank continues to raise the level of security used by the Bank's customers applications, improves the credit processes by centralizing activities related to servicing customers' contracts and improves the security of IT systems in the area of customers' settlements. In its anti-fraud activities, the Bank actively combats fraudulent and phishing websites impersonating its services, actively follows the development of malware attacking its clients as well as creates detection mechanisms identifying infected computers and prevents execution of unauthorized transactions.

In consequence of an increased cybersecurity threat, an initiative spearheaded by Electronic Banking Council operating within the Polish Bank Association was established, aimed at implementing comprehensive measures within and across sectors (in cooperation with institutions and external entities, including law enforcement authorities), aimed at increasing the level of security of mobile banking and preparation of tools (structures, procedures, mechanisms of information exchange) for managing emergency situations (eg. in the event of a cyberattack on the banking sector). representatives of PKO Bank Polski SA play a leading role in the aforementioned initiative. At the end of 2015, activities taken within this initiative have been structured in the form of a Banking Cybersecurity Centre (BCC) project. The first effect of the project took the form of cyclical shifts of employees of individual banks taking part in the project. During their schedules, said employees exchange information regarding identified threats (attacks) and analyze the situation, with a possibility of the establishment of crisis security team. The first bank to begin such activities was PKO Bank Polski SA (December 2015 and January 2016). Activities within the BCC are complex and long-term oriented and will be continued on several levels: inner- and outer- sector (i.a. cooperation with telecommunication companies), national (cooperation with state administration, law enforcement) and international.

The Bank informs its clients on the safe ways of using its ebanking channels, but it's the users' actions that quarantee the

<sup>\*\*</sup> According to the Recommendation M of the Polish Financial Supervision Authority as at 31.12.2015 gross losses include realised losses (e.g. provisions, write-downs, expenses) as well as unrealised (potential) losses. Gross losses do not include direct recoveries and recoveries from the risk transfer mechanism.

<sup>\*\*\*</sup> Net losses as at 31.12.2015 include realised losses (e.g. provisions, write-downs, expenses)



safety of the iPKO system. In order to prevent frauds, on the Bank's main website as well as on the websites to log in are placed announcement warning against false sms and e-mails send by people impersonating the Bank, as well as information on the safe ways of using electronic banking.

In 2015 two stages of an information campaign towards iPKO users took place, aimed at informing its users, in a systematic and effective way, about potential internet threats and rules of safe e-banking usage (information were presented on an interim message displayed right after login as well as messages sent to iPKO mail). Continuation of said campaign is planned for 2016.

In 2016, PKO Bank Polski SA, as a first bank in Europe, started cooperation with Microsoft in its Enterprise Customers Cyber Threat Intelligence Program (ECCTIP). The aim of the program is to increase cyberspace security by information exchange regarding potential threats. As a result of the aforementioned agreement a more effective and rapid reaction to potential internet threats will be possible.

Moreover, transaction limits setup through the www service, password masking, processes improvement, optimization of functional control, trainings and risk transfer (insurances, outsourcing) are planned.

#### 2.12. COMPLIANCE RISK

#### 2.12.1. INTRODUCTION

Compliance risk is the risk of incurring legal sanctions or occurrence of financial losses or a loss of reputation or credibility as a result of failure on the part of the Group, the Group's employees or entities operating on its behalf to comply with legal regulations, internal regulations and the standards of procedure adopted by the Bank, including the market standards.

The objective of the compliance risk management in Group is to:

- preserve the Bank's perception as an institution acting in accordance with the law and accepted standards of conduct and reliable, fair and honest, among shareholders, customers, employees, business partners and other market participants,
- prevent from the occurrence of cases of improper application of the provisions of the law, internal regulations and standards adopted by the Bank, including ethical standards,
- prevent the risk of financial losses or legal sanction and loss of reputation risk, which may result from the breach of regulations, internal regulations of the Bank or market standards adopted by the Bank.

# 2.12.2. COMPLIANCE RISK IDENTIFICATION AND ASSESSMENT

To identify the compliance risks, information on cases of noncompliance and the reasons for their occurrence, including information as a result of an internal audit, a functional internal control and external controls is used.

Identification and assessment of compliance risk is based mainly on:

- estimation of the severity of possible cases of noncompliance,
- assessment of the presence of additional factors of risk of compliance with the law.

Making the assessment, a character and potential losses scale are determined, and the way in which the compliance risk can be reduced or eliminated is indicated. Assessment is carried out in the form of workshops.

#### 2.12.3. COMPLIANCE RISK MONITORING

Compliance risk is monitored by means of information provided by organisational units of the Bank and the Group companies and it includes in particular:

- 1) analysis of cases of noncompliance in the Group and the banking industry, their reasons and consequences,
- 2) assessment of changes of the key legal regulations that have impact on the Bank's and Group's activities,
- assessment of activities undertaken by the Bank and the Group's companies within the scope of compliance risk management,
- 4) assessment of efficiency of control mechanisms related to limitation of compliance risk.

#### 2.12.4. COMPLIANCE RISK REPORTING

Reporting information on compliance risk refers to the Bank and the companies of the Bank Group. Quarterly reports contain information provided by the Group companies, also on cases of incompliance. The recipients of such reports are RC, the Management and Supervisory Boards and the Supervisory Board Risk Committee.

The reports contain i.a. synthetic information concerning:

- 1) results of compliance risk identification and assessment,
- 2) observed cases of noncompliance,
- 3) most significant changes in the external environment,
- major activities undertaken within the scope of systemic compliance risk management and fulfilment of recommendations after external audits.

# 2.12.5. MANAGEMENT ACTIONS RELATED TO COMPLIANCE RISK

Compliance risk management covers specifically the following issues:

- 1) prevention of the Group's involvement in illegal activities,
- propagation of the ethical standards and monitoring of their functioning,
- 3) management of conflicts of interests,
- prevention of situations, in which professional behaviour of the Group employees could seem as care for personal interests,
- 5) professional, reliable and clear formulation of the product offer and the advertising and marketing messages,
- 6) immediate, honest and professional consideration of the clients' complaints, applications and suggestions.

In 2015 the Bank Group maintained zero tolerance approach to compliance risk which means that the Bank Group focuses its activities on prevention from compliance risk materialisation.

The Bank gathers data on noncompliance events, their causes and results of their occurrence. Mentioned data are collected in central database. Information about noncompliance events is reported by Bank's organisational units and organisational units of Head Office and individually by particular employees of the Bank. Every report is examined with diligence and due care.

Respective organisational entities or appointed employees of such entities are responsible for establishment of systemic solutions within the scope of compliance of the operations of



individual Bank Group's entities with applicable legislations and standards of conduct. The Compliance Department is responsible in the Bank for creation of such solutions and development of compliance risk assessment, monitoring and reporting methods that is independent and in case of issues related to compliance risk management it reports directly to the President of the Management Board.

In all entities of the Bank Group the consistent compliance risk management principles are functioning.

#### 2.13. BUSINESS RISK

#### 2.13.1. INTRODUCTION

Business risk is the risk of losses 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.

Managing the business risk is aimed at maintaining, on an acceptable level, the potential negative financial consequences resulting from: adverse changes in the business environment, making adverse decisions, improper implementation of adopted decisions or lack of appropriate actions, which would be a response to changes in the business environment.

#### 2.13.2. BUSINESS RISK MEASUREMENT AND ASSESSMENT

Business risk identification is to recognize and determine factors both current and potential, resulting from current and planned activities of the Bank and which may significantly affect the financial position of the Bank, generating or change in the Bank's income and expense. Business risk identification involves identification and analysis of factors, which significantly affected the level of deviation of costs and revenues from their projected values.

The purpose of measurement of business risk is to determine, using existing risk measures, the scale of hazards related to existence of business risk. Business risk is measured quarterly and involves:

- 1) conducting of stress test,
- 2) calculation of internal capital.

Assessment of the business risk level is performed quarterly on the basis of:

- 1) calculated levels of strategic limits of tolerance,
- results of the annual survey conducted among Bank's senior management,
- results of internal capital for business risk measurements.

#### 2.13.3. BUSINESS RISK MONITORING

Monitoring of business risk includes in particular:

- 1) strategic levels of business risk,
- 2) stress-tests results,
- 3) internal capital level.
- 4) deviation of business risk realisation from its projected values,
- results of the survey conducted among Bank's senior management.

#### 2.13.4. BUSINESS RISK CONTROLLING

The purpose of the business risk controlling is to strive for maintaining the level of business risk of the Bank at an acceptable level.

Control of business risk involves setting and periodic review of the risk controls in the form of tolerance limits on the business risk along with its thresholds and critical values, adequate to the scale and complexity of the Bank.

#### 2.13.5. BUSINESS RISK REPORTING

Business risk reporting of the Group is conducted quarterly. Reports on business risk are prepared for the ALCO, the RC, the Management Board and the Supervisory Board. Reports contain among others information on the internal capital level, stress-tests results, results of an annual survey conducted among senior management of the Bank, utilisation of limits of risk tolerance on business risk, business risk forecast and its backtesting, business risk level, information on business risk related to the Bank Group entities.

#### 2.13.6. BUSINESS RISK RELATED MANAGEMENT ACTIONS

Management activities involve in particular:

- verification and updating of quarterly financial forecasts, including efforts to reduce business risk level in line with the approved limits,
- 2) monitoring of the strategic limit of business risk tolerance.

#### 2.14. LOSS OF REPUTATION RISK

#### 2.14.1. INTRODUCTION

Loss of reputation risk is defined as a risk of reputation loss among customers, counterparties, investors, supervisors and public opinion, due to business decisions, operational events, noncompliance or other events.

The purpose of loss of reputation risk management is to protect the Bank's reputation by reducing the negative impact of brandrelated events and preventing reputation losses.

# 2.14.2. REPUTATION RISK MEASUREMENT AND ASSESSMENT

Identification of loss of reputation risk involves events observed both in internal processes of the Bank and in the external environment, in particular:

- 1) brand-related events,
- 2) business environment factors, affecting the loss of reputation risk.

Each identified, negative information related to the Bank is taken into account during the brand-related information gathering process, i.a. in the form of:

- 1) information broadcasted in the media,
- 2) information disclosed by the Group according to the principles of information policy of the Bank,
- evaluations prepared by auditing companies, analytical agencies and external supervisory institutions,
- 4) public protests and speeches.

Additionally, identification of loss of reputation risk involves analysis of factors and their sources, related to loss of



reputation and which may affect the future loss of reputation risk profile.

#### 2.14.3. REPUTATION RISK MONITORING

Evaluation, assessment and monitoring of loss of reputation risk involves amount and severity of reputational losses including i.a. the tone and spread of information constituting the brand-related event,

#### 2.14.4. REPUTATION RISK REPORTING

Reporting of information related to loss of reputation risk is done in the form of:

- semi-annual management report, prepared for the Risk Committee, the Management Board and the Supervisory Board,
- information related to the current events that significantly affect the Bank's reputation, prepared for the Head of the CEO Division and Chairman of the Board,
- 3) information disclosed in the financial reports for the Bank and the Group as well as made available on the request of external supervisory institutions.

Semi-annual management report includes in particular information on:

- 1) scale and profile of the loss of reputation risk for the Bank.
- most severe reputational losses and protective measures undertaken to protect the Bank's reputation,
- factors affecting the future profile of loss of reputation risk and their sources.

#### 2.14.5. BUSINESS RISK RELATED MANAGEMENT ACTIONS

Management actions are taken on the basis on reported information, such as:

- 1) approval of sustained reputation loss risk,
- risk avoidance or discontinuation of activities generating reputation loss risk,
- remedial actions, aimed at mitigation of further reputation losses.
- 4) execution of protective actions.

Verification the undertaken actions comprises:

- 1) long-term remedial actions management,
- implementation of internal and external audit recommendations and functional controls related to loss of reputation risk,
- implementation of supervisory recommendations related to loss of reputation risk.

#### 2.15. MODEL RISK

#### 2.15.1. INTRODUCTION

Model risk is the risk of incurring losses as a result of making incorrect business decisions on the basis of the models operating within the Bank. The model risk in the Group is managed both on the level of particular company of the Group (owner of the model) and on the Bank's level, acting as a controlling entity of the Group.

The objective of model risk management is to mitigate the model risk of incurring losses due to inaccurate business decisions made on the basis of functioning models, thanks to a

properly defined and implemented model management process. in the Group. In the Group, the solutions functioning in the Bank are used, with the possibility of tailoring them individually to the specific nature of each Company.

All significant models in the Bank and model of the Group entities are covered by regular process of independent validation carried out by the validation PKO Bank Polski SA.

In the second half of 2015 the Bank and PKO Bank Hipoteczny SU carried the work related to the adjustment to the requirements of Recommendation W concerning the risk management models of banks issued by the Polish Financial Supervision Authority in July 2015.

# 2.15.2. MODEL RISK MEASUREMENT AND ASSESSMENT

Identification of model risk in the Bank mainly consists of:

- 1) gathering information on existing, under development and planned to be build models,
- 2) cyclical determining the relevance of models,
- determining potential threats that may occur during the life cycle of the model.

The model risk evaluation is aimed at determining the scale of threats associated with the occurrence of the model risk. Assessment of the risk level is made annually. Ratings are aggregated mainly at the level of the Bank, the individual entity or the Group.

#### 2.15.3. MODEL RISK MONITORING AND REPORTING

The purpose of model risk monitoring is to control model risk and diagnose areas for management actions. Model risk monitoring contains, in particular: updates on the level of model risk, verification of the status of implementation of the proposed recommendations and the assessment of effectiveness of implementation of the actions on mitigation of model risk. The results are cyclically reported to the RC, Management Board, Supervisory Board and contain a comprehensive assessment of model risk, in particular:

- 1) information on the level of model risk (solo and consolidated).
- 2) model risk map.
- 3) Information on the validation process as well as the status of post-validation recommendations.
- 4) evaluation of effectiveness of the recommendations made to reduce the model risk level,
- 5) potential proposed management actions reducing the model risk.

#### 2.15.4. MANAGEMENT ACTIONS CONCERNING MODEL RISK

The purpose of management actions is to form a model risk management process and a level of this risk.

Management actions consist in particular of:

- 1) issuing internal regulations,
- 2) determining acceptable risk levels,
- 3) issuing recommendations,
- 4) making decisions about the use of tools supporting model risk management.



#### 2.16. MACROECONOMIC RISK

#### 2.16.1. INTRODUCTION

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

The purpose of macroeconomic risk management is to identify macroeconomic factors having a significant impact on the Bank's activities and taking actions to reduce the adverse impact of potential changes in the macroeconomic situation on the financial situation of the Bank.

## 2.16.2. MACROECONOMIC RISK IDENTIFICATION AND ASSESSMENT

Identification of macroeconomic risk is to determine scenarios of the potential macroeconomic changes and to determine risk factors having the greatest impact on the financial situation of the Bank. Macroeconomic risk results from interaction of factors dependent and independent of the Bank's activities. The Bank identifies the factors affecting the level of macroeconomic risk during carrying out comprehensive stress-tests.

The macroeconomic risk materialises indirectly through other risks affecting the Bank's operations by:

- 1) credit losses,
- 2) losses arising from adverse changes in market situation (changes in exchange rates, changes in interest rates),
- 3) a decrease in the liquidity of the Bank,
- 4) losses arising from the operational risk materialization,
- 5) other losses.

For the purpose of measuring the macroeconomic risk the Bank uses risk measures based on the results of comprehensive stress-tests, in particular:

- 1) financial result and its components,
- 2) capital adequacy measures and their components,
- 3) selected liquidity measures,
- 4) data on credit portfolio quality.

#### 2.16.3. MACROECONOMIC RISK MONITORING

A process of macroeconomic risk monitoring includes monitoring of:

- 1) macroeconomics factors to which the Bank is sensitive,
- 2) changes in the macroeconomic situation,
- 3) results of stress-tests,
- 4) level of macroeconomic risk.

#### 2.16.4. MACROECONOMIC RISK REPORTING

Macroeconomic risk reporting is realised in the form of:

- 1) reports summarizing the results of each stress-tests, presented to ALCO,
- information on macroeconomic risk described in the "Capital Adequacy in PKO Bank Polski SA" report, related to stress tests subject to reporting to ALCO, RC, Management Board and Supervisory Board.
- 3) reports presented to ALCO and prepared in case of elevated or high level of macroeconomic risk: an analysis of reasons which led to an increase in the risk level, assessment of the potential consequences of this situation for the Bank, prediction of possible outcomes, proposals of: a. actions aimed at reduction of the risk level,

- b. initial assessment of effectiveness of said actions,
- specialised units of the Head Office, specialised units of the Bank or divisions responsible for corrective actions,
- d. deadlines for said actions, together with an assessment of required resources or justification for the lack of necessity for any actions to be taken.

## 2.16.5. MANAGEMENT ACTIONS CONCERNING MACROECONOMIC RISK

Management actions in particular consist of:

- 1) internal regulations of the Bank,
- 2) determining acceptable levels of risk,
- proposals of actions aimed at reducing the level of risk in the event of elevated or high macroeconomic risk occurrence.

#### 2.17. CAPITAL RISK MANAGEMENT

Capital risk is defined as the risk of inadequate, and thus insufficient in relation to the scale of PKO Bank Polski SA activities, level and structure of own funds for absorption of unexpected losses (taking into account both development plans and borderline cases).

The purpose of capital risk management is to ensure an adequate level and structure of own funds, in relation to the scale of PKO Bank Polski SA activities and its risk exposure, taking into account the dividend payout policy of the Bank and recommendations from the supervisory institutions, related to capital adequacy.

The level of capital risk for the Bank and the Group is determined on the basis of capital adequacy measures, i.a. total capital ratio, common equity Tier 1 capital ratio and leverage ratio. Additional thresholds in the form of a surplus over strategic tolerance limits for capital adequacy measures are established.

The bank regularly monitors the capital adequacy measures in order to determine the degree of compliance with regulatory norms, internal strategic limits and to identify events requiring utilisation of capital contingency measures.

The level of capital adequacy measures and the level and structure of own funds of the Bank are presented in Chapter 3 'Own Funds' and Chapter 10 'Capital adequacy' of this Report.

#### 2.18. EXCESSIVE LEVERAGE RISK MANAGEMENT

#### 2.18.1. INTRODUCTION

The risk of excessive leverage is defined as the risk resulting from vulnerability due to financial leverage or conditional leverage that may require unintended corrective actions of business plans, including emergency sale of assets which could result in losses or result in the need for valuation adjustments of other assets.

## 2.18.2. EXCESSIVE LEVERAGE RISK IDENTIFICATION AND ASSESSMENT

Leverage means the relative size of the Bank's assets, offbalance sheet obligations and contingent obligations to pay or to deliver or to provide collateral, including obligations from received funding, made commitments, derivates or repurchase agreements, but excluding obligations which can only be



enforced during the liquidation of the Bank, compared to that institution's own funds.

The risk of excessive leverage materializes as a mismatch of scale of activities and structure of the sources of financing and insufficient equipment of Group's own funds.

For the purpose of measuring the risk of excessive leverage, bank leverage ratio is calculated in accordance with Article 429 of the CRR (amended by Regulation 2015/62 UE<sup>12</sup>) i.e. as a measure of Tier 1 capital divided by the measure of total exposure and is expressed as a percentage rate. The Bank calculates the leverage ratio on the reporting reference date. The leverage ratio is calculated both in relation to Tier 1 capital, as well as according to a temporary Tier 1 definition.

The Bank does not take into account derogations laid out in art. 499 p. 2 and 3 of the CRR during leverage ratio calculation.

#### 2.18.3. EXCESSIVE LEVERAGE RISK MONITORING

The following parameters are in particular subject to monitoring of the risk of excessive leverage:

- 1) value of the leverage ratio,
- 2) threshold of the risk of excessive leverage,
- 3) deviation of the leverage ratio from forecasts.

The values are monitored on a quarterly basis.

#### 2.18.4. EXCESSIVE LEVERAGE RISK REPORTING

The risk of excessive leverage of the Group is reported on quarterly basis. The receivers of reports on the risk of excessive leverage are RC, the Management Board, the Risk Supervisory Board Committee and the Supervisory Board. Reports include, among others, information on the value of leverage ratio, the threshold values for excessive leverage risk and a forecast of the risk of excessive leverage.

## 2.18.5. MANAGEMENT ACTIONS COVERING EXCESSIVE LEVERAGE RISK

Management actions related to excessive leverage risk management are identical to management actions related to capital risk.

#### 2.19. COMPLEX STRESS - TESTS

Complex stress-tests are an integral part of the PKO Bank Polski SA Group's risk management and are complementary for stress-test-specific to particular types of risks.

Complex stress-tests collectively include the following risks considered to be relevant by the Bank, including:

- 1) credit risk,
- 2) market risk,
- 3) liquidity risk,
- 4) operational risk,
- 5) business risk,
- 6) capital risk,

Commission Delegated Regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No 575/2013 of the European Parliament and the Council with regard to liquidity coverage requirement for Credit Institutions

#### 7) excessive leverage risk.

Complex stress-tests include an analysis of the impact of changes in the environment and the functioning of the Bank on the financial position of the PKO Bank Polski SA Group, in particular on:

- 1) income statement,
- 2) statement of financial position,
- 3) own funds,
- the capital adequacy, including capital requirements, internal capital, measures of capital adequacy,
- 5) selected liquidity measures.

Complex stress-tests for the own use of the Group are carried out at least once a year in the three-year horizon for the Group and at least twice a year in the three-year horizon for the Bank, taking into account changes in the value and structure of the statement of financial position and income statement items (dynamic tests). Supervisory tests are carried out at the request of the supervisory authorities in accordance with the assumptions provided by supervisory authorities.

## 2.20. RISK MANAGEMENT IN PKO BANK HIPOTECZNY SA

Risk management system adopted in PKO Bank Hipoteczny SA is identical to the one adopted in the Group. A specialized nature of the activities of a mortgage bank means that:

- credit risk management is focused mainly on the mortgage sector, retail clients' creditworthiness and mortgage lending value assessment.
- long-term mortgage bonds are a to be a default main financing source, with liquidity management competencies focused on issuance of securities on the domestic and foreign securitized debt market.

PKO Bank Hipoteczny SA expands its mortgage loans portfolio through sales by intermediaries as well as purchase of liabilities from the parent company. The mortgage portfolio forms the basis of a collateral pool securing issuance of mortgage bonds.

The mortgage lending value is a value determined by the Bank in order to reflect the level of risk associated with the property accepted as a collateral securing the loans granted and is used in order to determine the maximum potential amount of the loan secured by a given immovable property or in order to determine whether a loan secured by said property can be purchased by the bank.

PKO Bank Hipoteczny SA determines the mortgage lending value on the basis of an expertise made with due diligence and caution, taking into account only those features of the property, together with investments necessary for its completion, that are permanent and which, considering a rational exploitation, will be recoverable by each of the owners of said property. All assumptions, parameters and the evaluation process adopted during the expertise are documented in the expertise, together with its date and proposed estimation value. The expertise takes into account all analyses and forecasts related to the property, which affect the creditworthiness assessment, as well as general factors such as: population, unemployment rate, local zoning plans.

The mortgage bond is a personal or a bearer bond, issued by a mortgage bank, on the basis of mortgage secured loans. Mortgage bonds are issued primarily for longer terms, therefore providing a source of long-term financing for the Group.



The PKO Bank Hipoteczny SA's business model assumes a significant share of mortgage bonds in the bank's financing structure. The mortgage bond is a stable source of financing, although its balloon repayment character frequently necessitates its replacement with additional bonds or alternative financing sources. The liquidity management process in the Bank pays particular attention to the matching of terms of cash flow items and the ability of the Bank to renew its financing sources during the maturity period of significant liabilities (repurchase of mortgage bonds).



#### 3. OWN FUNDS

For the purpose of capital adequacy, own funds are calculated according to the regulations of the Banking Law and Part Two of the CRR together with executive acts related to the CRR.

Own funds of the Group include Common Equity Tier 1 capital and Tier 2 capital. No items classified as Additional Tier 1 capital are identified in the Group.

Included in the Common Equity Tier 1 capital are the following:

- share capital presented according to the Bank's Statutes and entry in the Trade Registry, at nominal value,
- supplementary capital established from the annual net profits, assigned to absorb balance sheet losses that may arise within the Bank's activities,
- other reserve capital established independently from the supplementary capital, created from the annual net profits in the amount defined by the General Meeting (hereinafter referred to as "GM"), assigned to absorb balance sheet losses exclusively,
- 4) other accumulated total income (except for profits and losses related to cash flow), with the unrealised profits and losses on instruments classified as AFS (available for sale) recognized under the transition period (until the end of 2017) in the amount accepted by the Banking Law,
- general risk reserve created from the annual net profits in the amount defined by the GM, assigned to absorb unidentified losses may arise within the Bank's activities,
- 6) retained earnings,
- 7) net financial result prior to approval and net result for the current reporting period - calculated based on applicable accounting standards, decreased by any expected charges and dividends, in amounts not exceeding amounts audited by a certified public accountant; net financial result can be included in own funds under the condition of GM's approval or, prior to the aforementioned approval, consent of the PSFA.

Common Equity Tier 1 capital is reduced by the following items:

- 1) losses for the current financial year,
- intangible assets valued at their carrying amount, after deduction of the related provisions for deferred tax. The deducted amount includes goodwill included in the valuation of significant investments,
- additional adjustments for assets valued at their fair value, subject to requirements for prudent valuation, which are deducted from Common Equity Tier 1 capital,
- deferred tax assets related to future profitability, not resulting from temporary differences, recognized in the amount described in the Banking Law during the temporary period (i.e. until the end of 2017),
- additional fair value adjustments of liabilities and derivative instruments constituting liabilities, resulting from the own credit risk of the Bank, recognized in the amount described in the Banking Law during the temporary period (i.e. until the end of 2017),
- deferred tax assets related to future profitability arising from temporary differences, not exceeding 10% of Common Equity Tier 1 capital (after deductions described in p. 1-5 and 7),
- 7) direct and indirect equity exposures of the Bank in financial sector entities in which it doesn't have any significant investments, in the form of shares or other instruments of Common Equity Tier 1 or Tier 2 capital of said entities, not exceeding 10% of Common Equity Tier 1 capital of the Bank (after deductions described in p. 1-5),

- 8) direct and indirect capital exposure in financial sector entities in which the institution has significant investments, in the form of shares or other instruments of Common Equity Tier 1 of said entities, exceeding 10% of Common Equity Tier 1 capital of the institution (after deductions described in p. 1-5 and 7),
- 9) amount by which the sum of:
  - a. deferred tax assets related to future profitability arising from temporary differences, not exceeding 10% of Common Equity Tier 1 capital (after deductions described in p. 1-5 and 7) and
  - b. direct and indirect capital exposure in financial sector entities in which the institution has significant investments, in the form of shares or other instruments of Common Equity Tier 1 of said entities, not exceeding 10% of Common Equity Tier 1 capital of the institution (after deductions described in p. 1-5 and 7),
  - exceeds 17.65% of Common Equity Tier 1 capital of the institution (after deductions described in p. 1-7). The amount below the aforementioned threshold is included in risk weighted exposures.
- 10) during the transitional period described in the CRR (end of 2017), Common Equity Tier 1 capital is reduced by the amount, by which the sum of:
  - a. deferred tax assets related to future profitability arising from temporary differences, not exceeding 10% of Common Equity Tier 1 capital (after deductions described in p. 1-4 and 6) and,
  - b. direct and indirect capital exposure in financial sector entities in which the institution has significant investments, in the form of shares or other instruments of Common Equity Tier 1 of said entities, not exceeding 10% of Common Equity Tier 1 capital of the institution (after deductions described in p. 1-5 and 7),

exceeds 15% of Common Equity Tier 1 Capital of the institution. The amount below the aforementioned threshold is included in risk weighted exposures.

The Tier 2 capital comprises subordinated liabilities i.e. funds acquired by the Bank - in the amount and based on the consent of the PFSA issued in response to the Bank's request - conforming to the principles laid out in par. 127.3 p. 2.b of the Banking Law and conforming to the CRR.

The Tier 2 capital is reduced by the following items:

- 1) direct and indirect capital exposure in financial sector entities in which the institution has significant investments, in the form of instruments of Tier 2 capital of said entities,
- direct and indirect capital exposure in financial sector entities in which the institution doesn't have any significant investments, in the form of shares or other instruments of Tier 2 capital of said entities,
- 3) if the deductions described in points 1 and 2 above would result in a negative value of Tier 2 capital, the remaining value of said deductions is used to reduce Common Equity Tier 1 capital.

By way of derogation, during the transitional period described in the CRR, the residual amounts specified by the Banking Law are deducted from the Common Equity Tier 1 and Tier 2 capital on the 50/50 basis.



Conforming to the Executive Order 1423/2014, the Table 3.1 presents information on reconciliation of items from the report on the financial situation used in own fund requirements calculation as at 31 December 2015.

Table 3.1

RECONCILIATION OF ITEMS OF OWN FUNDS AND EQUITY REPORTED IN THE AUDITED FINANCIAL REPORT

		2015				
	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	3 271	-206	3 065	-272	2 793	
LIABILITIES						
Subordinated liabilities	2 499	0	2 499	-16	2 483	
CAPITAL						
Share capital	1 250	0	1 250	0	1 250	
Supplementary capital	20 711	-74	20 638	0	20 638	
Other reserves	3 536	-55	3 481	0	3 481	
General banking risk reserve	1 070	0	1 070	0	1 070	
Other income	-116	-19	-136	-235	-371	
revaluation capital related to assets available for sale	171	-10	161	-293	-132	
revaluation capital related to cash flow hedging instruments	-58	0	-58	58	0	
exchange differences	-217	-10	-226	0	-226	
actuarial gains / losses	-13	0	-13	0	-13	
share in other comprehensive income of an associated entity	0	0	0	0	0	
Net profit for the current period	2 610	41	2 651	-2 651	0	
Previous years' result	1 222	168	1 390	0	1 390	
Non-Controlling Interest	-18	18	0	0	0	
Total own funds	30 265	79	30 344	-2 886	27 458	
ADDITIONAL DEDUCTIONS					0	
Additional adjustments of assets					-55	
measured at fair value						
Deferred tax assets reliant on future profitability excluding those arising from temporary differences					-1	
OWN FUNDS TOTAL USED FOR CALCULATION OF CAPITAL ADEQUACY RATIO					27 091	

Conforming to the Executive Order 1423/2014, the Table 3.2 presents information on the type and value of key items of own funds utilised in the calculation of Total Capital Ratio as at 31 December 2015. Rows with values equal to 0 have been omitted.



Table 3.2

OWN FUNDS USED FOR CALCULATION OF CAPITAL ADEQUACY RATIO (CONSOLIDATED BASIS)

Common Equity Tier I capital: Instruments and reserves		The Bank Group			
		(A) AMOUNT AT DISCLOSURE DATE	(B) REGULATION (EU) No 575/2013 ARTICLE REFERENCE		
1	Capital instruments and the related share premium accounts	1 250.0	26 (1) a), b)		
	of which: A-SERIES REGISTERED SHARES	312.5	, , , ,		
	of which: A-SERIES COMMON BEARER SHARES	197.5			
	of which: B-SERIES COMMON BEARER SHARES	105.0			
	of which: C-SERIES COMMON BEARER SHARES	385.0			
	of which: D-SERIES COMMON BEARER SHARES	250.0			
2	Retained earnings	1 390.1	26 (1) c), 28		
3	Accumulated other comprehensive income	23 982.8	26 (1) d), e)		
3a	Funds for general banking risk	1 070.0	26 (1) f)		
6	Common Equity Tier I prior to regulatory adjustments	27 692.9	26		
	Common Equity Tier I capital: regulatory adjustments				
7	Additional value adjustment (negative value)	-43.8	34		
8	Intangible assets (net of related deferred tax liabilities) (negative value)	-2 793.3	36 (1) b)		
	Deferred tax assets reliant on future profitability excluding those arising				
10	from temporary differences (net of related income tax liabilities	-2.0	36 (1) c), 38		
10	providing the conditions in Article 38 (3) are met) (negative value)	-2.0	30 (1) (), 30		
11	Fair value reserves related to gains or losses resulting from cash flow headqing instruments	57.7	33 (1) a)		
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-28.3	33 (1) c)		
26	Regulatory adjustments applied to Common Equity Tier I in respect of amounts subject to pre-CRR treatment	18.1	469 (1) a), b), 472 (5), 468 (4), 472 (2), 478		
26a	Regulatory adjustments relating to unrealised gains and losses pursuant	-293.0	467, 468		
	Of which: filter for unrealised loss 1	-89.1	467		
	Of which: filter for unrealised loss 2	-203.5	467		
	Of which: filter for unrealised loss3	-0.5	467		
28	Total regulatory adjustments to Common equity Tier I	-3 084.6			
29	Common Equity Tier I capital	24 608.3	50		
	Additional Tier I: regulatory adjustments				
45	Tier I capital (Tier I = Common Equity Tier I + Additional Tier I capital)	24 608.3	25		
	Tier II capital: instruments and provisions				
46	Capital instruments and the related share premium accounts	2 483.1	62 a), 63		
51	Tier II capital before regulatory adjustments	2 483.1	62		
	Tier II Capital: regulatory adjustments				
58	Tier II capital	2 483.1	71		
59	Total capital (Tier I + Tier II capital)	27 091.4	72		
	Capital ratios and buffers				
61	Common Equity Tier I (as a percentage of risk exposure amount)	13,27%	92 (1) a)		
62		13,27%	93 (1) b)		
63	Total capital (as a percentage of risk exposure amount)	14,61%	94 (1) c)		
	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)	390.0	36 (1) h), 46 (4)		
73	Direct and indirect holdings by the institution 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)	910.6	37 (1) i), 48 (1), 470		
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article	1 134.0	39 (1) c), 48 (1), 470		



As at 31 December 2015, conforming to par. 48 of the CRR, capital exposure in financial sector entities didn't exceed 10% of Common Equity Tier 1 capital, and therefore do not constitute an impairment to own funds of the Bank and the Group and have been included in risk weighted assets.

The main features of instruments issued by the Bank and included in the Common Equity Tier 1 and instruments of Tier 2 capital are presented in Table 3.3 (PLN). Rows not related to the Group companies have been omitted.

Table 3.3

#### Capital instruments' main features (PLN) Capital instruments Unique identifier (eg. CUSIP or Bloomberg identifier for private PLPKO0000016 PLPKO0000016 PLPK00000016 Governing law(s) of the instrument Polish law Transitional CRR rul Common Equity Tier 1 Common Equity Tier 1 Common Equity Tier 1 Common Equity Tier Common Equity Tier 1 Post-transitional CRR rules Common Equity Tier Common Equity Tier Common Equity Tier 1 Common Equity Tier 1 Common Equity Tier 1 Tier 2 Tier 2 Solo and consolidated Solo and consolidated Eligible at solo/(sub-)consolidated / solo and (sub-)consolidated Solo and consolidated Instrument type (types to be specified by each jurisdiction) common stock common stock common stock common stock common stock bonds subordinated debt Amount recognised in regulatory capital (PLN, as of most recent reporting date) 197 500 000 105 000 000 780 013 000 PLN Nominal amount of instrument 312 500 000 197 500 000 250 000 000 1 600 700 000 105 000 000 385 000 000 197 500 000 385 000 000 9a Issue price 312 500 000 250 000 000 11 Original issue date 14.09.2012 Perpetual or dated perpetua perpetual perpetua perpetua perpetua 13 Original maturity date 24.04.2022 17 Fixed or floating dividend / coupon Floating dividend Floating dividend Floating dividend Floating dividend Floating dividend Floating coupon Floating coupon Non-compliant transitional features

At 30 June 2015 the net profit of the Bank for 2014 (PLN 3,079.5 million) and retained earnings from previous years (PLN 132.8 million) have been included in the own funds of the Bank calculated for capital adequacy purposes. The net profit has been presented in Tier 1 capital of the Bank (Table 3.1 "other reserves"), pursuant to Resolution 7/2015 of the General Meeting of Powszechna Kasa Oszczędności Bank Polski SA of

25 June 2015, regarding distribution of profits of PKO Bank Polski SA for year 2014 and settlement of remaining retained earnings from previous years, with PLN 1,962.3 million increasing the reserve capital of the Bank and PLN 1,250.0 million remaining undivided, with no amounts assigned for dividend payment. The Resolution of the Management Board is pursuant to the PFSA's recommendation.



#### 4. OWN FUNDS REQUIREMENTS

Pursuant to the CRR, the Group calculates own funds requirement for the following types of risk:

- 1) the credit risk using the standardized approach,
- 2) the operational risk
  - using AMA for the Bank, excluding the Bank's foreign branch in the Federal Republic of Germany,
  - using BIA for the Bank's foreign branch in the Federal Republic of Germany and Group companies subject to prudential consolidation,
- 3) the market risk using the basic methods.

The Group calculates requirements for own funds on account of credit risk using the following formula:

- in case of statement of financial position items a product of a carrying amount (considering value of adjustments for specific credit risk), a risk weight of the exposure calculated according to the standardised method of credit risk requirement as regards own funds and 8% (considering recognised collaterals),
- in case of off-balance sheet liabilities granted a product of value of liability (considering value of adjustments for specific credit risk), a risk weight of the product, a risk weight of off-balance sheet exposure calculated according to the standardized method of credit risk requirement for own funds and 8% (considering recognized collaterals),
- in case of off-balance sheet transactions (derivative instruments) a product of risk weight of the off-balance sheet transaction calculated according to the standardized method of credit risk requirement for own funds, equivalent in the statement of financial position of off-balance sheet transaction and 8% (the value of the equivalent in the statement of financial position is calculated in accordance with the mark-to-market method).

Information on the structure of own funds requirements of the Bank and the Group is presented in Table 4.1.

Bank and the Group is presented in Table 4.1.

Table 4.1

OWN FUNDS REQUIREMENT				
	The Gro	пр	Bank	
	2015	2014	2015	2014
Total own funds requirement	14 837	15 270	14 269	14 891
Credit risk	13 658	13 883	13 176	13 590
Settlement / delivery risk	0	0	0	0
Market risk	485	585	519	602
Risk related to credit valuation adjustment	31	42	31	42
Operational risk	663	759	543	655

Chart 4.1

STRUCTURE OF CAPITAL REQUIREMENT OF THE PKO BANK POLSKI SA GROUP BY RISK TYPES



As at 31 December 2015, the biggest part of the Group's total own funds requirements was the own funds requirement for credit risk (92.3%) - Chart 4.1. Credit risk showed on the chart

includes risk of credit valuation adjustment. Settlement risk is presented as part of market risk.

As at 31 December 2015:

- 1) own funds requirement for credit risk and counterparty credit risk was calculated under the standardized approach (pertaining to the CRR, Part III, Title II, Chapters 2 and 6),
- own funds requirement for market risk (including foreign exchange risk, commodities risk, equity risk, specific risk of debt securities, general risk of debt securities) was calculated under the basic methods, pursuant to the CRR, Part III, Title IV, Chapters 2-4),
- 3) own funds requirement for credit valuation adjustments of derivatives (pursuant to the CRR, Part III, Title VI),
- 4) own funds requirement for operational risk is calculated:
  - a) using AMA, for the Bank, excluding the Bank's foreign branch in the Federal Republic of Germany,
  - b) using BIA for the Bank's foreign branch in the Federal Republic of Germany (pursuant to the CRR, Part III, Chapter III),
  - c) using BIA for the Group companies subject to prudential consolidation (pursuant to the CRR, Part III, Chapter III),
- 5) own funds requirement for:
  - a) the settlement and delivery risk was calculated according to the CRR, Part III, Title V,
  - b) exposure risk related to central counterparty (CCP) calculated pursuant to Part III, Title II of the CRR,
  - c) the risk of exceeding the significant investments limit was calculated according to the CRR (par. 395 401).

Total own funds requirement for the Group comprises all of the above requirements for selected types or risk.

Value of own funds requirements for the credit risk for 2015 decreased in comparison to 2014 by ca. PLN 224 million and resulted mainly due to activities aimed at decreasing the value of Risk Weighed Assets (RWA). Increase in the quality of data (i.a. inclusion of SME exposures meeting the segmentation criteria in the retail category) as well as review of off-balance sheet commitments, coupled with verification of products' risk weights were the primary sources of the capital optimization.

The Bank utilizes netting in its calculation of own funds requirements for the counterparty credit risk, pursuant to art. 295-298 of the CRR.

Decrease of own funds requirement for market risk by ca. 17% (down from PLN 485 million) in comparison to 2014 results primarily from the changes regarding recognition and optimization of bond underwriting transactions.

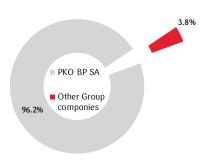
The decrease of own funds requirement for operational risk for the Group by ca. 13%, down to PLN 663 million, results from the finalization of merger of the Bank and Nordea Bank Polska SA.

Own funds requirement for the Bank constitutes a significant part (96.2%) of the total own funds requirement for the Group (Chart 4.2).



Chart 4.2

#### STRUCTURE OF CAPITAL REQUIREMENT BY COMPANIES IN THE GROUP



The PKO Bank Polski SA Group comprises insurance companies, PKO Życie Towarzystwo Ubezpieczeń SA and PKO Towarzystwo Ubezpieczeń SA, which, as an entity covered with separate supervision of PFSA Office, including capital requirements compliance assessment, is excluded from the prudential consolidation. The amount of own capital requirements regarding said companies is presented in a consolidated financial statement of the Group for 31 December 2015, published on 7 March 2016 (74.3 "Capital requirements for insurance companies").

#### 4.1. CREDIT RISK

The own funds requirement for credit risk and the counterparty credit risk as at 31 December 2015 is shown (by exposure classes) in Table 4.2.

Table 4..

#### STRUCTURE OF OWN FUNDS REQUIREMENT FOR CREDIT RISK

The Bank G	roup			
	2015		2014	
OTAL	13 658	100.0%	13 883	100.0%
Exposures to central governments or central banks	304	2.2%	219	1.6%
Exposures to regional governments or local authorities	170	1.2%	172	1.2%
Exposures to public sector entities	9	0.1%	14	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	150	1.1%	158	1.1%
Exposures to corporates	3 750	27.5%	4 414	31.8%
Retail exposures	4 996	36.6%	4 446	32.0%
Exposures secured by mortgages on immovable property	2 883	21.1%	3 083	22.2%
Exposures in default	823	6.0%	824	5.9%
Exposures associated with particularly high risk	59	0.4%	60	0.4%
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')	1	0.0%	1	0.0%
Equity exposures	197	1.4%	199	1.4%
Other items	317	2.3%	293	2.1%

The Group is obliged to maintain the highest own funds requirement for the risk related to corporate exposures (36.6%), retail exposures (27.5%) and exposures secured on real property (21.1%), which results from the Bank's high exposure to such types of segments.

## 4.1.1. USE OF EXTERNAL CREDIT ASSESSMENT INSTITUTIONS (ECAI)

Within the calculation of its 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 Bank implemented the process of carrying the issuer's and issue's rating to off-trading book items for the purposes of calculation of the own funds requirements functions in accordance with the CRR, Part III, Title II, Chapter 2.

#### 4.1.2. EXPOSURE TO SECURITIZATION POSITIONS

The Bank did not enter any securitisation transactions, although in 2015 it performed bundle sales of both on- and off- balance sheet liabilities. Detailed information in this respect can be found in consolidated financial statement for the Group for 31 December 2015, published on 7 March 2016 (75 "Information on loan bundle sale").

#### 4.2. MARKET RISK

The market risk of the Bank Group is determined primarily by the Bank. The Group's own funds requirement for its market risk is calculated in accordance with the CRR. To calculate the own funds requirement for FX risk and specific risk of debt instruments, the Bank uses basic methods. To calculate the own funds requirement for the commodities risk and risk of equity instruments the Bank uses simplified methods. To calculate the own funds requirements for debt instruments, the Bank uses the duration method.

The largest share in the value of requirement for market risk in the Group for 2015 was related to the specific risk of debt instruments (approx. 64.9%), which results from growth of liabilities for underwriting of the corporate bonds. Another type of capital requirement that is significant in terms of value is the own funds requirement for the general debt instruments risk (approx. 34.6%) ( table 4.3).

Tabela 4

OWN FUNDS REQUIREMENT FOR MARKET RISK

	The Group		Bank	
	2015	2014	2 015	2014
Specific risk related to debt instruments	314	438	341	453
Genereal risk related to debt instruments	167	146	175	148
Risk related to capital instruments	1	1	1	1
Commodities risk	0	0	0	0
Foreign exchange risk	0	0	0	0
Position risk related to exposures in CIUs	2	1	2	1
Total	485	585	519	602

The own funds requirement for FX risk was zero due to the fact that the total currency position did not exceed 2% of the Bank's own funds. As at the end of 2015 the Bank did not have an open position for commodity price risk, so the respective own funds requirement was zero.

Considering the fact that the Group does not use internal models for the purpose of calculation of own funds requirements for market risk, art. 455 of the CRR does not apply.

#### 4.3. OPERATIONAL RISK

Having obtained approval from the PFSA, the Bank uses the AMA for calculation of own funds requirement for operational risk since 31 December 2012. In July 2015, the Bank obtained approval from PFSA for a joint usage of AMA and BIA for calculation of own funds requirement for operational risk, and calculates said requirements according to:

- 1) BIA, in relation to the Bank's operations in the Federal Republic of Germany, and
- 2) AMA, in relation to the remaining activities.

The Bank uses the BIA approach in relation to Group entities subject to prudent consolidation.

The value of the Group's own funds requirement for operational risk was ca. PLN 663 million (including PLN 543 million of the own funds requirement for the Bank's operational risk) in 2015. As compared to 2014 this amount was lower by ca. PLN 97 million for the Group, mainly due to the merger of the Bank with Nordea Bank Polska SA.

Table 4.4

CAPITAL REQUIREMENT FOR OPERATIONAL RISK

Group

	2015	2014	2015	2014	2015	2014
Total	662	759	119	104	543	655
Basic Index Approach - BIA	119	104	119	104	0*	0
Advanced approach - AMA	543	655	0	0	543	655

Other Group companies



#### 5. UNENCUMBERED ASSETS

Information regarding encumbered assets of the Group can be found in the tables below. Respective assets are considered encumbered, if they have been pledged or are subject to any form of agreement aimed at securing or increasing a credit rating of any on- or off-balance sheet transaction, and cannot be freely withdrawn (for instance to be pledged for financing purposes).

PKO Bank Polski SA group held encumbered assets as of 31 December 2015:

- resulting from sell-buy-back transactions
- Registered treasury bonds, pursuant to art. 18 p. 3a of Mortgage Bonds and Mortgage Banks Act.

Moreover, PKO Bank Polski SA Group held securities in the form of mortgage bonds, secured with mortgage loans in the amount of PLN 82,977 thousand.

Table 5.1

#### **ENCUMBERED AND UNENCUMBERED ASSETS**

The Bank Group 2015

Carrying amount of Fair value of Carrying amount of Fair value of unencumbered unencumbered encumbered assets encumbered assets assets assets Assets of the reporting institution 14 994 249 656 0 Equity instruments 0 306 306 Debt securities 1 013 1 013 45 611 40 872 Other assets 0 17 552

Table 5.2

#### COLLATERAL RECEIVED

The Bank Group

	2015		
	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance	
Collateral received by the Group	0	0	
Equity instruments	0	0	
Debt securities	0	0	
Other collateral received	0	518 201	
Own debt securities issued other than own		_	
covered bonds or ABSs	0	0	

Table 5.3

#### ENCUMBERED ASSETS/COLLATERAL RECEIVED AND ASSOCIATED LIABILITIES

The Rank Group

	The bank Group		
		)15	
	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered	
Carrying amount of selected financial liabilities	0	20	



#### 6. CAPITAL BUFFERS

Pursuant to the CRR and the act on macroprudential supervision, financial institutions are obligated to hold additional capital buffers over the minimum levels set out in the CRR for:

- 1) Total Capital Ratio (TCR),
- 2) Tier 1 capital ratio,
- 3) Common Equity Tier 1 capital ratio.

Buffers need to be covered with Tier 1 capital.

Capital conservation buffer – imposed on all banks. The buffer will be increased on a yearly basis until its final, stable level of 2.5% (in 2019). As of 31 December 2015, the capital conservation buffer was equal to 0%.

Countercyclical buffer – imposed with the aim of mitigating the systemic risk resulting from the credit cycle. Countercyclical buffer will be introduced by the finance ministry during an increased lending activity and cancelled during its slowdown. As of 31 December 2015 the countercyclical buffer was equal to 0%.

Systemic risk buffer – used to prevent and reduce the long-term, non-cyclical risk or macroprudential risk, which may cause severe negative consequences for the financial system and economy of the country. As of 31 December 2015 the systemic risk buffer was equal to 0%.

G-SII / O-SII (global / other systemically important institutions) buffer – additional buffer for institutions that may generate systemic risk. As of the date of publication of this Report the Bank did qualify as a G-SII according to art. 131 of directive 2013/36/UE and no O-SII buffer was imposed on the Bank.

As of 31 December 2015 additional requirement related to join buffer measures equalled 0%.

As of 1 January 2016, a capital conservation buffer in the amount of 1.25% applies to all banks.



#### 7. LEVERAGE

#### Table 7.1

#### SUMMARY RECONCILIATION OF ACCOUNTING ASSETS AND LEVERAGE RATIO EXPOSURES

#### The Bank Group

		2015
1	Total assets as per published financial statements	266 940
2	Adjustment for entities which are consolidated for accounting purposes but are	
	outside the scope of regulatory consolidation	-2 290
7	Other adjustments	3 917
8	Total leverage ratio exposure	268 567

#### Table 7.2

#### LEVERAGE RATIO

Exposure used for leverage ratio calculation in accordance with the CRR  $$\operatorname{\textsc{The}}$$  Bank Group

		2015
On-ba	lance sheet exposures (excluding derivatives and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but	
	including collateral)	255 709
2	(Asset amounts deducted in determining Tier 1 capital)	-3 113
3	Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)	252 596
Deriva	tive exposures	
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash	
	variation margin)	1 367
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market	
	method)	1 667
11	Total derivative exposures	3 033
Securi	ties financing transaction exposures	
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting	
-12	transactions	34
16	Total securities financing transaction exposures	34
Other	off-balance sheet exposures	
17	Off-balance sheet exposures at gross notional amount	52 055
18	(Adjustments for conversion to credit equivalent amounts)	-39 152
19	Other off-balance sheet exposures	12 903
Capita	l and total exposures	
20	Tier 1 capital	24 608
21	Total leverage ratio exposures	268 567
Leverd	ige ratio	
22	Leverage ratio	9,16%
EU-23	Choice on transitional arrangements for the definition of the capital measure	Przejściowe
	·	



#### Table 7.3

#### ON BALANCE SHEET EXPOSURES

#### The Bank Group

		2015
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs), of which:	255 709
EU-2	Trading book exposures	0
EU-3	Banking book exposures, of which:	255 709
EU-4	Covered bonds	0
EU-5	Exposures treated as sovereigns	47 691
EU-6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	10 199
EU-7	Institutions	2 840
EU-8	Secured by mortgages of immovable properties	42 747
EU-9	Retail exposures	85 586
EU-10	Corporate	41 247
EU-11	Exposures in default	8 299
EU-12	assets)	17 101

<sup>\*</sup>On-balance sheet exposures used for leverage ratio calculation in accordance with the CRR (excluding derivatives and SFTs)

- 1) The following factors influenced the leverage ratio:
  - a. increase in credit exposures,
  - b. increase in value of investment securities available for sale,
  - c. increase in value of other assets (cash and its equivalents)
- 2) Increase in the value of own funds results from inclusion of profit for 2014 and undivided retained earnings from previous years.

In 2015 leverage ratio remained above external and internal limits as well as above minimum values recommended by the PFSA.



#### 8. INTERNAL CAPITAL (PILLAR II)

The Group determines the internal capital in compliance with the CRR.

Internal capital is the amount of capital that is required to cover all identified significant types of risk present in the business activity of the Bank and the Group and the effect of changes in the business environment, taken into account the anticipated risk level.

The purpose of internal capital assessment is to define the minimum level of own funds ensuring the safety of operations, taking account of changes in the profile and volume of conducted activities and unfavourable stress conditions.

The internal capital of the Bank Group in 2015 was estimated to cover each significant risk type:

- 1) credit risk, including default risk, concentration risk and dilution risk,
- 2) FX risk,
- 3) interest rate risk,
- 4) liquidity risk,
- 5) operational risk,
- 6) business risk (including strategic risk).

Materialisation of macroeconomic risk, model risk, compliance risk, loss of reputation, capital, excessive leverage and derivatives risk is reflected in the estimates of internal capital for covering the types of risk: credit, interest rate, currency, operational and business.

The Bank monitors on a cyclical basis the significance of individual types of risk related to the business activity of the Bank and the Bank Group entities.

The total internal capital of the Bank Group is the sum of internal capital required to cover all significant risk types that occur in the companies of the Bank and the Group. A conservative approach to risk aggregation is adopted and the diversification effect is not used.

The amount of internal capital for credit default risk is determined for exposures subject to credit risk at the level of unexpected loss for the portfolio of exposures, covered by the portfolio risk measures and is calculated pertaining to the VaR model. The unexpected credit loss (UL) is the difference between the credit value at risk (CVaR) and the amount of the expected loss (EL). For credit portfolios not covered by the portfolio risk measures, it is assumed that internal capital for credit risk equals own funds requirement for credit risk, calculated under the standard method.

The internal capital to cover the concentration credit risk of the Group is determined as the product of:

- the multipliers of the internal capital surcharge for each material risk concentration type and
- 2) the internal capital to cover the credit default risk.

The value of exposure to a counterparty being a financial institution, sovereign or a central bank is determined on the basis of the exposure values and internal risk weights. Depending on its rating, the exposure is given a credit quality step and appropriate risk weight calculated on the basis of internal methods.

Internal capital for credit dilution risk is equal to the internal capital charge for clients affected by the dilution risk, divided by internal capital for credit default risk. Value of the internal capital charge is calculated on the basis of loan portfolio's rating of the dilution risk affected client.

To calculate the internal capital for interest rate risk and FX risk, the Bank uses the VaR methodology, taken into account the results of stress tests.

The internal capital to cover the liquidity risk comprises the total estimated cost of an accelerated sale of securities covering the stress-test related outflow of funds and the cost of acquisition of additional financing for intangible assets necessary to meet the required level of intangible assets.

The internal capital for the Bank's operational risk is equal to the Bank's capital requirement for operational risk calculated using AMA and BIA. The internal capital for the operational risk of the Group entities is adopted as follows:

- 1) for Group entities subject to prudential consolidation as the additional own funds requirement for operational risk, calculated under the basic indicator approach,
- 2) for Group entities not subject to prudential consolidation, except for insurance companies as equal to the maximum amount of the annual losses related to operational risk for the last 3 years, as suffered by a given entity.

The internal capital to cover business risk of the Bank is determined on the basis of analysis of historical volatility of deviations of realised net revenue from its expected values, in accordance with the earnings at risk concept (Earnings at Risk).

The internal capital for covering business risk of the Group entities is determined as the product of ratio of internal capital calculation for covering business risk and total internal capital of said entity reduced by its internal capital for business risk.

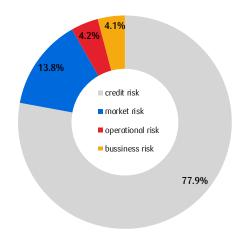
The internal capital ratio for business risk of the Group entities is a product of the internal capital of the Bank for business risk and total internal capital of the Bank excluding the internal capital for business risk.

The internal capital calculation approaches are defined in internal regulations. To assess internal capital based when using the statistical models, the time horizon of one year and 99.9% confidence level is applied.

The Chart below presents the structure of internal capital by risk type, as estimated as at 31 December 2015 for the Group.

Chart 9.1

## STRUCTURE OF INTERNAL CAPITAL OF THE GROUP



The total internal capital is allocated by business areas, client segments and by the companies of the Group.

In order to assess the amount of capital required to safely conduct business activity in unfavourable economic conditions, the Bank carries out stress tests.



#### 9. CAPITAL ADEQUACY

Capital adequacy is a process aiming to ensure that the risk level assumed by the Bank and the Group for the development of business operations can be covered by available capital within specified risk tolerance levels and time horizon. Capital adequacy management process involves, in particular, adherence to applicable supervisory regulations and risk tolerance levels set in the Bank and the Group, capital planning process, including policies related to sources of capital.

The objective of capital adequacy management is to maintain, on an ongoing basis, the level of own funds that is adequate to the scale and risk profile of business activity of the Group.

Capital adequacy management at the Bank comprises:

- definition and implementation of desired capital adequacy objectives.
- 2. identification and monitoring of significant types of risk,
- 3. assessment of the amount of internal capital for individual significant types of risk and of total internal capital,
- 4. definition of internal capital adequacy limits,
- 5. forecasting, monitoring and reporting of internal capital levels and its structure as well as capital adequacy,
- balance sheet structure management with the aim of optimization of quality of the Bank's own funds,
- 7. capital-related contingency actions,
- allocation of own funds requirement and internal capital to business areas, client segments and individual companies of the Group,
- 9. profitability assessment of individual business areas and client segments.

The main measures of capital adequacy are as follows:

- 1) the total capital ratio (TCR),
- 2) Tier 1 (T1) capital ratio,
- 3) Common Equity Tier 1 capital (CET1) ratio,
- 4) the own funds to internal capital ratio,
- 5) leverage ratio.

Pursuant to the CRR, the minimum capital ratio levels maintained by the Bank are as follows:

- 1) Total capital ratio (TCR) 8.0%,
- 2) Tier 1 (T1) 6.0%,
- 3) Common Equity Tier 1 (CET1) 4.5%.

In the letter from 23 October 2015, the PFSA recommended all the banks to maintain additional capital requirement, for the purpose of foreign-denominated mortgage risk hedging, consisting of min. 75% of Tier 1 capital. Additional capital requirement recommended to PKO Bank Polski SA equalled 0.76% for Total Capital Ratio (TCR) and 0.57% for Common Equity Tier 1 (CET1) ratio.

As a result:

- Minimum capital ratios for the Bank, taking into account the additional capital requirement recommended by the PFSA are equal to:
  - a. criteria for up to 50% of 2014 profit pay-out:
    - TCR = 12.5% + 0.76% = 13.26%,
    - CET1 = 12.0% + 0.57% = 12.57%
  - b. criteria for up to 100% of 2014 profit pay-out:
    - TCR = 15.5% + 0.76% = 16.26%,
    - CET1 = 12.0% + 0.57% = 12.57%

The above recommendation should be respected by the Bank starting from the date of its receipt until its cancellation – i.e.

until the PFSA decides – on the basis of analyses and supervisory assessment – that the risk related to foreign-denominated mortgage loans, constituting the reason for establishment of the additional requirement, changed significantly.

According to KNF's recommendation, a dividend for year 2015 could only be paid out by the banks:

- 1) which are not subject to recovery proceeding;
- with a BION (Research and Supervisory Assessment) score not lower than 2.5,
- 3) with a leverage ratio up to 5%,
- 4) with Tier I Capital ratio increased by the conservation capital<sup>13</sup>:
- 5) banks with over 5% market share in deposits from the non-financial sector with Tier I capital ratio (increased by the conservation capital) over 13.25%, plus 75% of eventual capital measures related to foreign-denominated retail mortgages placed on the Bank by the PFSA on 23rd October 2015<sup>14</sup>,

remaining commercial banks - with Tier I capital ratio (increased by the conservation capital) over 11.25%, plus 75% of eventual capital measures related to foreign-denominated retail mortgages placed on the Bank by the PFSA on  $23^{\rm rd}$  October  $2015^{15}$ .

PFSA recommends a dividend in the amount of up to 50% of achieved profit to be payable only by the banks meeting the supervisory criteria related to the Total Capital ratio, i.e. with TCR over 13.25% plus 100% of eventual capital measures related to foreign-denominated retail mortgages, placed on the bank by the PFSA on 23rd October 2015.

In 2015 PKO Bank Polski SA continued activities aimed at ensuring proper capital buffer, and maintaining and enhancing its liquidity position.

As of 31 December the net profit of the Bank for 2014 (PLN 3,079.5 million) and retained earnings from previous years (PLN 132.8 million) have been included in the own funds of the Bank calculated for capital adequacy purposes. The profit has been included in Tier 1 capital of the Bank (reserve capital), with PLN 1,250.0 million remaining undivided, with no amounts assigned for dividend payment.

In the 2<sup>nd</sup> half of 2015 the Bank took several measures aimed at lowering the level of risk weighted assets. Increase in the quality of data (i.a. inclusion of SME exposures meeting the segmentation criteria in the retail category) as well as review of

<sup>&</sup>lt;sup>13</sup> Conservation capital, for the purpose of the dividend payment policy, has been defined as additional 3 percentage points above the Tier I and Total Capital ratio levels recommended by the PFSA for the banks with over 5% share inf deposits from the non-financial sector, and 1 percentage point for the remaining banks. In accordance with the PFSA's letter dated 22nd October 2015, the recommended levels of Tier I and Total Capital ratios are equal to 10.25% and 13.25% respectively, forming the basis for additional, conservation capital increase of 3 or 1 percentage points.

 $<sup>^{14}</sup>$  For instance, for a bank with over 5% market share in deposits from the non-financial sector, with 1 percentage point of capital measures related to foreign-denominated retail mortgages placed on it by the PFSA, the Tier I capital ratio over which the bank will be allowed to make dividend payments is equal to: 10.25% + 3 percentage points +  $(1 \text{ percentage point} \times 0.75) = 14.00\%$ .

 $<sup>^{15}</sup>$  For instance, for a bank with less than 5% market share in deposits from the non-financial sector, with 1 percentage point of capital measures related to foreign-denominated retail mortgages placed on it by the PFSA, the Tier I capital ratio over which the bank will be allowed to make dividend payments is equal to: 10.25% + 1 percentage points +  $(1 \text{ percentage point} \times 0.75) = 12.00\%$ .



Chart 10.1

off-balance sheet commitments, coupled with verification of products' risk weights proved to be the primary sources of the aforementioned optimization.

At the end of 2015 the Bank met the criteria set out by the PFSA, qualifying it for the dividend payment of up to 50% net profit for 2015.

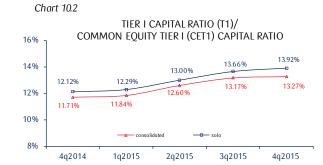
The chart below presents changes in the Total Capital Ratio calculated for the Bank and the Bank Group.

15.28%





The chart below presents changes in the Tier 1 (Common Equity Tier 1) Ratio <sup>16</sup> for the Bank and the Bank Group.



As at 31 December 2015, as compared to the state as of 31 December 2014, the Group's total capital ratio increased by 1.65 percentage points, to the level of 14.61%, with total capital ratio equal to 15.28%. The following events had the biggest impact on the total solvency ratio:

- inclusion of the Bank's net profit for 2015 in the amount of PLN 3.08 billion and undivided retained earnings from previous years (PLN 0.13 billion) into own funds,
- activities related to optimization of risk weighted assets (performed in 2<sup>nd</sup> half of 2015).

 $<sup>^{\</sup>rm 16}$  Tier 1 and common equity Tier 1 ratios are identical in the Bank and the Group.



#### 10. REMUNERATION POLICY

The basic internal regulation regard of remuneration policy is the Collective Labour Agreement ('Zakładowy Układ Zbiorowy Pracy' - ZUZP) concluded with the company trade union organisations on 28 March 1994 (with subsequent amendments), under which employees of the Bank receive the following remuneration components:

- the base remuneration,
- additional remuneration for working overtime, as well as under conditions which are especially onerous and detrimental to health,
- bonuses and awards for special achievements in professional work.

Base salaries and additional benefits granted to employees are formed on the basis of job grading (grading categories assigned to specific organisational positions) and analysis of market remuneration in the banking sector.

# 10.1. VARIABLE COMPONENTS OF REMUNERATION OF BOARD MEMBERS AND KEY MANAGERS WITH A HIGH IMPACT ON THE BANK'S RISK PROFILE (MATERIAL RISK TAKERS – MRT)

Pertaining to the CRD IV and regulation 604/2014 of 4 March 2014 <sup>17</sup>, the Bank implemented principles of determination of variable components of remuneration (bonuses and awards) in the following resolutions:

- Resolution of the Supervisory Board policy on variable components of remuneration entitled "Principles of variable components of remuneration for the Bank's management" (on the basis of which further regulations have been issued) and the Regulation on variable components of remuneration for the Management Board Members,
- Resolution of the Management Board the Regulation on variable components of remuneration for the Management,

The list of MRTs – other than Management Board Members – is defined by the Management Board on the basis on quantitative and qualitative criteria used for categorization of employees, whose activities influence the risk profiles enumerated in the UE Delegated Regulation No. 604/2014 from 4 March 2014. Based on the aforementioned criteria, the following are classified as MRTs:

- 1) members of the management body,
- 2) top management responsible for a material business unit, risk management and control functions,
- 3) staff members responsible for providing internal support which are crucial to the operation of the business, exposing the Bank to significant risk or other types or risk,
- 4) staff members generating credit and market risk, selected on the criteria of decision limits,
- 5) staff members with a total remuneration exceeding a certain threshold, which have a significant impact on the risk profile of the institution,
- staff members, whose remuneration is on par with remuneration of top management and risk takers (with a significant impact on risk profile).

17 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.

The principles of determination of variable components of remuneration of the Management Board have also been implemented by Supervisory Boards of selected subsidiaries of PKO Bank Polski SA – PKO Leasing SA, PKO Towarzystwo Funduszy Inwestycyjnych SA, PKO BP BANKOWY PTE SA, PKO Życie Towarzystwo Ubezpieczeń, PKO Towarzystwo Ubezpieczeń and PKO Bank Hipoteczny SA. Additionally, selected managerial positions in PKO Życie Towarzystwo Ubezpieczeń SA, PKO Towarzystwo Ubezpieczeń and PKO Bank Hipoteczny SA have been included in said principles.

## 10.1.1. THE PROCESS OF DETERMINATION OF VARIABLE COMPONENTS OF REMUNERATION OF MRT

The preparation the above mentioned documents, including the policy on variable components of remuneration involved the experts and the Bank's management from the following departments: the Human Resources and Performance Management Department (principles of bonus and remuneration payment), the Human Resources and Payroll Centre (labour), the Planning & Controlling Department (planning, imposing and checking financial objectives).

While preparing the policy, the Bank used external services rendered by a consulting company, PwC Polska. EY Polska provided support to the Bank during the update of aforementioned policy. The policy itself is modified by the Supervisory Board on the basis of Management Board's recommendation and Remuneration Committee's opinion.

#### 10.1.2. REMUNERATION COMMITTEE

The Remuneration Committee was appointed in the Bank to support the Supervisory Board in fulfilment of its statutory obligations and execution of tasks defined in the legal regulations.

The Remuneration Committee is formed by the members of the Supervisory Board. The Committee members as of 31 December 2015 are presented in Table 11.1.

Table 11.1

MEMBERS OF SUPERVISORY BOARD OF THE BANK FORMING THE REMUNERATION COMMITTEE

	2015
NAME	FUNCTION
Małgorzata Dec - Kruczkowska	Chairman of the Committee
Jerzy Góra	Vice-Chairman of the Committee
Elżbieta Mączyńska – Ziemacka	Committee member
Marek Mroczkowski	Committee member

The Remuneration Committee prepares opinion on the policy on variable components of remuneration – its amount and components – of the Bank's management, including regular and variable components of remuneration of the Management Board Members.

The Remuneration Committee is responsible in particular for accomplishment of the following tasks:

- 1) preparing opinions on general principles of the policy on variable components of remuneration of the Bank's MRTs,
- preparing proposals for the Supervisory Board, regarding remuneration policy of the Management Board, including variable components of remuneration and base remuneration,
- 3) preparing report on the review of implementation of variable components of remuneration, prepared by the Audit Department,
- 4) performing periodical reviews of general principles of the policy and its presentation to the Supervisory Board,



5) preparation of a project of a report regarding functioning of the remuneration policy in the Bank, presented to the General Assembly by the Supervisory Board.

In December 2015, changes to the Committee's regulation have been made in respect of implementation of corporate governance principles of supervised entities – introducing the Committee's obligation to prepare a project of a report regarding functioning of the remuneration policy in the Bank, presented to the General Assembly by the Supervisory Board.

Four meetings of the Remuneration Committee took place in 2015.

## 10.1.3. MOST SIGNIFICANT INFORMATION ON CHARACTERISTICS OF VARIABLE COMPONENTS OF REMUNERATION SYSTEM

The Principles and Remuneration Regulations issued on the basis of such principles describe the manner in which MRTs are granted variable components of remuneration bound to the results and effects of their work – including awards for exceptional achievements and bonuses.

The main principle of granting of variable components of remuneration is in particular bonus objectives assigned within the Management by Objectives System (MbO).

The rules indicate that the assigned to MRT goals are to ensure the inclusion of the business cycle of the Bank and the risks associated with the ongoing operations. The risk is taken into account by both determining appropriate risk-sensitive criteria for performance evaluation and reduction of bonus or even lack of it in case of degraded performance or financial losses of the Bank (including the use of malus with respect to deferred for three years part of the variable remuneration).

Assessment criteria of a MRT, including member of Management Board should include amongst others:

- 1) impact on regulatory capital, capital adequacy ratio and equity of the Bank in such a way that payment of variable remuneration does not limit possibilities of their strengthening,
- 2) Bank's result on the area of responsibility of a given person in respect to the results of the entire Bank.

The KPI structure combines different types of KPI, that is in particular quantitative and performance indicators resulting from possessed systemic data and coherent with specific nature of the organisation. All performance indicators are parameterised and of measurable nature. Due to nature of a given management position, different proportions of individual assessment levels and weights of the above mentioned KPI types are defined. Responsibilities for risk-adjusted long-term financial results and costs with different structure of objectives depending on a specific nature of accomplished tasks have been used.

Variable components of remuneration for a given period of time (a calendar year) are granted on the basis of Regulations, after bonus objectives have been settled, in the following forms:

- 1) non-deferred from up to 60% of variable remuneration (in the first year after assessed period),
- deferred from up to 40% of variable remuneration (in equal instalments for the following three years after assessed period),

and both, non-deferred and deferred remuneration is granted in equal parts in cash and in form of financial instrument that is phantom shares (that are converted into cash according to

updated prices of the Bank's shares after the retention period and in case of deferred remuneration – after deferment).

If the amount of variable remuneration for a given year is higher than PLN 1 million, PLN 400 million and 60% of the surplus over such PLN 1 million is to be deferred.

Variable remuneration – can be no higher than 100% of the fixed component of remuneration of managerial positions and 70% for Management Board members. At the request of the Supervisory Board, the aforementioned limit for variable remuneration for persons holding managerial positions outside of the Management Board can be raised up to 200% of the fixed component for remuneration for investment banking positions – if approved by the General Meeting of Shareholders.

50% of every variable component of remuneration of the MRT is related to the value of phantom shares, based on the share price (variable in time) of the Bank.

#### The bonus amount:

- for member of the Board may be adjusted in minus or in plus by the certain rate - depending on the achieved results of the Bank specified in the Bank's Annual Note (a set of key indicators of management specified for a given calendar year),
- for MRT who is not a member of the Board it may be adjusted in plus by certain rate depending on the results of the Bank specified in the Bank's Annual Note.

In case of members of the Management Boards, variable components are granted and released on the condition of approval of the financial statement for the given period of assessment by the General Meeting of Shareholders.

The respective Supervisory Board in relation the Bank's or Group company's Management Board and the Management Board in relation to management members may take a decision on possible pro rate reduction of funds for variable remuneration before every payment of such remuneration, taking into account:

- 1) impact on regulatory capital, capital adequacy ratio and the Bank's equity, so payment of variable compensation does not restrict possibilities of their strengthening,
- 2) impact on the capital cost, so payment of variable compensation does not restrict possibilities to maintain proper capital base,
- 3) required risk profile of the Bank,
- financial results of the Bank in respect to long-term plans of development.

#### In case of:

- 1) significant deterioration in the Bank's results,
- 2) assessment of a significant negative change in equity,
- 3) violation of law or commitment of significant errors by MRT,
- 4) adjustment of implementation and completion degree of results or objectives of MRT,
- performance deterioration of supervised or managed structures,
- granting of variable remuneration on the basis of incorrect, misleading information or MRT fraud

It is possible to use - respectively by the Supervisory Board or Board of Directors - malus-type solution reducing the size of the due variable compensation deferred in subsequent accounting periods.

Material Risk Takers are entitled to the non-financial benefits that are available to all employees, i.e.: medical care, PPE, group insurance.



Members of the Management Board are entitled to Bankfinanced insurance, in particular for the death of serious illness, permanent disability, permanent or long-term damage to health and inability to work.

In case of granting the MRT severance related to the withdrawal from the function associated with the termination of employment (other than resulting from generally applicable laws) its sum reflects the assessment of the work in the last three years of employment. The Bank's regulations stipulate the maximum amount of severance pay.

Members of the Board and selected MRT are additionally covered by non-competition agreements. The agreements provide payment of the required labour law damages for refraining from hiring at competition after the termination of employment at the Bank.

Quantitative data on variable components of remuneration will be published in May 2016.

Knowledge, experience, competences, skills and information on clean criminal record are verified.

Moreover, an annual assessment of members of the management body is performed by an external advisory company. Both individual and Management Board's competences are subject to assessment.

## 10.1.4. THE NUMBER OF DIRECTORSHIPS HELD BY MEMBERS OF THE MANAGEMENT BODY

"Members of the management body" shall mean members of the Management and Supervisory Boards. As of 31 December 2015 there were 8 members of the Supervisory Board and 7 Members of the Management Board.

## 10.2. VARIABLE COMPONENTS OF REMUNERATION OF NON-MRT EMPLOYEES

#### 10.2.1. **BONUSES**

- 1) PKO Bank Polski SA has a remuneration and incentive system, in which the level of variable component of the salary is determined by the degree of achievement of the targets set. It consists of four pillars:
  - MbO (Management by Objectives) covers managerial and expert positions crucial for the Bank's key objectives. The MbO consists of granting bonus which depends on the quality and degree of completion of the tasks.
- 2) Individual Bonus System (IBS) a system of bonuses which depends on the degree of completion of specific tasks in the areas of sales and effectiveness. The system covers those employees who are performing business tasks, mainly in corporate and investment banking, as well as in debt collection.
- 3) Sales Bonus System (SBS) aimed to positions in retail branches, which perform the sale of banking products.
- Support Bonus System (SBS) includes other employees not covered by the system MbO, IBS and Sales Bonus System.

The bonus targets of the remaining employees are linked to key management indicators of the Bank taken into account for the purposes of premium imposed on the individual units of the Bank. The principle of cascade included in the bonus rules, which is monitored for compliance purpose, requires assigning targets to workers employed under individual structures.

In addition, each object is placed in line with the SMART principle (S-specific, M-measurable, A-ambitious, R-real T-term), which is also subject to cyclical monitoring.

#### 10.2.2. AWARDS

Regardless of the bonus system there is a system of rewarding employees, under which the Bank creates a prize fund for the purpose of:

- individual discretionary awards to employees of the Bank, deriving outstanding results in their work or for achievements, which led to results important for the Bank, and
- awards in competitions relating to performance and other competitions organized by the Bank.

#### 10.2.3. BENEFITS

#### 10.2.3.1. MEDICAL CARE

The Bank ensures its employees additional healthcare - besides occupational health services which are compulsory according to the regulations of the Polish Labour Code. Employees are entitled to various packages, addressed to particular groups of jobs. Since 2011, the medical care for the employees was extended to include a health promotion program called 'Zdrowie jak w Banku', covering, i.e. a preventive health check and activities directed at health-oriented education and promoting a healthy life style.

#### 10.2.3.2. EPP

As of July 2013, the Employee Pension Program (EPP) functions at the Bank, with which a long-term savings opportunity is available to each employee – complementing mandatory pension payments. The EPP was introduced in the form of a contract on the Bank making basic and additional contributions (3% of salary) on behalf of the employees to investment funds managed by PKO TFI SA.

In connection with the acquisition of Nordea Bank Polska SA on 31 October 2014 and the acquisition of SKOK "Wesoła" on 31 August 2015, additional programs function in the Bank:

- Employee Pension Program created in Nordea Bank Polska SA, designed for its employees, which were enrolled in EPP NoBP during the acquisition,
- Employee Pension Program created in SKOK "Wesoła", designed for its employees, which were enrolled in EPP SKOK during the acquisition.

#### 10.2.3.3. INSURANCE

Employees are entitled to join the cost-effective group insurance. The fee is being incurred by the Bank.

#### 10.2.3.4. SOCIAL BENEFITS FUND

The Bank gives its employees the possibility of using the cafeteria system called 'MyBenefit' as part of which each employee of the Bank may use the funds allocated to him/her from the Company Social Benefits Fund via an online platform on his/her own. The platform offers a broad range of benefits for the employees to choose from.

The amount of funds received to be spent at the cafeteria is dependent on the amount of gross income per person in a given family.

Additionally, the Bank's employees are eligible for housing loans social assistance funds and funds for social events.



#### 11. GLOSSARY OF TERMS AND ABBREVIATION

AFS - available for sale - a securities portfolio type under IAS

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,

**Application scoring method**- a method for assessing the Bank's credit risk involved in the financing of clients on the basis of scores corresponding to information provided by the client

**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

Basel III – a set of external regulations defining a new approach to the calculation of capital requirements and management of the risk in banks; in particular those defined in 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"), executive acts to the CRR, national acts transposing 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 (hereinafter referred to as the "CRD IV").

**Basel III** – set of amendments to Basel II regulations published in December 2010 entered into force in January 2014 and they implemented gradually until January 2019

**Behavioural scoring system** – a system for assessing the bank's credit risk involved in the financing of clients mainly on the basis of transactions on the current account, used for defining the revolving credit limits

**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

**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%

Capital risk - risk of inadequate, and thus insufficient in relation to the scale of the Bank's activities, level and structure of own funds for absorption of unexpected losses (taking into account both development plans and borderline cases)

**CET 1 Ratio (Common Equity Tier 1 Ratio)** – Tier 1 funds (exclusive of hybrid instruments and total capital requirements) multiplied by 8%.

**CIRS (Currency Interest Rate Swap)** – a currency interest rate swap transaction

**Commodities risk** – risk of loss related to negative changes in prices of commodities, generated by through the maintenance of open positions in respective commodities

Compliance risk - the risk of incurring legal sanctions or occurrence of financial losses or a loss of reputation or credibility as a result of failure on part of the bank, the bank's employees or entities operating on the Bank's behalf to observe legal provisions, internal regulations and the market standards adopted by the bank.

Concentration risk - the risk resulting from the Bank's significant exposure to individual entities or groups of entities, whose debt repayment ability depends on one and the same factor (e.g. the industry situation, geographical location, relations between business entities etc.)

Confidence level - the probability, expressed usually as a proportion, that the variable (bank's loss) under analysis will not exceed a specific value

**Coverage ratio** – a ratio of the credit and loan impairment write-downs to the value of credits and loans assessed by means of individual and portfolio approaches

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.

**Credit exposure** -total assets constituting, awarded off-balance sheet liability or concluded off-balance sheet (derivative) transaction

**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 counterparty's ability to service its debt

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

CRR Regulation - 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

**CSA (Credit Support Annex)** – a collateral agreement – annex to the framework agreement

**Cumulated adjusted liquidity gap** – the sum of all partial real-terms liquidity gaps from the first a'vista interval to the interval for which the cumulated real-terms liquidity gap is calculated

**Cumulated contractual liquidity gap** - the sum of all partial contractual liquidity gaps from the first a'vista interval to the interval for which the cumulated contractual liquidity gap is calculated

**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

**CVA (Credit Value Adjustment)** - adjustment of the valuation of derivatives reflecting counterparty credit risk



**DVA (Debt Value Adjustment)** - adjustment of the valuation of derivative reflecting the Bank's own credit risk

**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

**Price risk of equity securities** – risk of loss related to changes in prices of equity securities on the public market or securities exchange indices, generated through the maintenance of open positions in instruments that are sensitive to changes in such market parameters

Excessive leverage risk - risk resulting from vulnerability due to financial leverage or conditional leverage that may require unintended corrective actions of business plans, including emergency sale of assets which could result in losses or result in the need for valuation adjustments of other assets

**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

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

**Foreign Exchange (FX risk)** – risk of loss due to changes in the foreign exchange rates, generated through maintaining open currency positions in individual currencies

FRA (Forward Rate Agreement) – a forward agreement for the interest rate

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

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

FX Swap - a foreign currency exchange swap

IAS - the International Accounting Standards

**IBNR (incurred but not reported)** – a collective method for assessment of the impairment of credit exposures

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

**Insurance risk** - the risk of loss or unfavourable change of value of insurance liabilities due to inadequate assumptions regarding valuation and creation of provisions (technical and settlement provisions in particular)

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

**Internal capital** – an amount of capital, assessed by the Bank 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

**IRB** (Internal Ratings Based Approach) – an internal ratings method used to determine the capital requirement for credit risk

**IRS (Interest Rate Swap)** – a transaction involving a swap of interest rates

ISDA – the International Swap and Derivatives Association

ISMA - the International Securities Market Association

**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

**Key Risk Indicators, KRI** – simplified operational risk measure that is significant for a given area, application or process

**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

**Liquidity reserve** – the difference between the most liquid assets and expected and potential liabilities that mature in a given period for a given currency

**Liquidity risk** - the risk of inability to timely discharge of liabilities due to non-availability of liquid means

LMA - the Loan Market Association

LTV – ratio of the credit exposure amount to the value of the real property offered as collateral of that exposure

Macroeconomic risk – a risk of deterioration of the Bank's financial condition in result of adverse impact of changes in macroeconomic conditions

**Model risk** – possibility of suffering losses in result of wrong business decisions taken on the basis of functioning models

**Material Risk Takers (MRT)** – members of the Management Board and key managers with a significant impact on the risk profile of the Bank

NBP - the National Bank of Poland

**Operational risk** – the risk of losses resulting from inadequacy or unreliability of the internal processes, the human factor and systems, or from external events; it includes legal risk and does not include reputation risk and business risk

Outsourcing – use of external resources

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

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

PBA - the Polish Bank Association

PCBA - the Polish Classification of Business Activity

PFSA - the Polish Financial Supervision Authority



**Pre-settlement risk** - the risk of the counterparty's losing creditworthiness while its transaction with the bank is pending

**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)

**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

**Recommendation** – a document prepared by the Polish Financial Supervision Authority defining the list of best practices and suggestions for banks

**Reputation risk** – risk of reputation loss among customers, counterparties, investors, supervisors and public opinion, due to business decisions, operational events, noncompliance or other events

**Settlement risk** - the risk resulting from the counterparty's default in the discharge of its liabilities at the moment of settlement of the contract

**Strategic tolerance limit** – acceptable risk level defined by the Management Board

**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

**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

**Unexpected Loss, UL** - the difference between the value affected by credit risk and the expected loss

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



#### Declaration of the Management Board of PKO Bank Polski SA

The Management Board of PKO Bank Polski SA certifies that:

- 1. To the best of its knowledge, the adequacy of rules related to risk management in PKO Bank Polski SA, guarantees that the risk management systems utilized are well suited to the risk profile and strategy of the Bank and the Group.
- 2. Approves the Report "CAPITAL ADEQUACY AND OTHER INFORMATION SUBJECT TO DISCLOSURE OF THE PKO BANK POLSKI SA GROUP AS OF 31 DECEMBER 2015", which contains risk-related information, describes the general risk profile 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

18.03.2016	Zbigniew Jagiełło	President of the Management Board	(signature)
18.03.2016	Piotr Alicki	Vice-President of the Management Board	(signature)
18.03.2016	Bartosz Drabikowski	Vice-President of the Management Board	(signature)
18.03.2016	Piotr Mazur	Vice-President of the Management Board	(signature)
18.03.2016	Jarosław Myjak	Vice-President of the Management Board	(signature)
18.03.2016	Jacek Obłękowski	Vice-President of the Management Board	(signature)
18.03.2016	Jakub Papierski	Vice-President of the Management Board	(signature)