risk management

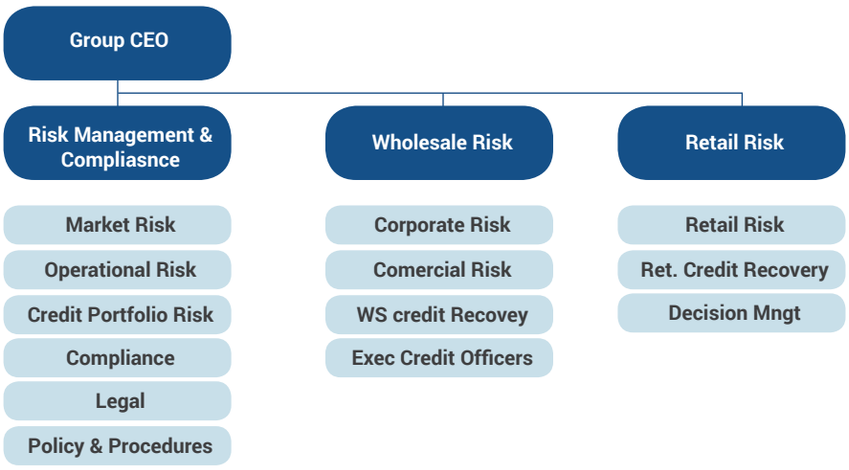
Risk management is a key factor in the achievement of specified performance targets Bank Mandiri. Bank Mandiri implemented risk management through the Enterprise Risk Management as a component that complements the implementation of risk management in accordance with the provisions of the regulator. Risk management can be seen as a whole in the Bank and in the subsidiaries.

Governance

In order to manage risk, the Bank has four (4) pillars, namely: (i) active surveillance commissioners through the Risk Oversight Committee and Board of Directors through the Risk Management Committee (RMC); (Ii) risk management governance (iii) the risk management processes, information systems and human resources; and (iv) the adequacy of internal controls.

For the implementation of effective risk management in the whole of Unit, Bank line of defense in applying Three models in which: (i) Work Unit as the risk owner is the first line of defense is responsible for the risk management work unit; (Ii) Risk Management Unit acts as a second line of defense that perform the function of oversight, as well as (iii) Internal Audit as a third line of defense is functioning independent assurance.

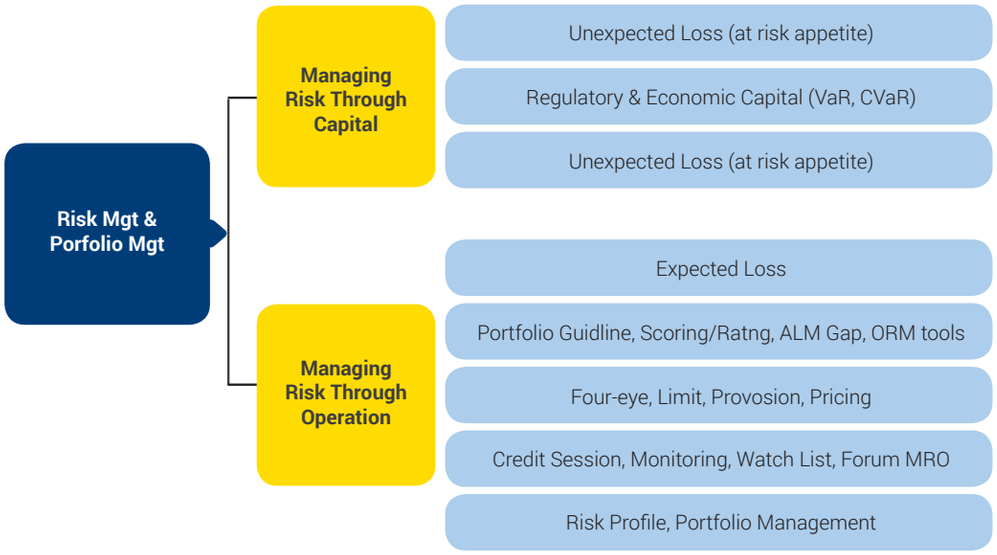
In order to strengthen the management of credit risk in Wholesale and Retail segments, the corresponding Decree of the Board of Directors of PT. Bank Mandiri (Persero) Tbk. No. KEP.DIR/001/2015 dated January 2, 2015 on Amendments organization structure. Bank Mandiri (Persero) Tbk. stipulated the establishment of the Directorate of Risk Wholesale and Retail Risk Directorate. It enhances the formation of Retail Risk Directorate which has been formed in 2014. Retail Risk Directorate headed by SEVP Retail Risk, Risk Directorate headed by SEVP Wholesale Wholesale Risk and Risk Management Directorate headed by the Director of Risk Management & Compliance.



Risk Management Overview

ERM Approach – 2 Prong Approach

Application of risk management at Bank Mandiri through ERM framework is done with a two-prong approach, namely the management of risk through capital and risk management through operational activities, so it is expected to achieve the management of the risks inherent in business management.



Managing Risk through Capital

In the calculation of capital adequacy, the Bank uses the Basel II Standard Approach (Standardized Approach)[1] for credit risk and has incorporated components External Rating. Gradually the Bank has conducted a simulation Internal Rating Based Approach (Internal Ratings-Based Approach). For market risk, the Bank uses the Basel II Standard Measurement Method)[2], and internally using the Value at Risk[3]. For operational risk, the Bank refers to the Basic Indicator Approach of Basel II[4] and already simulate in Advanced Measurement Approach.

For position in December 2015, the calculation of risk weighted assets and capital adequacy is shown in the following table:[5]

1 Referring to the Circular Letter No.13/6/DPNP dated February 18, 2011 regarding the calculation of RWA Credit Risk Using the Standard Approach.

2 Referring to the Circular Letter No.14/21/DPNP dated July 18, 2012, concerning Amendment to Bank Indonesia Circular Letter No. 9/33/DPNP dated December 18, 2007 regarding Guidelines for Use in Calculation Method Standard Minimum Capital Requirement for Commercial Banks Taking Account of Market Risk.

3 Referring to the Circular Letter No. 9/31/DPNP dated December 12, 2007 regarding Guidelines for the Use of Internal Models in the calculation of the Minimum Capital Requirement for Commercial Banks Taking Account of Market Risk.

4 Referring to the Circular Letter No.11/3/DPNP dated January 27, 2009 regarding the calculation of Risk Weighted Assets (RWA) for Operational Risk by Using the Basic Indicator Approach (PID).

5 Bank Mandiri refers to Bank Indonesia regulations governing transparency, publications, and annual reports of banks (PBI No. 14/14/PBI/2012 on Transparency and Publication Report of the Bank and the Circular Letter No. 14/35/DPNP regarding the Annual Report of Commercial Bank and the Annual Report certain to Bank Indonesia).

Tabel 1.a Quantitative Disclosure of Commercial Bank Capital Structure

		December 31, 2015		December 31, 2014	
	Capital Component	**Bank**	**Consolidated**	**Bank**	**Consolidated**
I	**CAPITAL COMPONENTS**				
	A Core Capital	93.252.808	101.081.429	79.052.150	84.422.801
	1. Paid Up Capital	11.666.667	11.666.667	11.666.667	11.666.667
	2. Additional Capital Reserves	92.589.161	98.061.952	69.487.242	73.601.673
	3. Innovative Capital			-	-
	4. Factors Reducing Core Capital	(11.003.020)	(8.941.789)	(2.101.759)	(1.300.731)
	5. Minority Interests	-	294.599	-	455.192
	B. Supplementary Capital	14.135.338	14.751.448	6.427.547	7.909.442
	1. Upper Tier 2			6.936.802	7.499.928
	2. Lower Tier 2maximum 50% of the Core Capital"			1.592.504	1.592.504
	3. Factors Reducing Supplementary Capital			(2.101.759)	(1.182.990)
	C. Factors Reducing Core Capital and Supplementary Capital	-	-	-	-
	Securitization Exposure	-	-	-	-
	D. Additional Supplementary Capital that Satisfies Requirements (Tier 3)**)			-	-
	E. Allocated to Anticipate Market Risks			-	-
II	**TOTAL CORE CAPITAL AND SUPPLEMENTARY CAPITAL (A + B - C)**	107.388.146	115.832.877	85.479.696	92.332.243
III	**TOTAL CORE CAPITAL, SUPPLEMENTARY CAPITAL ANDADDITIONAL SUPPLEMENTARY CAPITAL ALLOCATED TO ANTICIPATE MARKET RISKS (A + B - C + E)**	107.388.146	115.832.877	85.479.696	92.332.243
IV	**RISK WEIGHTED ASSETS (RWA) FOR CREDIT RISKS**	497.912.789	547.201.603	445.254.441	490.304.562
V	**RISK WEIGHTED ASSETS (RWA)FOR OPERATIONAL RISKS**	78.627.774	95.640.437	67.786.852	79.510.013

Tabel 1.a Quantitative Disclosure of Commercial Bank Capital Structure

		December 31, 2015		December 31, 2014	
	Capital Component	**Bank**	**Consolidated**	**Bank**	**Consolidated**
VI	**RISK WEIGHTED ASSETS (RWA)FOR MARKET RISKS**	805.426	881.544	1.863.243	2.446.704
	A. Standardized Approach	805.426	881.544	1.863.243	2.446.704
	B. Internal Model	1.875.565		942.628	
VII	**RATIO OF MINIMUM CAPITAL ALLOCATIONS FOR CREDIT RISKS, OPERATIONAL RISKS AND MARKET RISKS [VII: (IV + V+VI)]**	18,60%	17,99%	16,60%	16,13%

*) Modal Pelengkap posisi Desember 2015 mengacu pada PBI nomor 15/12/PBI/2013 tanggal 12 Desember 2013 tentang KPMM Bank Umum
**) Modal Pelengkap Tambahan yang Memenuhi Persyaratan (Tier 3) posisi Desember 2015 mengacu pada PBI nomor 15/12/PBI/2013 tanggal 12 Desember 2013 tentang KPMM Bank Umum

In preparation for the implementation of Basel III, Basel Bank refers to documentation and regulations and initiatives issued by Bank Indonesia . The Bank actively participates in working groups Basel III and Quantitative Impact Study (QIS) conducted by the Basel Committee on Banking Supervision (BCBS) through Bank Indonesia and the Financial Services Authority (OJK) per semester. Based on the position in June 2015, the Bank consolidated QIS results indicate that the Bank can meet the Basel III guidelines. It is shown by simulation results Capital Adequacy Ratio of 17.21% and a Leverage Ratio of 10.56% (minimum ratio of ≥ 3%). With this result, in general, the Bank operates on a low risk level. In fulfillment of the Global Liquidity Standard which showed the resilience of liquidity and sources of stable funding, the Bank has a Liquidity Coverage Ratio (LCR) 160% (minimum ratio of ≥ 100%) and Net Stable Funding Ratio (NSFR) amounted to 130% (minimum ratio of ≥ 100 %).

Managing Risk Through Operation

In managing risks, the Bank classifies the risk management into eight types of risk following the regulatory provisions.

Credit Risk

Credit risk derived from lending activities, placement in securities and placements with other banks, sales to customers and trading activities. Credit risk also comes from commitments and contingencies to its customers and counterparties. Credit risk management aims to quantify, anticipate and minimize losses due to the failure of the debtor or counterparty to meet its obligations.

Market Risk

Market risk is the potential loss caused by changes in interest rates and exchange rates (including derivative instruments).

Liquidity Risk

Liquidity risk can occur if the Bank is not able to provide liquidity at a reasonable price that will affect the Bank's profitability and capital.

Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events affecting the operations of the Bank.

Legal Risk

Legal risk is the risk caused by the demands made by the law, both internal and external and/or weakness of the juridical aspects such as the absence of legal documents and regulations or weakness in legally binding documents.

Bank Mandiri continually improve risk control law such as by placing the Legal Officers in units of Head Office and Regional Officers are obligated to ensure any activity or transaction has received the study of law.

Strategic Risk

Strategic risk is a result of inaccuracies in the decision and/or implementation of a strategic decision as well as the failure to anticipate changes in the business environment. In the management of strategic risk, the Bank conducted a review of performance and evaluation of policy formulation business targets and undertakes corrective measures in the plan strategy and business targets taking into account the internal and external conditions, if necessary. The Bank also continues to support the strengthening of the implementation of the program for supporting financial performance management through the development of automated budgeting, PMS enhancement and development of Executive Information System (EIS).

Reputation Risk

Reputation risk occurs as a negative impact on the perception of stakeholders of the bank sourced from various undesired events, including negative publicity over the bank's operations, violation of business ethics, customer complaints, governance weaknesses and other events that bring down the image of the Bank.

Bank Mandiri has customer service standards are monitored regularly and used as part of Branch KPIs. The Bank also has a Contact Center so that customers can directly submit complaints and inquiries regarding the Bank's products and services. Bank Mandiri also active in Corporate Social Responsibility held in the fields of education, health, culture, sports, environment, religious facilities and assistance for victims of natural disasters.

Compliance Risk

Compliance risks caused by disobeying and/or implement legislation and regulations. In the management of compliance risk, the Bank has a Code of Conduct as the Code of Conduct and is part of corporate culture (corporate culture). In the strategic planning phase, Bank always assesses the adequacy of compliance with regulations and legislation in force. Bank has also implemented a rotation system and mutations to some employees as well as bank officials consistently and comprehensively, especially those in strategic positions.

Main Risk

The main risk is the risk that the focus of the management of the Bank management. Included in the main risks are credit, market, liquidity and operational risk. In general, credit risk management is carried out on the credit front end, middle-end and back end. Market and liquidity risk management is done through a system of limits. While operational risk management is done on the products and activities of the Bank. Operational risk management is performed by the entire unit, in reviewing bankwide by the risk management unit, and measure the effectiveness of its execution (assurance) by unit Internal Audit. Major risk management, following framework: policy, methodology, processes, systems and reporting.

Credit Risk

Credit Risk Management

Policy

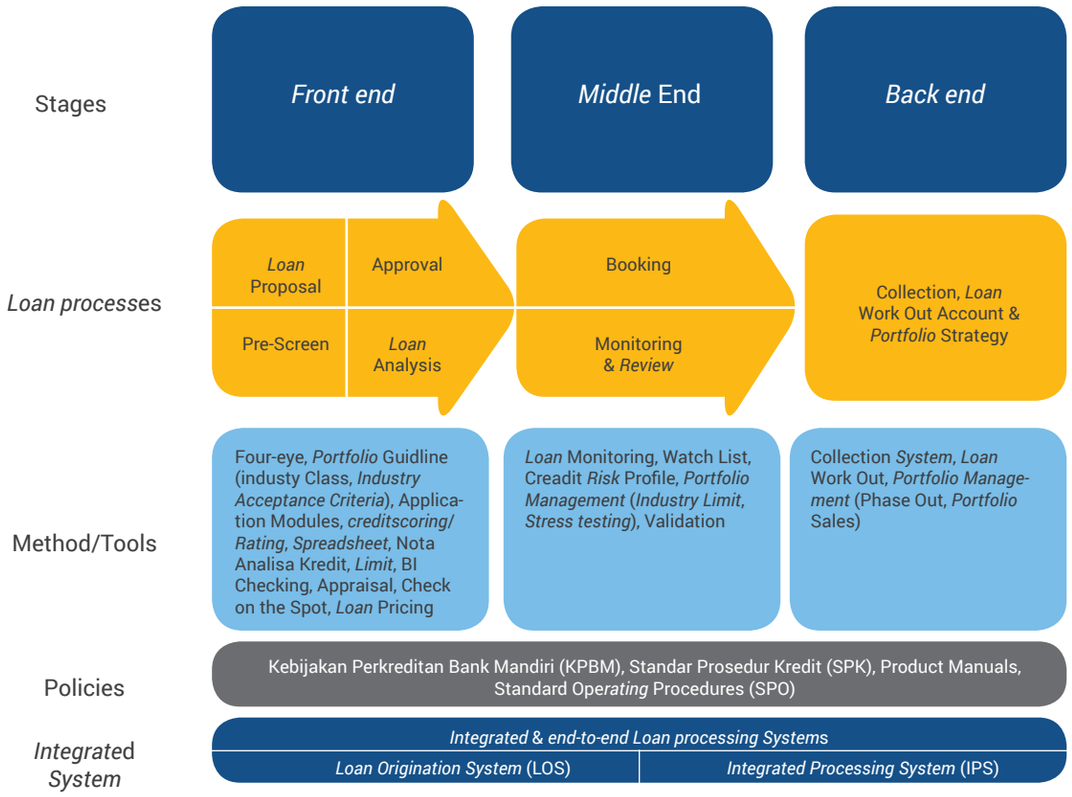
As a guideline in credit management of end-to-end, the Bank uses the Credit Policy Bank Mandiri (KPBM), including Culture Credits and Credit Doctrine. Operationally, the policy set forth in the form of Credit Standard Procedures (SPK) and the Product Manual.

Bank Mandiri to apply the precautionary principle in the provision of credit by implementing the four eye principle. Then in assessing and monitoring the quality of credit, the Bank refers to the regulation of both the Regulation of the OJK (POJK) and Bank Indonesia Regulation (PBI).

Furthermore, in carrying out the concentration of credit risk management at the level of debtors, Bank Mandiri consistently monitor Lending Limit (LLL) as set out in PBI No. 7/3/PBI/2005. As early detection of potentials exceeding the maximum limit of credit, the bank also set an in-house limit whose value is more conservative than the LLL.

Metodologi

The credit process and credit risk management at the Bank conducted by Business Unit, Credit Risk Management and Credit Operation Unit integrated manner. Credit and risk management processes supported by integrated systems and do end-to-end with three stages as described in the scheme below:



Processes, Systems and Reporting

Front End

Approval and credit limit setting on the wholesale segment were identified and quantified through a system of credit rating and then do a business feasibility analysis through spreadsheet and Credit Analysis Memorandum (NAK) in integrated and end-to-end through the Integrated Processing System (IPS).

Bank Mandiri published Portfolio Guideline, as a guide credit expansion in all regions of Indonesia, which is valid for one (1) year. Portfolio Guideline consists of three (3) components used in all stages of credit risk management, namely Industry Classification, Industry Acceptance Criteria and Industry Limit

Portfolio** Guideline **Process

While in the retail segment, measured by credit scoring system. The credit process and credit risk management in retail segments is done through the process end-to-end integrated in the system Loan Origination System (LOS).

Middle End

Monitoring of credit quality in the wholesale segment is done at the level of debtors by using ALERT Tools through the Integrated Processing System (IPS). While monitoring the credit to borrowers who require special attention do with Watch List, which is part of the ALERT Tools. ALERT Tools that have been integrated in the IPS system, used to identify debtors which may experience difficulties in meeting their obligations. Process monitoring for early detection was at least a quarterly basis. Based on the analysis, the Bank should determine account strategy and measures to prevent the decline in credit quality.

Back End

Handling of problem loans in the wholesale segment can be done through guidance, rescue, or resolution of bad loans. Handling of problem loans in the retail segment can be done through the collection, preservation and settlement of non-performing loans.

In 2015, in the retail segment has performed repair method limits the auction as an acceleration rate of collection/recovery, changes in collection strategy in four segments of retail loans through program monitoring of the pipeline accounts restructuring, pre-approved and change of tactical strategy, encourage achievement of NPL, write-off and recovery to the fullest, decentralization obligation to decide the individual in order to optimize the function of the termination of the restructuring and resolution of credit in the region, centralization breaker at Headquarters decreased 15.95%, from the previous 56.58% to 40.63%.

Risk Mitigation

In the process of credit, collateral received may be an object that is financed by credit (moving objects or object is not moving), or objects that are not funded (personal guarantee and corporate guarantee). Collateral must meet the following criteria have economic value, marketable, transferable, and has a juridical value.

Credit Risk Stress Test

As anticipatory measures (early warning signal), a process simulation and stress testing of the portfolio of the Bank on a regular basis to determine changes in the quality of the portfolio Bank per segment or per industry sector, due to the changes in the parameters of economic conditions in the extreme that may occur (extreme but plausible). The simulation results provide guidance for the Bank to monitor more closely the

sectors or debtors which may experience a decrease in quality as well as to establish the anticipatory measures to prevent the bad effects. In 2015, in addition to conducting periodic stress testing, the Bank also conducts stress test simulations related to the impact of changes in commodity prices, exchange rate changes, and a decline in purchasing power.

Stress testing is performed consists of two types of sensitivity analysis and scenario analysis. The simulation results sensitivity analysis conducted in 2015 regarding the impact of changes in macro variables that can affect the NPL in the loan portfolio of banks (in the next year) as follows:

Credit Risk Sensitivity Analysis

risk Factors	value change*	NPL CHANGE (bps)
GDP	↓ 100 bps	↑ 26.00
Inflation	↓ 100 bps	↑ 13.16
BI Rate		
Exchange Rate (Rp / USD)	↑ Rp.100/USD	↑ 3.83

*) Other Risk Factors are considered constant

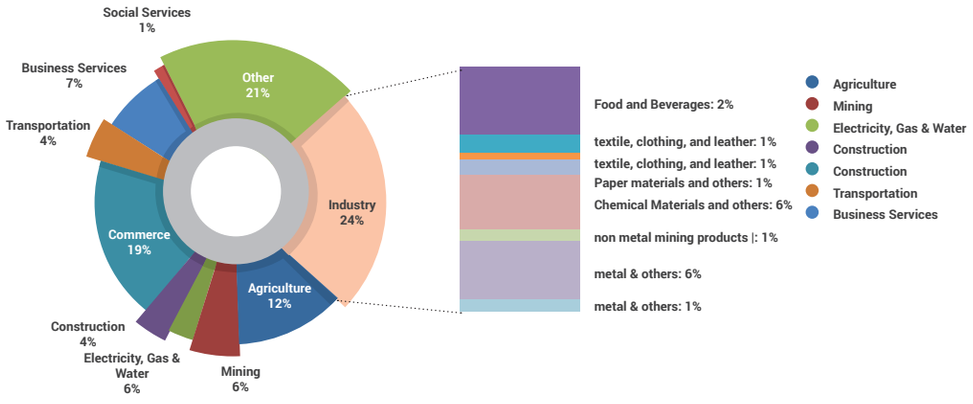
*) BI Rate during 2015 was constant, so the sensitivity is not counted

Development of Internal Rating Based Model

Model credit rating (wholesale) and credit scoring (retail and consumer) continuously is developed and validated and monitored via Outlook report Model Scoring and Rating. The model of credit rating and credit scoring is used is able to provide the Probability of Default (PD), while the Bank continuously develop models Loss Given Default (LGD) and the model of Credit Conversion Factors (CCF) for calculating Exposure at Default (EAD) in order to support implementation of Basel II and economic capital calculations.

Credit Risk in

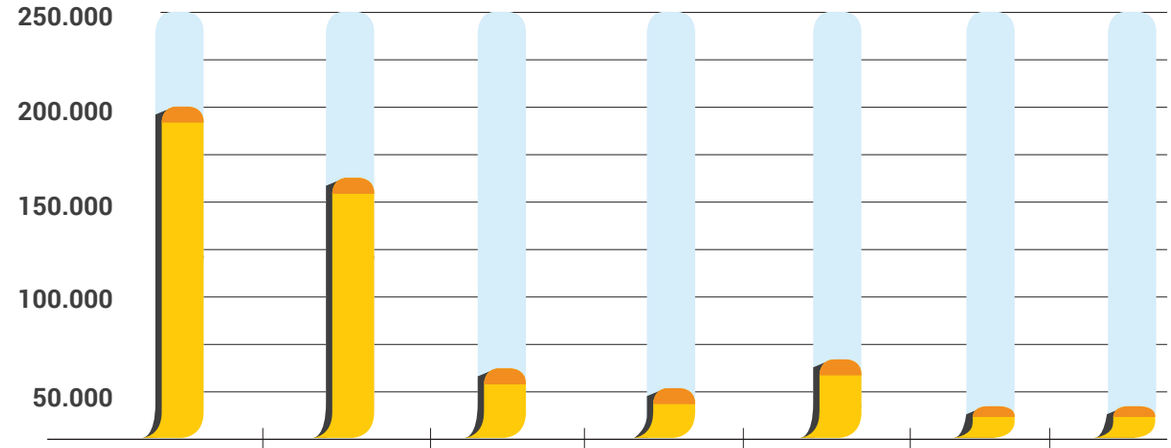
The composition of the Bank Loans per Economic Sectors (December 2015)



During 2015, the Bank recorded loan growth was quite good with a maintained level of NPLs. Credit portfolio of the bank for the entire segment (position of individual banks) grew 98.7% (YoY) with a NPL rate of 2.22% (gross). Some credit segments experienced growth above the average, such as the Commercial Wholesale segment grew by 13.4% (YoY) with a NPL rate of 0.83%.

Volume & Credit Quality

December 2015 (IDR Billion)



	Wholesale CIB	Wholesale Commercial	Retail SME	Retail Mikro	Retail Individu	SAM	wholesale Global Market
NPL	1.625	4.240	2.275	1.536	1.273	927	51
PL	194.966	156.381	58.179	40.971	70.977	1.254	1.374