



Effect of on Performing Loans (NPL), Loan to Deposit Ratio (LDR) and Operational Income Operating Costs (BOPO) on Return on Equity (ROE) PT. XDS Tbk Period 2011-2019

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ABSTRACT

The banking sector is one of the important sectors in the Indonesian economy. Considering that its function as an intermediary institution and payment transaction organizer also functions in collecting funds from the public and channeling them back in the form of credit, it can be said that banking is one of the sectors that plays a role in driving the economy. To maintain public trust, the bank must maintain its liquidity and operate effectively and efficiently to achieve high profitability. This study aims to determine the effect of Non Performing Loans (NPL), Loan to Deposit Ratio (LDR) and Operational Income Operating Costs (BOPO) on Return on Equity (ROE) at Bank Mandiri, Tbk for the 2011-2019 period. This research was conducted with descriptive analysis with a quantitative approach. The results showed that NPL, LDR and BOPO partially and simultaneously had a significant effect on ROE at PT. XDS for the period 2011-2019

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1. Introduction

Banks and money are interrelated matters, according to Law No.10 of 1998, a bank is a business entity that collects funds in the form of savings and distributes them to the public in the form of credit and / or other forms in order to improve the standard of living of the community at large. From the definition above, it can be understood that a bank has three main activities, namely: collecting funds, channeling credit and providing other services. Because banks function as financial intermediaries, public trust is a major factor in a bank (Kurniasari, 2017: 71).

The banking sector is one of the important sectors in the Indonesian economy, because banking is one of the bases that drive the economy, given its function as an intermediary institution, organizer of payment transactions, as well as a means of transmitting monetary policy, also functions to collect funds from the public and mobilize public funds by channeling back to society in form of fund utilization or investment activities. (Hermina & Suprianto, 2014: 129)

Providing credit is another banking service that the public can take advantage of with its conveniences, starting from unsecured loans, housing loans to vehicle ownership loans. The various facilities provided by the bank are inseparable from the objectives of banking institutions as stated in Law Number 10 of 1998 concerning banking, namely to support the implementation of national development in order to increase equity, economic growth and national stability towards improving people's welfare. The convenience and service facilities provided by the bank are to support the smooth running of main activities in terms of increasing profitability.

Profitability is the ratio used to measure a company's ability to generate profits from its normal business activities. The measurement of the profitability ratio can be done by comparing the various components in the income statement and / or balance sheet. Measurements can be carried out for several periods, with the aim of monitoring and evaluating the level of development of profitability over time (Hery, 2018: 192). Based on the theory above, it can be understood that profitability can be said to be one of the most appropriate indicators to measure the performance of a company. The company's ability to generate profits can be a benchmark for the company's performance. Banks need to maintain their profitability in order to be stable and even increase, this is important to attract investors to invest and increase public confidence in saving their funds.



One of the ratios that can be used to measure the profitability of a bank is the Return On Equity (ROE). ROE is a ratio that shows how much equity contributes to creating net income. In other words, this ratio is used to measure how much net profit will be generated from each rupiah of funds embedded in total equity (Hery, 2018: 194). ROE is very useful for potential investors because it can be used to measure a bank's ability to generate profits. The higher the ROE result, the higher the amount of net income generated. Conversely, the lower the ROE result means the lower the amount of net income generated. One of the indicators to increase the profitability of a bank is by increasing the provision of credit to the public.

Based on data from Bank Indonesia, it shows that one of the largest commercial bank business activities is credit. Law No.10 of 1998 defines credit as the provision of money or an equivalent claim, based on a loan agreement or agreement between the bank and another party which requires the borrower to pay off its debt after a certain period of time with interest. Thus it can be understood that the main source of bank income comes from the size of the credit that is distributed to the public, because with this credit the bank will get income in the form of interest and with this income the profit will increase.

In fact, not all credits can be returned on time. Loans that experience congestion or default result in losses to the bank. NPL (Non Performing Loans) is the ratio between total loans classified as substandard, doubtful and non-performing loans to total loans (BI Regulation number 17/11 / PBI / 2015, 2015). The NPL ratio is also used to measure the ability of bank management to manage non-performing loans provided by banks. So that the higher this ratio, the worse the quality of bank credit, the greater the possibility of the bank in a problematic condition. (Hariyani, 2018: 52). From this understanding, it can be understood that a bank will experience a loss if a loan fails to pay. This is because the income in the form of interest that should be received is lost, while from that interest it is hoped that the bank's capital will increase, with the increase in capital, the bank will be able to channel new credit so that an increasing number of loans will increase income and with this income it will increase the profit. means that the profitability (ROE) also increases. Another factor that affects the profitability of a bank is the LDR (Loan to Deposite Ratio).

LDR is a type of ratio used to assess how good the level of bank liquidity is by dividing the amount of credit given by the amount of funds that the bank has collected from third parties (Hariyani, 2018: 55). Thus it can be understood that the level of liquidity of a bank is influenced by the size of the LDR value, the greater the LDR, the less liquid the bank will be, meaning that the bank will find it difficult to fulfill its short-term obligations. Conversely, the smaller the LDR value, the more liquid a bank is, but this situation shows that a lot of funds in the bank are deposited, thus reducing the bank's income. In other words, the higher the LDR, the more third party funds that are channeled to the public in the form of credit or loans, this will provide greater interest income so as to increase profitability. Whether or not the LDR ratio is managed by a bank, it can affect the ratio of operating costs to operating income, known as BOPO.

The BOPO ratio is often used as a tool to measure the level of operational efficiency of a bank. The financial performance of a bank will depend on the amount of operational costs incurred by the bank to obtain operating income. BOPO, also known as the efficiency ratio, is a ratio used to measure the ability of bank management to control operating costs against operating income (Hariyani, 2018: 54). Considering that the main activity of a bank is to act as an intermediary, namely to raise funds and distribute public funds, the bank's operating costs and income are dominated by interest costs and interest yields. Any increase in operating costs will result in reduced profit before tax which will ultimately reduce profit or profitability, conversely, if operating costs can be reduced, income will increase, which will increase profit or profitability (ROE).

Thus it can be understood that the efficiency of operational costs will affect the performance of a bank. A good bank performance will generate and increase public confidence to invest their funds, with these funds the bank will be able to carry out its main activities, namely providing or channeling a wider range of credit to the public, so that the interest income from these credits generates profits which in turn will increase profitability (ROE).

2. Research Methods

The place used by the author is for the period 2011-2019. Thus, the authors use financial report data from the annual report of PT. XDS. The target time used in this study is eleven months, from October 2019 to August 2020.

The population is each subject that meets predetermined criteria, while the sample is part of the affordable population that can be used as research subjects through sampling (Riwidikdo, 2020: 31). The population used in this study is the financial statements of PT. XDS period 2011- 2019. While the sample used is the quarterly financial report data of PT. XDS totaling 36 originating from the balance sheet, income statement and notes on financial statements for the period 2011-2019.



Operational definition is the activity of measuring research variables seen based on specific characteristics reflected in the dimensions or indicators of research variables (Widodo, 2019: 82). The operational definition of the variables in this study are:

- a. Non Performing Loan (NPL)
NPL is a ratio to measure the ability of bank management to manage non-performing loans provided by banks (Hariyani, 2018: 52).
- b. Loan to Deposit Ratio (LDR)
LDR is a comparison between total credit against third party funds collected by banks.
- c. Operational Expenses Operating Income (BOPO)
BOPO, also known as the efficiency ratio, is a ratio used to measure the ability of bank management to control operating costs against operating income (Hariyani, 2018: 54)
- d. Return on Equity (ROE)
ROE is a ratio that measures how much return the business owner (shareholders) receives on the paid-up capital for the business (Jusuf, 2014: 68).

The calculation of the ratio value of the variables in this study uses existing data in the form of quarterly financial reports for the 2011-2019 period. The data analysis technique used is descriptive statistics. Descriptive statistics are data analysis techniques used to describe the conditions of the research variables (Widodo, 2019: 76).

Linearity is a condition where the relationship between the dependent variable and the independent variable is linear. It is called linear regression if there is only one independent variable while it is called multiple linear regression if there are more than one independent variable (Widodo, 2019, p.113). This study uses multiple linear analysis methods with the aim of making predictions of the estimated value of Y over X. In this case it is used to measure the effect of the ratio of NPL, LDR and BOPO to ROE.

3. Result

3.1 Multiple Linear Regression Test

Multiple linear regression analysis is used to determine the effect of two or more independent variables on the dependent variable. The results of the regression calculation can be seen in the table as follows:

Table 1
The test results of Multiple Linear Regression Analysis

Model	Unstandardized		Standardized	T	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	89.289	5.075		17.593	.000
NPL	-8.537	1.137	-.418	-7510	.000
LDR	-.563	.045	-.643	-12.438	.000
BOPO	-.203	.040	-.252	-5.068	.000

Source: Processed secondary data

The regression equation based on the results of testing multiple regression analysis in the table above can be written as follows:

$$Y = 89.289 - 8.537X_1 - 0.563X_2 - 0.203X_3$$

- a. The constant is 89,289, meaning that if the NPL (X₁), LDR (X₂) and BOPO (X₃) are 0, then the ROE (Y) is a positive value of 89,289
- b. The regression coefficient for the NPL variable (X₁) is -8,537. If the LDR and BOPO variables are assumed to be constant (zero) and the NPL has increased by 1%, then ROE will decrease by 8,537. The coefficient is negative, meaning that there is a negative influence between NPL and ROE, the higher the NPL, the lower the ROE.
- c. The LDR variable regression coefficient (X₂) is - 0.563. If the NPL and BOPO variables are assumed to be constant (zero) and the LDR has an increase of 1%, then ROE will decrease by 0.563. The

coefficient is negative, meaning that there is a negative influence between LDR and ROE, the higher the LDR, the lower the ROE.

- d. The regression coefficient of the BOPO variable (X3) is - 0.203. If the NPL and LDR variables are assumed to be constant (zero) and the BOPO has increased by 1%, then ROE will decrease by 0.203. The coefficient is negative, meaning that there is a negative influence between BOPO and ROE, the higher the BOPO value, the lower the ROE value.

3.2 Multicollinearity Tes

Table 2
Multicollinearity Test Results

Model	Coefficients(a)		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	89.289	5.075		17.593	.000		
NPL	-8.537	1.137	-.418	-7.510	.000	.572	1.747
LDR	-.563	.045	-.643	-12.438	.000	.665	1.503
BOPO	-.203	.040	-.252	-5.068	.000	.720	1.389

a. Dependent Variable: ROE

Source: Processed secondary data

Based on the table of multicollenearity test results above, it can be concluded that each of the independent variables used in this study is free from multicollenearity symptoms, it can be seen that the Tolerance value of each independent variable is greater than 0.10 as well as the smaller VIF value. or less than 10.00.

3.3 Autocorrelation Test

Table 3
Autocorrelation Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.971 ^a	.943	.938	1.50610	1.722

a. Predictors: (Constant), BOPO, LDR, NPL

b. Dependent Variable: ROE

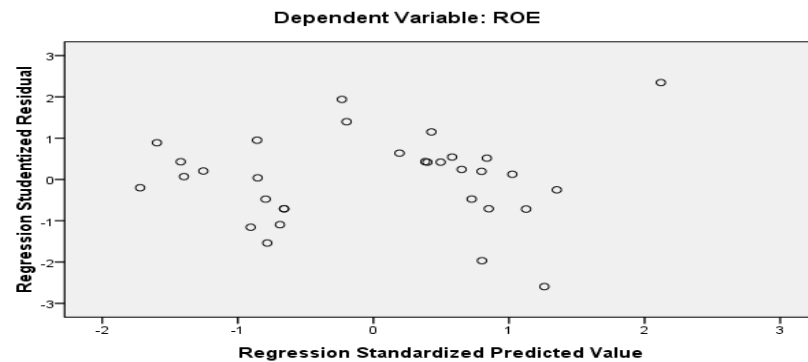
Source: Processed secondary data

Based on the table of Autocorrelation Test results above, it is known that the Durbin-Watson value is 1.722, which means that the multiple regression model in this study is free from autocorrelation. In accordance with the criteria (Santoso, 2012: 242) which states the D-W number between -2 to +2 means that there is no autocorrelation.



3.4 Heteroscedasticity Test

Table 4
Heteroscedasticity Test Results
Scatterplot



Source: Processed secondary data

Based on the table of test results, which can be seen in the figure above, it shows that the distribution points do not gather in one place but spread out and do not form a pattern. Thus it can be said that the regression model does not occur heteroscedasticity.

3.5 Partial Test (t test)

Table 5
Partial Test Result (t test)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	89.289	5.075		17.593	.000		
NPL	-8.537	1.137	-.418	-7.510	.000	.572	1.747
LDR	-.563	.045	-.643	-12.438	.000	.665	1.503
BOPO	-.203	.040	-.252	-5.068	.000	.720	1.389

a. Dependent variable: ROE

Source: Processed secondary data

Based on the table of partial hypothesis test results above, it is known that the value of the NPL variable is negative (-) of -7,510 with a significance level (Sig) of 0.000. Based on these results, it is said that the level of significance of the NPL is smaller than the test level ($0.000 < 0.05$). So it can be concluded that H1 or the first hypothesis is accepted, which means that NPL has a significant negative effect on ROE at PT. Bank Mandiri, Tbk for the 2011-2019 period.

The results of the calculation of LDR on ROE show that the t-value of the LDR variable is negative (-) of -12,438 with a significance level (Sig) of 0.000. Based on these results, it is said that the LDR significance level is smaller than the test level ($0.000 < 0.05$). So it can be concluded that H2 or the first hypothesis is rejected, which means that LDR has a significant negative effect on ROE at PT Bank Mandiri Tbk. 2011-2019 period

The results of the calculation of BOPO on ROE show that the tcount of BOPO variables is -5.068 with a significance level (Sig) of 0.000. Based on these results, it is said that the significance level of BOPO is smaller than the test level ($0.000 < 0.05$). So it can be concluded that H3 or the first hypothesis is accepted, which means that BOPO has a significant negative effect on ROE at PT. Bank Mandiri, Tbk for the 2011-2019 period.

3.6 Simultaneous Test (Test F)

Table 6
Simultaneous Test Results (Test F)

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1204.635	3	401.545	177.022	.000 ^a
	Residual	72.587	32	2.268		
	Total	1277.222	35			

a. Predictors: (Constant), BOPO, LDR, NPL

b. Dependent Variable: ROE

Source: Processed secondary data

Based on the table of simultaneous hypothesis test results above, it is known that the significance value (Sig) of the NPL, LDR and BOPO variables is 0.000 < 0.05 probability, then H1 is accepted, in other words, NPL (X1), LDR (X2) and BOPO (X3) simultaneously affect ROE (Y) at PT. Bank Mandiri, Tbk for the period 2011-2019.

3.7 Determination Coefficient Test

Table 7
Determination Coefficient Test Results

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.971 ^a	.943	.938	1.50610

a. Predictors: (Constant), BOPO, LDR, NPL

b. Dependent Variable: ROE

Source: Processed secondary data

Based on the coefficient test table above, it is known that the coefficient of determination or R Square is 0.943. Thus it can be interpreted that the variables NPL, LDR and BOPO simultaneously affect the ROE variable by 94.3%. While the remaining 5.7% is influenced by other variables which are not included in this research model.

4. Conclusion

Based on the results of research and discussion of the effects of NPL, LDR and BOPO on ROE at PT. Bank Mandiri, Tbk for the period 2011-2019, the following conclusions can be drawn:

- Variable (X1) NPL has a negative and significant effect on profitability (ROE). An increase in NPL will result in a decrease in ROE and conversely the lower the NPL, the higher the ROE.
- The variable (X2) LDR has a negative and significant effect on profitability (ROE). The higher the LDR, the lower the ROE and vice versa, the lower the LDR, the ROE will increase.
- Variable (X3) BOPO has a negative and significant effect on profitability (ROE). The higher the BOPO, the lower the ROE, conversely, the lower the BOPO, the ROE will increase.
- Variables (X1) NPL, (X2) LDR and (X3) BOPO have a simultaneous effect on ROE. An increase in the ratio of NPL, LDR and BOPO will result in a decrease in ROE and conversely a decrease in NPL, LDR and BOPO will increase ROE.

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