The Effect Of Non Performing Loan (NPL) And Loan To Deposit Ratio (LDR) On Return On Assets ()

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Abstract	This study aims to determine whether there is an effect of Non Performing Loans and Loan To Deposit Ratio on Return On Assets partially or simultaneously. The method used in this research is descriptive verification method with a quantitative approach which is sourced from the annual financial statements of state-owned banks and private banks and literature studies. The sampling technique was using purposive sampling technique. The data used are secondary data analyzed through descriptive analysis and verification of the validity of multiple linear regression test data and hypotheses using the T test and F test coefficient of determination. This study uses the SPSS version 22 software program to process data. The results of this study indicate that partially non-performing loans have a significant negative effect on Return on Assets and the Loan to Deposit ratio has no effect on Return on Assets. Meanwhile, simultaneously the Non Performing Loan and the Loan To Deposit Ratio simultaneously have a significant effect on Return On Assets
Keywords	Non Performing Loan, Loan To Deposit Ratio, Return On Asset

INTRODUCTION

In the current era of globalization, it is the most important role of financial institutions, namely banks. The main function of banks in general is to collect funds from the public and distribute them back to the public for various purposes, therefore public trust is a major factor in running the banking business.

In today's global era, the banking industry is one of the fastest growing industries. Based on data from the Bank. In Indonesia, through its official account, it can be seen that the growth of loans extended by banks reached 11.7% (year on year), higher than the realization of credit growth in the previous year of 8.2% (year on year).

Currently, the banking sector has faced various problems, one of which is Bank Indonesia raising interest rates. The increase in interest rates will affect the banking business and also affect economic growth. In fact, economic growth greatly affects demand for credit.

When economic growth is weak, demand for credit will weaken. The increase in credit interest caused banks to face an increase in the ratio of non-performing loans (NPL). Another problem, liquidity management. If you look at the loan to deposit ratio (LDR), almost all banks face tight liquidity. An increase in interest rates will increase deposit rates, so that people are willing to deposit their funds in banks.

The Financial Services Authority (OJK) said that the profitability ratio of assets (Return on Assets / RoA) in the banking industry during 2016 decreased slightly. According to the Director of Finance, the decrease in ROA was due to slow credit growth coupled with an increase in NPL, with an increase in NPL that required banks to pay more reserves for losses.

It is important for management to pay attention to the amount of ROA that is owned in order to measure the effectiveness of the company in generating profits by utilizing its assets. ROA is the ratio between profit after tax to total assets. The greater the ROA, the better the financial performance, because the rate of return (return) is getting bigger. If ROA increases, it means that the company's profitability increases so that the final impact is an increase in profitability enjoyed by shareholders. The standard reference for determining ROA in banks in Indonesia is at least 1.5% as stipulated in SE BI No.13 / 24 / DPNP / 2011. Non Performing Loans (NPL) and Loan to Deposits Ratio (LDR) are ratios that are often used to measure profitability, which are financial ratios related to credit risk.

Non Performing Loan (NPL) is the level of credit risk in a bank, where this ratio shows the ratio of the number of non-performing loans to total credit. In this regard, NPL is credit extended by banks, and customers cannot make installments or payments according to the agreement agreed between the customer and the bank. The amount of NPL allowed by Bank Indonesia is currently a maximum of 5%.

In this study, the liquidity ratio used is the Loan to Deposit Ratio (LDR). Loan to Deposits Ratio (LDR) is an indicator to measure the ability of a bank to pay back withdrawals made by customers using credit as a source of liquidity, where this ratio shows the ratio between total loans and total third party funds.

It is important for management to pay attention to the percentage of the LDR ratio in order to remain within the safe limit set by Bank Indonesia. The current Loan to Deposits Ratio (LDR) is 94%, which is a fairly healthy bank in terms of LDR. The higher the LDR ratio, the higher the profit, with the increase in bank profit, the performance in a bank will also increase. Thus it can be concluded that the size of the LDR ratio will affect performance in banking.

In this study, the authors chose the Banking Industry, especially state-owned banks and private banks listed on the Indonesia Stock Exchange for the 2014-2018 period. The following is a table listing the average NPL, LDR and ROA developments in banking companies listed on the Indonesian Stock Exchange for the period 2014-2018.

Figure 1. Average Development of NPL, LDR and ROA of banking companies listed on the Indonesia Stock Exchange for the period 2014-2018

Based on the data above, it is known that every year from 2014 to 2018 the average Return on Assets (ROA) in Indonesia for banking companies tends to decline. The ROA value in 2014 was 2.85% and decreased in 2015 by 2.32%. Then there was a decline again in 2016 of 2.23%, but in 2017 it increased by 2.45%. Then there was an increase again in 2018 of 2.55%.

The asset quality ratio used in this study is the Non Performing Loan (NPL). The NPL was chosen because the amount of this NPL can show the level of risk in a bank. It can be seen from the average value of development above, indicating that NPL moves in the opposite direction to Return On Assets (ROA), where when NPL increased in 2017, this was not followed by a decrease in ROA in the same year. This contradicts the theory, if the NPL goes up, the ROA will decrease, because the higher the NPL value, the worse the credit quality, and there is a fear that it will experience bad credit. According to Bank Indonesia standards, NPLs are said to be healthy as having a percentage of <5%, while NPLs with a percentage of> 5% are said to be unhealthy. This NPL will affect the level of credit to be extended by the bank.

Meanwhile, the liquidity ratio used by the authors in this study is the Loan to Deposit Ratio (LDR). LDR was chosen because it is based on a theory which states that the higher the LDR level, the higher the bank's profit, meaning that the amount of LDR channeled by a bank indicates that the bank's management has the ability to market its funds. As can be seen above, the average Loan to Deposit Ratio value tends to increase. 2017 shows that LDR moves against ROA, where when LDR increases, this is not followed by an increase in ROA in the same year. This contradicts the theory, if the LDR increases, the ROA will increase. From the data above, it shows that the LDR has increased and decreased fluctuating every year. According to Bank Indonesia standards, the lower limit for LDR is 80% and the upper limit for LDR is 94%.

Based on research conducted by Septiani and Lestari (2016), it shows that Non-Performing Loans (NPL) have a significant and negative effect on Return On Assets (ROA). The results of this study are in accordance with research conducted by Sudiarta and Putri (2015) which shows that Non-Performing Loans (NPL) have a significant effect on Return On Assets (ROA). However, it is different from Ali and Laksono's

research (2017) which shows that Non-Performing Loans (NPL) have no effect on Return On Assets (ROA).

Then research on Loan to Deposit Ratio (LDR) to Return On Assets (ROA) also shows various results including, the results of research conducted by Sudiarta and Putri (2015) show that LDR has a positive effect on profitability (ROA). The results of this study are in accordance with research conducted by Septiani and Lestari (2016) that the LDR has a significant and positive effect on ROA. However, it is different from the research conducted by Edwar (2016) which shows that LDR has no effect on ROA.

Return On Asset (ROA)

According to Kasmir (2014) ROA is a ratio that shows the results (return) on the total assets used in the company. In addition, ROA provides a better measure of the company's profitability because it shows the effectiveness of management in using assets to generate revenue. High profits make the bank gain the trust of the public which allows the bank to raise more capital so that the bank has a wider opportunity to lend funds. The Return On Asset (ROA) formula is:

ROA= (Profit After Tax)/(Total Assets) x 100%

Non Performing Loan (NPL)

Non Performing Loans (NPL) is the ratio of credit risk which shows the ratio of the number of non-performing loans to total loans. According to Ismail (2014), non-performing loans are loans that have been disbursed by banks, and customers cannot make payments or make installments in accordance with the agreements signed by the bank and the customer. The Non Performing Loan (NPL) formula is:

NPL= (total Non Performing Loans)/(Total Credits) x 100%

Loan to Deposit Ratio (LDR)

According to Kasmir (2014) states that "Loan to Deposit Ratio is a ratio to measure the composition of the amount of credit given compared to the amount of public funds and capital used". Liquidity is a ratio to measure a bank's ability to meet its short-term obligations when they are collected. In other words, it can pay back the disbursement of depositors' funds when they are collected and can meet the credit requests that have been

submitted (Kasmir, 2014). The Loan to Deposit Ratio formula is:

LDR=(total Credits)/(Total DPK) x 100%

Conceptual Framework

This is the conceptual framework in this research :
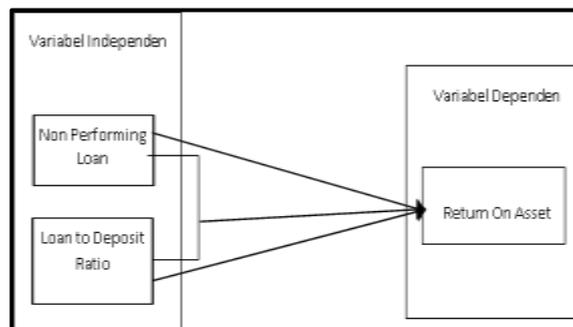
Figure 2. Conceptual framework

Research Hypothesis

This is the hypothesis in this research
H1: There is an effect of Non performing Loan (NPL) on Return On Assets (ROA).
H2: There is an effect of Non performing Loan (NPL) on Return On Assets (ROA)
H3: There is an effect of Non performing Loan (NPL) and Loan to Deposits Ratio (LDR) on Return On Asset (ROA)

METHODS

This type of research method is quantitative research. The type of data used in this study is secondary data. According to (Sugiyono, 2017), secondary data is a source of data that is not directly given to researchers. Secondary data comes from the financial statements of sub sector Banking and real estate companies listed on the Indonesian Stock Exchange (website: www.idx.co.id).

The sampling technique used in this research was purposive sampling. According to (Sugiyono, 2017), purposive sampling is a technique in determining samples with certain criteria. In this research, the criteria set are companies listed on the Indonesian Stock Exchange from 2015-2018 period. Companies that publish consecutive financial statements from 2014-2018 period. Commercial banks that have gone public and have been listed on the Indonesia Stock Exchange and have consistently operated for 2014 - 2018 period, Commercial banks that publish audited annual financial reports and

do not have complete data related to the variables studied during research period 2014 - 2018. Commercial banks that experience losses in succession participated during the 2014 - 2018 research period. So the total sample selection in this study is 67 samples

Data Analysis Technique
Normality Test

The purpose of the normality test is to determine whether the data in the resulting regression equation is normally distributed or not. The regression equation can be said to be good if it has data on the independent variables and the dependent variable is distributed close to normal or not at all normal (Ghozali, 2016).

According to (Ghozali, 2016: 156-158), other than that the Normality test can be seen in the Kolmogorov-Smirnov test, where the guidelines used in making this decision are If the significant value > 0.05 then the normal distribution and if the significant value < 0.05 then the distribution is not normal.

Multicollinearity Test

The purpose of the multicollinearity test is to test whether the regression model finds a correlation between independent variables (independent), a good regression model should not have a correlation between the independent variables, if the dependent variables are correlated, then the variable is not orgonal. The orgonal variable is an independent variable whose correlation value between independent variables is equal to 0 (zero) (Ghozali, 2016)

The basis for the decision making for the Multicollinearity Test is:

Looking at the tolerance value, if the Tolerance value is> 0.10 then Multicollinearity does not occur

Looking at the VIF value, if the VIF value is <10.00 then multicollinearity does not occur.

Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residuals of one observation to another. If the residual variance from one observation to another is constant, it is called homoscedasticity and if it is different it is called heteroscedasticity.

The basis for the decision to be tested for heteroscedasticity by using the scattler plot test. The scattler plot test uses the following criteria:

The data points spread over and below or around the 0

Data points do not collect only above or below.

The distribution of data points should not form a wavy pattern that widens then narrows and widened again.

The distribution of data points is not patterned.

Autocorrelation Test

Autocorrelation test appears in regressions that use scaled data or time series. A good model must be free from autocorrelation. The autocorrelation test that is widely used is the Durbin-Watson vvvvmodel. If there is a correlation, it is called an autocorrelation problem. Decision making whether there is autocorrelation or not (Sujarweni, 2016), namely:

D-W numbers below -2 means there is positive autocorrelation.

The D-W number between -2 and +2 means there is no autocorrelation

Figures D-w above +2 have negative autocorrelation

Multiple Linear Regression Analysis

To determine the effect of the independent variables with the variables used the multiple linear analysis formula as follows:

$$Y = \beta + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

The statement as follows:
Y : Return On Asset (ROA)
β : Constanta
$\beta_1. \beta_2.$: Regression
X1 : Non Performing Loan (NPL)
X2 : Loan to Deposit Ratio (LDR)
ε : Standard error

Coefficient Of Determination (R2)

The coefficient of determination (R2) basically measures how far the model's ability to explain the dependent variables. The coefficient of determination is between zero and one ($0 < R^2 < 1$). Small R^2 value means that the ability of the independent variables to explain the variation in the dependent variable is very limited. A value close to one means that the independent variables provide almost all the information needed to predict the dependent variation.

Simultaneous Hypothesis Testing (F-Test)

The purpose of this simultaneous significant test or F statistical test is to show whether all the independent variables in the model have a joint influence on the dependent variable. The hypothesis that will be used in this study relates to the presence or absence of the influence of the independent variable on the dependent variable.

The criteria for acceptance or rejection of the hypothesis are as follows:
If F count> F table, then Ho is rejected and Ha is accepted, which means that all independent variables have an effect on the value of the dependent variable.
If F count <F table, then Ho is accepted and Ha is rejected, which means that all independent variables have no effect on the value of the dependent variable.

Partial Hypothesis Testing (t-Test)

The t statistical test is used to determine how much influence each independent variable has on the dependent variable. The hypothesis that will be used in this study relates to the presence or absence of the influence of the independent variable on the dependent variable.

The criteria for acceptance or rejection of the hypothesis are as follows:
Comparing the significance level (sig.) Of the study with the significance level (α) of 5%:
Sig. > 0.05 then H0 is accepted and Ha is rejected
Sig. <0.05, then H0 is rejected and Ha is accepted
Criteria for decision making
If t count> t table then H0 is rejected and Ha is accepted
If t <t table then H0 is accepted and Ha is rejected The table value is obtained from: df = n-1; 0.025

RESULTS AND DISCUSSION
Normality Test

This is the result of graph analysis in the normality test:

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: ROA
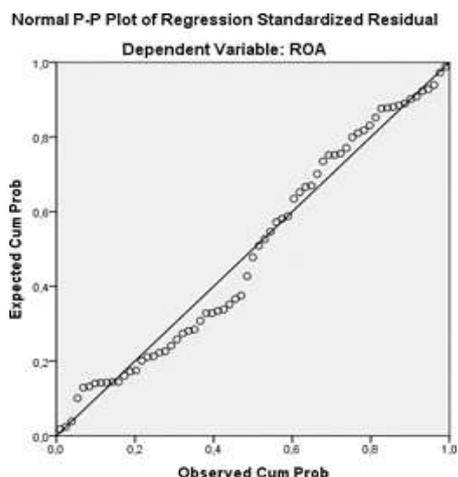
Figure 3. P-plot normality graph

Figure 3 shows that the dots spread around the line and follow the diagonal line. This shows the normality assumption is fulfilled or the residual data is normally distributed.

Table 1. Kolmogorov-Smirnov test One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		67
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	,88862213
Most Extreme Differences	Absolute	,104
	Positive	,104
	Negative	-,068
Test Statistic		,104
Asymp. Sig. (2-tailed)		,070[c]

Based on the results of the One Sample Kolmogorov Smirnov Test above, the Asymphotic Significance value shows a number of 0.070. Then it can be interpreted that the data is normally distributed because the significance value is above 0.05.

Multicollinearity Test

Table 1 It is known that the VIF value for variables X1 and X2 is around 1.001, which means that this value is less than 10. So it can be concluded that the regression model does not have multicollinearity between independent variables

Table 2. Multicollinearity Test

Model		Collinearity Statistics Tolerance	VIF
1	(Constant)		
	NPL	,999	1,001
	LDR	,999	1,001

Heteroscedasticity Test

This is the result of graph analysis in the heteroscedasticity test using scatterplot diagram
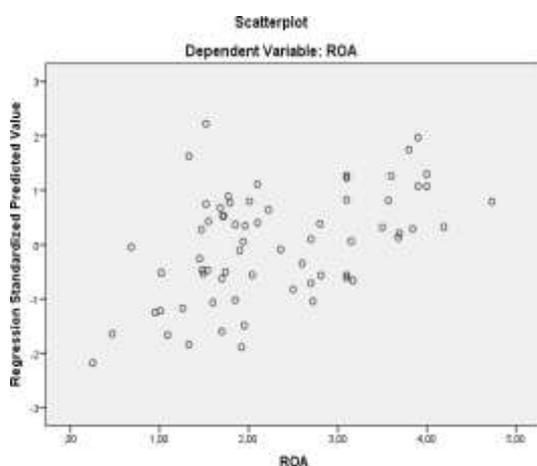
Figure 4. Scatterplot graph

From the test results in Figure 4 it can be seen that the dots spread above and below the number 0 on the Y axis and there is no clear pattern, so it can be concluded that the regression model in this study is free from heteroscedasticit

Autocorrelation Test

Based on table 3 above shows that the Durbin-Watson value is 1.873 so that the DW value is between -2 and 2, it means that there is no autocorrelation in the variables in this study.

Table 3. Autocorrelation Test Model

Model	Durbin-Watson
1	1,873

Multiple Linear Regression Analysis

The results of multiple linear regression analysis:

Table 4. Results Of Multiple Linear Regression Analysis

Model	Unstandard-ized Coefficients B	Std. Error	Standard-ized Coefficients Beta	t	Sig.
1(Constant)	4,714	1,348		3,497	.001
NPL	-,476	,109	-,476	-4,367	.000
LDR	-,015	,015	-,108	-,991	,325

Based on Table 4, we get the following multiple linear equations:

$$ROA\ (Y) = 4{,}714 - 0{,}476 - 0{,}015 + e$$

The constant value is 4.714. This constant value indicates that the independent Non-Performing Loan (NPL) and liquidity (LDR) are considered constant or equal to 0, so the Return on Assets value increases by 4,714.

The non-performing loan coefficient value is - 0.476. This shows that for every 1 percent increase in Non Performing Loans, the Return on Assets will decrease by -0.476.

The value of the Loan to Deposit ratio coefficient is - 0.015. This shows that every one percent increase in the Loan to Deposit ratio, the Return on Assets will increase by 0.015.

Coefficient Of Determination (R2)

The coefficient of determination results:

Table 5. Results Coefficient of determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,491a	,241	,217	. ,90240

Based on table 5, the value of Adjusted R Square is 0.241 or 24.1%, which means that the change in the Return On Asset variable can be explained by Non-Performing Loans and Loan to Deposit Ratio. While the remaining 75.9% is influenced by other variables not examined in this study.

Simultaneous Hypothesis Testing (F-Test)

Based on the results of data processing with the SPSS program, the F test results can be obtained as follows:

Table 6. Results of F-Test ANOVAa

Model	F	Sig.
Regression	10,165	,000[b]
Residual		
Total		

Based on table 6, it can be seen that the result of Fcount is 10,165 with a significant value of 0,000, while the value of the table is 3.14 (where N2 (nk) = 67, N1 (k-1) = 3) with a significant value of 0.05. Then the Fcount> Ftable is obtained, namely 10.165> 3.14, which means that the Non-Performing Loan and the Loan to Deposit Ratio simultaneously affect the Return on Assets of State-Owned Banks and Private Banks listed on the Indonesia Stock Exchange for the 2015-2018 period.

Partial Hypothesis Testing (t-Test)

Based on the results of data processing with the SPSS program, the t-Test results can be obtained as follows:

Table 7. Results of t-Test

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1(Constant)	4,714	. 1,348		3,497	.001
NPL	-,476	,109	-,476	-4,367	.000
LDR	-,015	,015	-,108	-,991	.325

Non Performing Loan variable has a tcount -4.367 with a significant value of 0.000. While the table is 1.99773 with a significant value 0.05. Thus t table> tcount is -4.376 <1.99773, so that partially non-performing loans have a negative effect on Return on Assets at state-owned banks and private banks listed on the Indonesia Stock Exchange for the 2015-2018 period.

The variable Loan to Deposit ratio has a tcount of -0.991 with a significant value of 0.325. While t table is 1.99773 with a significant value of 0.05. Thus, t table <tcount is -0.991 <1.99773, so that partially the Loan to Deposit Ratio has no effect on Return On Assets at state-owned banks and private banks on the Indonesia Stock Exchange for the 2015-2018 period.

Effect of Current Non Performing Loan on Return On Asset

There is a partial effect of Non Performing Loan (NPL) on Return on Assets (ROA). This result is in line with research conducted by Nyoman Tri and I Gde Kajeng Baskara (2019) which states that Non-Performing Loans (NPL) have a negative and significant effect on Return on Assets (ROA), but these results are not in line with research conducted by Luh Putu Sukma (2015). which states that the Non Performing Loan (NPL) has a positive but insignificant effect on Return on Assets (ROA).

The results of this study indicate that the increase in Non-Performing Loans (NPL) means that the bank has a loss, this is due to the increase in non-performing loans owned by the bank, so it can have a negative impact on the bank and the Return on Assets decreases due to the profit or profit it has. companies are used to cover problem loans faced by the Bank.

The Effect of Loan to Deposit Ratio on Return On Asset

. There is no partial effect of the Loan to Deposit Ratio (LDR) variable on Return on Assets (ROA). These results are in line with research conducted by Deden Edwar (2016) which shows that the Loan to Deposit Ratio (LDR) has no effect on Return On Assets (ROA), but these results are not in line with research conducted by Rita Septiani and Putu Vivi Lestari (2016).) shows that the Loan to Deposit Ratio (LDR) has a positive effect on Return on Assets (ROA). The results of this study indicate that the effect of the Loan To Deposit Ratio on Return on Assets is relatively small, so that the Loan To Deposit Ratio does not necessarily increase the profit analyzed. using Return on Assets and from the results of this study the effect is not significant in the sense that the effect is insignificant, this is possible because the relatively always decreases the level of the Loan To Deposit Ratio even though it is still in the healthy category for the Loan To

Deposit Ratio, but it cannot simultaneously increase profit. using the Return on Assets analysis. And by becoming a national bank, the bank has not yet gained full national confidence in investing in the bank and there is a lack of maximum return on funds that have been spread with all forms of credit to the public, thus creating less pressure to increase profits by using Return on Assets

CONCLUSIONS

Based on the research results, the following conclusions are obtained: (1) partially Non-Performing Loans have a significant negative effect on Return On Assets at state-owned banks and private banks listed on the Indonesia Stock Exchange for the period 2015 - 2018; (2) partially the Loan to Deposit Ratio has no effect on Return On Assets at state-owned banks and private banks listed on the Indonesia Stock Exchange for the period 2015 - 2018; (3) Simultaneously the Non Performing Loan and the Loan t Deposit Ratio have an effect on the Return on Assets of State-Owned Banks and Private Banks listed on the Indonesia Stock Exchange for the period 2015-2018. The coefficient of determination is 0.241 or 24.1%, it can be concluded that the variable Return On Asset can be explained by the variable Non Performing Loan and Loan to Deposit ratio to Return On Asset and the remaining 75.9% is influenced.

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