

## Effect of Credit Risk, Liquidity Risk, and Interest Rate Risk on Return on Assets (ROA)

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### Abstract

This article discusses the effects of credit risk, liquidity risk and interest rate risk on bank profitability. The dependent variable in this study is Return On Asset (ROA). Meanwhile, the independent variables in this study are Non Performing Loans (NPL), Loan to Deposit Ratio (LDR), and Net Interest Margin (NIM). The sampling technique was done by using purposive sampling method. The total sample in this study amounted to 10 years of financial reports at PT. Bank Rakyat Indonesia (Persero) Tbk for the period 2007-2016. Data processing was performed using multiple linear regression analysis with classical assumption testing first. This article finds that partially Non Performing Loans (NPL) have a negative and significant effect on Return On Assets (ROA), Loan to Deposit Ratio (LDR) has a negative but insignificant effect on Return On Assets (ROA) and Net Interest Margin (NIM) has a positive but not significant effect on Return on Assets (ROA), while the results of the research simultaneously state that Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), and Net Interest Margin (NIM) have an effect. simultaneously to Return On Asset (ROA).

**Keywords:** *Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), Return On Asset (ROA)*

## Pengaruh Risiko Kredit, Risiko Likuiditas, Dan Risiko Tingkat Bunga Terhadap Return On Asset (ROA)

### Abstrak

Artikel ini membahas pengaruh risiko kredit, risiko likuiditas dan risiko tingkat bunga terhadap profitabilitas perbankan. Variabel dependen dalam penelitian ini adalah Return On Asset (ROA). Sedangkan, variabel independen dalam penelitian ini adalah Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), dan Net Interest Margin (NIM). Teknik pengambilan sampel dilakukan dengan metode purposive sampling. Total sampel dalam penelitian ini berjumlah 10 tahun laporan keuangan di PT. Bank Rakyat Indonesia (Persero) Tbk periode 2007-2016. Pengolahan data dilakukan dengan menggunakan analisis regresi linier berganda dengan pengujian asumsi klasik terlebih dahulu. Artikel ini menemukan bahwa secara parsial Non Performing Loan (NPL) berpengaruh negatif dan signifikan terhadap Return On Asset (ROA), Loan to Deposit Ratio (LDR) berpengaruh negatif namun tidak signifikan terhadap Return On Asset (ROA) dan Net Interest Margin (NIM) berpengaruh positif namun tidak signifikan terhadap Return On Asset (ROA), sedangkan hasil penelitian secara simultan menyatakan bahwa Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), dan Net Interest Margin (NIM) berpengaruh secara simultan terhadap Return On Asset (ROA).

**Kata-kata Kunci:** *Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM), Return On Asset (ROA)*

## INTRODUCTION

The negligence of the internal company in managing profitability can endanger the company's assets, this danger can be overcome by a risk management process which includes determining the scope, context and criteria, the three must be interrelated, so that the determination of the context must be relevant to the defined scope. The best of all things considered, this article was originally published in Indonesian language

(Subrata, 2019).

The scope of this article is the profitability of conventional banking in the context of credit risk, liquidity risk and interest rate risk on profitability. Profitability is an indicator that reflects the competitive position of a bank in the banking market and the quality of its management (Arindi, 2016). The measure of profitability used is Return on Assets (ROA), which is generally used in the banking industry (Agustina, 2017). The greater the Return on Assets (ROA), the better the financial performance because the rate of return (return) is greater, if the Return on Assets (ROA) increases, it means that the company's profitability increases, so that it has an impact on the increase in profitability that can be obtained by shareholders.

The best of all things considered, this article was originally published in Indonesian language. (Syahyunan, 2004). Banks in carrying out their operations certainly cannot be separated from various kinds of risks (Ananda, 2017). Bank business risk is the level of uncertainty regarding an outcome that is expected or expected to be received (Rivai, 2013:70). The risks that commonly occur in the banking world are credit risk, liquidity risk and interest rate risk. credit risk is the risk of loss related to the counterparty failing to meet its obligations at maturity (Hayati, 2017). In this study, the ratio used to measure credit risk is the non-performing loan (NPL).

Banks can be said to have a large credit risk if the ratio of non-performing loans (NPL) to total bank credit is more than 5% or  $> 5\%$ . Because in the Indonesian bank regulation Number 17/11 / PBI / 2015 dated June 25, 2015 concerning amendments to Bank Indonesia regulation Number 15/15 / PBI / 2013 concerning the minimum statutory reserve requirement for commercial banks in rupiah and foreign currency for conventional commercial banks. Whereas the ratio of Non Performing Loans (NPL) to total bank credit on a gross basis  $> 5\%$  (Bank Indonesia, 2018). Furthermore, the measure of bank profitability can be seen from its liquidity management because liquidity management errors can cause a risk called liquidity risk. must be fulfilled (Sudarini, 2005). A bank's Loan to Deposit Ratio (LDR) is 80%, but the tolerance limit is between 85% -100%.

The higher the Loan to Deposit Ratio (LDR) of a bank is not a measure of the success of bank management but because the bank has accumulated funds or it may also have difficulties in channeling funds so that it does not increase the profit Return On Asset (ROA) in other words, the higher Loan to Deposit Ratio (LDR), the lower the Profitability Return On Assets (ROA) obtained (Dendawijaya, 2009). The subsequent risk Interest rate risk represented by the Net Interest Margin (NIM) is the Net Interest Margin (NIM) of a bank is said to be good if it has a Net Interest Margin (NIM) above 2% (Lestari, 2007). In increasing the net interest margin (NIM), it is recommended to reduce the cost of funds, the cost of funds is the interest paid by the bank to the respective sources concerned.

Determination of Net Interest Margin (NIM) refers to the interest rate, where the greater

this ratio, the higher the interest income on productive assets managed by the bank, so that the possibility of the bank being in a problematic condition is very small. (Taswan, 2010). This research was conducted on the financial statements of PT Bank Rakyat Indonesia (Persero), Tbk. For the period 2007-2016. Researchers are interested in choosing the object of PT. Bank Rakyat Indonesia (Persero), Tbk because from the observations, PT Bank Rakyat Indonesia (Persero), Tbk can represent the main problem in this study and can represent other similar companies. In addition, the researcher also wants to know how much influence the credit risk is represented by the non-performing loan (NPL), the liquidity risk is represented by the loan to deposit ratio (LDR) and the interest rate risk is represented by the net interest margin (NIM) Against Return On Asset (ROA) at PT. Bank Rakyat Indonesia (Persero), Tbk, because according to sources, customer failure in paying off debts experienced by PT. Bank Rakyat Indonesia (Persero), Tbk has increased every year, liquidity conditions and interest rates tend to fluctuate, so it is likely that the effect on profits will decrease (Sitorus, 2019). Whereas according to several articles read by researchers PT. Bank Rakyat Indonesia (Persero), Tbk is one of the largest state-owned banks in Indonesia. (Kayo, 2015). So that control, both Credit Risk, Liquidity Risk and Interest Rate Risk, should be handled properly.

Researcher conducted research on financial reports at PT. Bank Rakyat Indonesia (Persero), Tbk for 10 years, because according to sources obtained the last 5-10 years of financial data is very relevant to be used by researchers in order to get the expected results. (Sekaran, 2014). The previous explanations serve as the examiner's reason for analyzing the effect of credit risk, liquidity risk and interest rate risk on the Return On Asset (ROA) ratio as the bank's profitability ratio.

This study analyzes the effect of Credit Risk, Liquidity Risk and Interest Rate Risk on Profitability. The variables used include the projected profitability of Return on Assets (ROA) as the dependent variable. Credit Risk is projected by Non Performing Loans (NPL), Liquidity Risk by Loan to Deposit Ratio (LDR), Interest Rate Risk by Net Interest Margin (NIM) as independent variables.

## **METHOD**

### **Effect of NPF on ROA**

The role of credit in bank operations is very large and important because most banks still rely on their main source of income from the credit business, based on Bank Indonesia circular letter No. 13/24 / DPNP dated 25 October 2011, credit risk is the risk due to failure of the debtor or other party to fulfill obligations to the bank (Fitri, 2016), Credit risk in this article is represented by a Non Performing Loan (NPL), which is a loan where the repayment of the loan principal and interest payments have been delayed 1 (one) year from maturity according to the agreed schedule, Non Performing Loans (NPL) can also be used. is defined as a loan that is experiencing repayment difficulties due to deliberate

factors or due to external factors beyond the ability of the debtor which can be measured from collectability. (Nym, 2014) .

H<sub>1</sub> : Non Performing Loans (NPL) have a negative effect on Return On Assets (ROA).

### **Effect of LDR on ROA**

Liquidity risk is a form of risk experienced by a company due to its inability to fulfill its short-term obligations, thus affecting the disruption of the company's activities to a position that does not run normally. Therefore, liquidity risk is often referred to as short term liquidity risk (Fahmi, 2013). Liquidity risk in this article is represented by the Loan to Deposit Ratio (LDR), which is the ratio of loans to third party funds received by the bank concerned. The amount of the Loan to Deposit Ratio (LDR) will have an effect on profits through credit creation, a high Loan to Deposit Ratio (LDR) indicates a large investment of funds from third parties into the form of credit (Koesheryatin, 2015). Large credit will increase profits, liquidity growth is opposite to profit growth, that is, if liquidity growth shows an increase in idle funds, it can cause profit growth in the next year to decrease (Verawati, 2016). Even though the high Loan to Deposit Ratio (LDR) number has the potential to increase bank profits, this must be accompanied by prudence in lending so that later it does not cause bad credit problems which will actually reduce bank profits. (Haryani, 2008).

H<sub>2</sub> : Loan to Deposit Ratio (LDR) have a negative effect on Return On Asset (ROA).

### **Effect of NIM on ROA**

Interest rate risk is the risk experienced as a result of changes in interest rates that occur in the market which can have an impact on company earnings (Haryati, 2017). The interest rate risk used by researchers is the Net Interest Margin (NIM), which is the ratio used by management to control costs (Kasmir, 2008).

H<sub>3</sub> : Net Interest Margin (NIM) has a positive effect on Return On Assets (ROA).

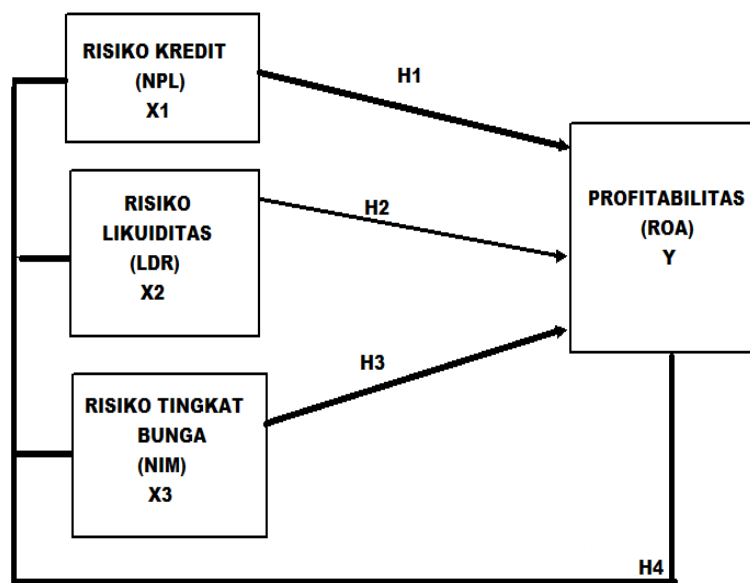
### **Effect of NPF, LDR, NIM on ROA**

Profitability is the ability of a bank to earn profits in a certain period, in this study the profitability measured is Return On Asset (ROA), which is the company's ability to generate profits (Sinung, 2016). as a whole because the greater the Return On Assets (ROA) of a bank, the greater the level of profit the bank gets in terms of asset use (Kasmir, 2008). So it can be concluded that NPF, LDR, NIM simultaneously affect ROA

H<sub>4</sub> : Non Performing Loans (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) have a simultaneous effect on Return On Assets (ROA).

Based on the theory and results of previous research that have been described, the following framework is developed:

### Research Paradigm



Source: Tracking Result, proceed

This study uses 1 dependent variable and 3 independent variables. The dependent variable consists of Return On Assets (ROA) which represents bank profitability. The independent variable consists of Credit Risk represented by the Non Performing Loan (NPL) indicator, Liquidity Risk represented by the Loan to Deposit Ratio (LDR) and Interest Rate Risk with the Net Interest Margin (NIM) indicator.

The population of this research is the financial statements of PT. Bank Rakyat Indonesia (Persero), Tbk. 2007-2016 period. The data used are quantitative data related to the variables in the study. This data comes from secondary data published in the annual financial statements of the selected banks as the research sample. The selection of research samples based on purposive sampling includes financial reports taken for the period 2007-2016 over a period of 10 years. The analytical method used is multiple linear analysis. The analysis was carried out by processing quantitative data with statistical tools SPSS V.23 (Statistical and Service Solution).

This study uses Time Series data. The results of regression analysis are the results in the form of coefficients for each independent variable. The coefficient is obtained by predicting the value of the dependent variable with an equation. In regression analysis, in addition to measuring the strength of the relationship between two or more variables, it also shows the direction of the relationship between the dependent variable and the independent variable (Sudjana, 2005). Before performing multiple regression analysis, a classic assumption test is carried out first to ascertain whether the regression model used does not contain multicollinearity, autocorrelation, heterosdasticity, and normality problems.

## RESULTS AND DISCUSSION

### Classical Assumption Test Results

The Classical Assumption Test is a prerequisite for multiple regression analysis. Testing of multiple regression assumptions to avoid the emergence of bias in data analysis and to avoid errors in the specification of the regression model used (Agung, 2005)

### Multicollinearity

Multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). A good regression model should not have a correlation between the independent variables. The variables are said not to be orthogonal if the independent variables are correlated with each other. The general method used by researchers to detect the presence or absence of multicollinearity problems in the regression model is to look at the Tolerance and VIF (Variance Inflation Factor) values. The recommended value to indicate the absence of multicollinearity problems is that the tolerance value must be  $> 0.10$  or equal to  $VIF < 10$ . (Agung, 2005)

**Table 1. Multicollinearity Analysis**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	11.128	3.676		3.028	.023		
	NPL	-.824	.194	-.1184	-4.249	.005	.459	2.177
	LDR	-.068	.028	-.855	-2.407	.053	.283	3.536
	NIM	.092	.186	.194	.494	.639	.231	4.337

a. Dependent Variable: ROA

Source: SPSS V Output Processed Data 23 In February 2018

table 1, the multicollinearity test shows that the Tolerance value for all variables  $> 0.10$  and the VIF (Variance Inflation Factor) value for all variables  $< 10$ , it can be concluded that the data studied fulfills the classic multicollinearity assumption test. The best of all things considered, this article was originally published in Indonesian language.

### Autocorrelation

Autocorrelation test aims to test the linear regression model for the correlation between confounding error in period  $t$  with confounding error in period  $t-1$  (previous). If there is a correlation, it is called an autocorrelation problem. A good regression model is regression that is free of autocorrelation. To detect the presence or absence of autocorrelation, the Durbin-Watson test (DW test), the Lagrange Multiplier test (LM test), the Q statistic test, and detect autocorrelation with the run test can be performed. . The general way that researchers use to detect the presence or absence of autocorrelation problems is to look at the Durbin Watson (DW) value. Data can be said to be free of autocorrelation if the value of Durbin Watson (DW) is between Durbin Watson (DW) and  $4 - DW$ .

**Table 2. Autocorrelation analysis**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.887 <sup>a</sup>	.786	.679	.28011	1.683

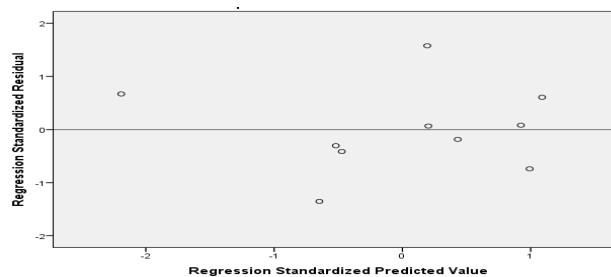
Source: SPSS V Output Processed Data 23 In February 2018

Table 2, The autocorrelation test shows that the Durbin Watson (DW) value is between  $DU < \text{Durbin Watson (DW)} < 4 - DU$  or  $1.6413 < 1.683 < (4 - 1.6413)$  so it can be concluded that the data studied is autocorrelation free.

**Heteroscedasticity**

The heteroscedicity test aims to test whether there is an inequality of variance from the residuals of one observation to another. If the variance from one residual from one observation to another is constant, it is called homoscedasticity and if it is different it is called heteroscedasticity. A good regression model is homoskesdaticity or heteroscedastity does not occur (Agung, 2005).

**Table 3. Heteroscedasticity analysis**



Source: SPSS V Output Processed Data 23 In February 2018

Table 3, heteroscedasticity does not occur or the data includes homogeneity because the data spreads out on the zero line without forming a specific pattern.

**Table 4. Normality analysis**

**One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		10
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	.22870719
Most Extreme Differences	Absolute	.161
	Positive	.161
	Negative	-.106
Test Statistic		.161
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

Source: SPSS V Output Processed Data 23 In February 2018

Table 4, data is normally distributed because the Kolmogorov-Smirnov test is above 0.05, which is 0.200 seen in Asymp. Sig. (2-tailed). Based on the classical assumption test, it can

be stated that the three variables are feasible to be the subject of research by researchers because they have met the requirements of the classical assumption test.

**Hypothesis test**

Hypothesis testing is one of the objectives that will be proven in research. If there is a deviation between the specified sample and the population, it is possible for an error to occur in making a decision between rejecting and accepting a hypothesis (Yulianto, 2015)

**Multiple Linear Analysis**

After the classical assumption test shows that the data does not have multicollinearity problems, does not occur heteroscedasticity, and is free from autocorrelation and normally distributed data, so to determine the effect of Non Performing Loan (NPL), Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM) to Return On Assets (ROA) at PT. Bank Rakyat Indonesia (Persero) Tbk. Multiple linear regression analysis can be performed using SPSS V.23. To see the effect of Credit Risk (X1), Liquidity Risk (X2) and Interest Rate Risk (X3) on Return On Assets (Y), multiple regression analysis techniques are used. The multiple regression equation is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

The following shows the results of multiple regression analysis using the SPSS program

**Table 5. Multiple Linear Analysis**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.128	3.676		3.028	.023
	NPL	-.824	.194	-1.184	-4.249	.005
	LDR	-.068	.028	-.855	-2.407	.053
	NIM	.092	.186	.194	.494	.639

a. Dependent Variable: ROA

Source: SPSS V Output Processed Data 23 In February 2018

From the output in table 6, the multiple regression equation is obtained as follows.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

$$Y = 11.128 - 0.824 X_1 - 0.068 X_2 + 0.092 X_3 + \epsilon$$

**Significant Test for Individual Parameters (t Statistical Test)**

The test step is to determine the ability of each independent variable in explaining the behavior of the dependent variable by performing t test. testing is carried out using a significance level 0,05 (α=5%).

**Table 6. Significant Test for Individual Parameters (t Statistical Test)**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.128	3.676		3.028	.023
	NPL	-.824	.194	-1.184	-4.249	.005
	LDR	-.068	.028	-.855	-2.407	.053
	NIM	.092	.186	.194	.494	.639

a. Dependent Variable: ROA

Source: SPSS V Output Processed Data 23 In February 2018

**Simultaneous Significance Test (Test Statistic F)**

Simultaneous test with the F-test aims to determine the joint effect of the independent variables on the dependent variable. The degree of confidence used is 5%. If the calculated value is greater than the F table value, then the alternative hypothesis states that all independent variables simultaneously have a significant effect on the dependent variable.

**Table 7. Simultaneous Significant Test Analysis (Test F)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.729	3	.576	7.346	.020 <sup>b</sup>
	Residual	.471	6	.078		
	Total	2.200	9			

Source: SPSS V Output Processed Data 23 In February 2018

Based on the results of secondary data processing of the financial statements of PT. Bank Rakyat Indonesia (Persero) Tbk. The 2007-2016 period uses SPSS V.23

Hypothesis 1 :

*Ha : Non Performing Loan (X1) partially has a negative and significant effect on Return On Asset (Y) PT. Bank Rakyat Indonesia (Persero) Tbk. 2007-2016 period*

The hypothesis is acceptable, because the results of the partial hypothesis testing (Ujit) show the tcount of -4249 < ttable 2.776 and the probability significance value is 0.005 < 0.05, then at the 95% confidence level with an error rate of 5% Non-Performing Loans (NPL) Partially negative and significant effect on the profitability of PT. Bank Rakyat Indonesia (Persero) Tbk. 2007-2016 period. The results of this study are supported by the results of research from (Nym, 2014). The Effect of Credit Risk and Liquidity on Profitability in Go Public Banking Companies for the 2010-2012 period, the results of this study indicate that Non-Performing Loans (NPL) have a negative and significant effect on Return On Assets (ROA), research conducted by (Putranto, 2017) regarding Capital Adequacy Ratio, Loan Deposit Ratio and Non Performing Loans on Profitability and research conducted by (Sudarmawanti, 2017). The effect of CAR, NPL, BOPO, NIM and LDR

on ROA at Bank Perkreditan Rakyat where both research results indicate that Non-Performing Loans (NPL) have a negative and significant effect on Return On Assets (ROA). Based on the results of this study, company managers, especially in the realm of banking, need to address the level of credit risk that occurs because if the level of credit risk for Non Performing Loans (NPL) is high, there will be many parties that will be harmed, one of which is the customer, the customer is a very disadvantaged because they are one of the main sources of banking funds as we know that if a bank has a very high risk in providing credit, then the bank must have a large amount of capital. (rai, 2017). Bank capital is usually only around 10% -15% of the total assets owned (Fiki Ariyanti, 2015). This means that most bank activities are financed from loans, aka Third Party Funds (DPK), such as current accounts, savings, time deposits. Based on the results of the hypothesis in accordance with the first hypothesis which states that non-performing loans (NPL) have a negative and significant effect on Return on Assets (ROA) so that the first hypothesis is accepted.

Hypothesis 2 :

*Ha: Loan to Deposit Ratio (X2) has a negative and significant effect on Return On Asset (Y) PT. Bank Rakyat Indonesia (Persero) Tbk. 2007-2016 period.*

The hypothesis is rejected because the results of partial hypothesis testing (t test) Based on the output of the regression results, the tcount value is  $-2,407 < t_{table} 2.776$  and the significant value is  $0.053 > 0.05$ , it can be concluded that the Loan to Deposit Ratio (LDR) has a negative but insignificant effect. to Return On Asset (ROA). This means that an increase in the credit ratio of PT. Bank Rakyat Indonesia (Persero) Tbk with third party funds or Loan to Deposit Ratio (LDR) does not always make a positive contribution to increasing asset profitability, there are even indications of lowering the value of profitability. The best of all things considered, this article was originally published in Indonesian language(Sinungan, 1993) asserted that a bank will remain liquid, if most of the loans channeled are short-term trade credits that can be disbursed under normal business conditions. The correlation of the Loan to Deposit Ratio (LDR) negatively affects profitability according to the findings of the study by (Putranto, 2017) regarding the Capital Adequacy Ratio, Loan to Deposit Ratio and Non Performing Loans where the results of the research show that the Loan to Deposit Ratio (LDR) has a negative and insignificant effect on Return On Assets (ROA).

In addition, this research is also supported by research. (Putri, 2013) The Effect of Liquidity (Cash Ratio) and Loan to Deposit Ratio on the Profitability of Assets (ROA) in the Banking Sector in the Indonesia Stock Exchange. His research shows that the Loan to Deposit Ratio has a negative but not significant effect on Return On Assets (ROA). This condition is caused by a decrease in the repayment capacity of debtors which results in the inability to pay loan installments on time, thereby reducing bank profitability. The results of this hypothesis are not in accordance with the second hypothesis which states

that the Loan to Deposit Ratio (LDR) has a negative and significant effect on Return On Assets (ROA) so that the second hypothesis is not accepted.

Hypothesis3:

*Ha: Net Interest Margin (X3) has a positive and significant effect on the Return on Assets (Y) of PT. Bank Rakyat Indonesia (Persero) Tbk. 2007-2016 period*

Hypothesis is rejected because the results of testing the hypothesis partially (t test) Based on the output of the regression results, the tcount value is  $0.494 < t_{table} 2.776$  and the significant value is  $0.639 > 0.05$ , it can be concluded that the Net Interest Margin (NIM) has a positive but not significant effect on Return On Asset (ROA). The results of this study indicate that the Net Interest Margin (NIM) of PT. Bank Rakyat Indonesia, Persero. Tbk, has a positive but insignificant effect on Return On Assets (ROA) where during the study period it can be seen that each increase in Net Interest Margin (NIM) does not all result in an increase in Return On Assets (ROA), as well as not all decreases in Net Interest Margin (NIM) results in a decrease in Return On Assets (ROA). The Return On Asset (ROA) ratio is not only influenced by net interest income (NIM) but also by other operating costs, for example human resource costs, depreciation of fixed assets, expenses for allowance for decreasing fixed assets and other costs. (Mismiwati, 2016). This means that this research is in accordance with the theory of profitability in which the environment encourages banks to increase the Net Interest Margin (NIM) ratio in accordance with the direction of the bank (Harun, 2016).

This research is supported by research (Pamularsih, 2015) The effect of LDR, NPL, NIM, OEOI, CAR, and Interest Rates on Profitability in the Banking Sector on the IDX. The results of his research show that the Net Interest Margin (NIM) has a positive but insignificant effect on Return On Assets (ROA). This research also supports the research conducted by (Mismiwati, 2016) Effect of CAR, NIM, BOPO, LDR, NPL on ROA studies at PT. BPD SUMSEL BABEL. The results of his research show that Net Interest Margin (NIM) has a positive but insignificant effect on Return On Assets (ROA). The results of this hypothesis are not in accordance with the third hypothesis which states that Net Interest Margin (NIM) has a positive and significant effect on Return On Assets (ROA) so that the third hypothesis is not accepted. The best of all things considered, this article was originally published in Indonesian language.

Hypothesis 4 :

*Ha: Non Performing Loans (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) have a simultaneous effect on Return On Assets (ROA)*

This hypothesis can be accepted because the results of simultaneous Hypothesis testing (F test) show that the value of  $F_{count} > F_{table}$  is  $7.346 > 4.76$  with a significance value smaller than the probability value, namely  $0.020 < 0.05$ , then at the 95% confidence level with an error level of 5 % Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) simultaneously have a positive and significant effect on PT. Bank

Rakyat Indonesia (Persero) Tbk. This research is supported by the results of research by (Sudarmawanti, 2017) the effect of CAR, NPL, BOPO, NIM and LDR on ROA at Rural Banks.

This study shows that all variables are simultaneously influential, besides the supporting research for the results of this study is research. (Pinasti, 2018) Analysis of the Effect of CAR, OEOI, NPL, NIM, LDR on the Profitability of Commercial Banks is the next research by (Pamularsih, 2015), The effect of LDR, NPL, NIM, OEOI, CAR, and Interest Rates on Profitability in the Banking Sector on the IDX. The results of this study indicate that Non Performing Loans (NPL), Loan to Deposit Ratio (LDR) and Net Interest Margin (NIM) simultaneously influence Return On Assets (ROA). The results of the hypothesis are in accordance with the fourth hypothesis which states that Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) have a simultaneous effect on Return On Assets (ROA).

Based on the results of the partial hypothesis testing, it can be concluded that the first hypothesis is accepted because the results of the first hypothesis test state that Non-Performing Loan (NPL) has a negative and significant effect on Return On Asset (ROA), while for the second hypothesis it is rejected because of the results. Hypothesis testing conducted by the researcher states that the Loan to Deposit Ratio (LDR) has a negative but insignificant effect on Return On Assets (ROA) is inversely proportional to the second hypothesis which states that the Loan to Deposit Ratio (ROA) has a negative and significant effect on Return On Asset (ROA), then for the third Hypothesis it is rejected because based on the results of the research conducted by researchers, it is stated that the Net Interest Margin (NIM) has a positive but insignificant effect on Return On Asset (ROA), then for Hypothesis testing simultaneous can be accepted because between the results of Hypothesis testing with Hyp The initial hypothesis is synchronous because in testing the fourth hypothesis it states that Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), Net Interest Margin (NIM) simultaneously affect Return On Assets (ROA).

## CONCLUSION

Based on the results of the research it is firmly stated that partially Non Performing Loans (NPL) have a negative and significant effect on Return On Assets (ROA), Loan to Deposit Ratio (LDR) has a negative but not significant effect on Return On Assets. (ROA) and Net Interest Margin (NIM) have a positive but insignificant effect on Return On Assets (ROA), while the research results simultaneously state that Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR) ), and Net Interest Margin (NIM) has a simultaneous effect on Return On Assets (ROA)

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