

## **THE EFFECT OF NPL, CAR, LDR, OER AND NIM TO BANKING RETURN ON ASSET**

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### **Abstract**

*Rapid development of banking world and high level of complexity may affect the performance of a bank. Banking industry is a business entity that raises funds from the society in the form of savings and distributes it to the society in the form of credits and/or other forms in order to improve the standard of living of society at large. This research aimed to determine the effect of Non-Performing Loan (NPL), Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Operating Expense Ratio (OER) and Net Interest Margin (NIM) to banking Return on Assets (ROA). The population of this research were 10 Commercial Banks based on the largest asset in 2011-2016 year period by using Multiple Linear Regression Analysis method through SPSS 20. The sampling technique was purposive sampling; intentional sampling which is in accordance with the sample requirements. The test results stated that NPL variable had positive and insignificant effect to ROA, CAR variable had no effect to ROA, LDR variable had negative and significant effect to ROA, OER variable had negative and insignificant effect to ROA, and NIM variable had positive and insignificant effect to ROA.*

*Keywords: Capital Adequacy Ratio, Loan to Deposit Ratio, Non-Performing Loan, Operating Expense Ratio, Net Interest Margin, and Return on Assets*

## INTRODUCTION

Rapid development of banking world and high level of complexity may affect the performance of a bank. According to the Law of the Republic of Indonesia No.10 of 1998 regarding banking mentions that bank is a business entity that raises funds from the society in the form of savings and distributes it to the society in the form of credits and/or other forms in order to improve the standard of living of society at large.

The performance of banking companies, in this research, was measured by using profitability ratios that is important for the bank; it is Return on Assets (ROA). The reason of choosing Return on Assets (ROA) as a dependent variable was because Return on Asset (ROA) was used to measure the effectiveness of the company in generating profits by utilizing its assets.

Research on the analysis of the influence of financial ratios on bank performance has been done by several researchers, among others, as follows:

1. The NPL, researched by Suwandi (2017), Indrayani et al (2016), Raharjo et al (2014), and Dewiet al (2016), indicated that it had significant and negative effect to ROA. However, the research result was different from Sianturi(2012), Raharjo (2013), and Vernanda and Widiyarti (2016) in which the NPL had significant and positive effect to ROA.
2. The CAR, researched by Raharjoet al (2014), Sianturi (2012), and Vernanda and Widiyarti (2016), indicated that it had significant and positive effect to ROA. However, the research result was different from Bilian and Purwanto (2017) and Suwandi (2017) in which the CAR had no effect to ROA.
3. The LDR, researched by Sianturi (2012), Raharjo et al (2014), and Indrayani et al (2016), indicated that it had significant and positive effect to ROA. However, the research result was different from Raharjo (2013) and Suwandi (2017) in which the LDR had significant and negative effect to ROA.
4. The OER, researched by Suwandi (2017) and Raharjo et al (2014), indicated that it had significant and negative effect to ROA. However, the research result was different from Dewi et al (2016) and Sianturi (2012) in which the OER had significant and positive effect to ROA.
5. The NIM, researched by Harun (2016), indicated that it had no effect to ROA. However, the research result was different from Raharjo et al (2014) and Dewi et al (2016) in which the NIM had significant and positive effect to ROA.

Based on the above issues, the research problems are formulated as follow: 1) how are the effects of NPL, CAR, LDR, OER, and NIM to ROA partially?, 2) how are the effects of NPL,

CAR, LDR, OER, and NIM to ROA partially simultaneously?. The aims of the research are: 1) to determine the effects of NPL, CAR, LDR, OER, and NIM to Return on Asset (ROA) partially, 2) to determine the effect of NPL, CAR, LDR, OER, and NIM to Return on Asset (ROA) simultaneously.

## **THEORETICAL REVIEW**

### **Bank Financial Performance**

Bank financial performance is the description of bank financial condition for a certain period covering fund raising as well as funds channeling aspects. Generally, bank financial performance is a description of the achievements of a bank in conducting their business activities. The performance of companies and banking institutions can be measured by analyzing and evaluating financial statements. Financial position and financial performance information in the past is often used as a guide to predict future financial position and performance and other things that directly attract the attention of the stakeholders and the shareholders such as dividend payments, wages, securities price movements and the ability of a company to fulfill its commitments in the payment due.

### **Return on Assets (ROA)**

According to Bank Indonesia, Return on Assets (ROA) is the ratio between profit before tax and the average of total assets within particular period. Return on Assets (ROA) is one of analysis of rentability ratio analysis. Rentability ratio analysis is a tool to analyze or measure the efficiency level of a business or profitability achieved by the bank. According to Circular Letter of Bank Indonesia No.13/24/DPNP on October 25, 2011, Return on Assets (ROA) standard set for banks in Indonesia is at least 1.5%. This ratio is used to measure the ability of bank management in obtaining profit as a whole.

### **Non-Performing Loan (NPL)**

Non-Performing Loan (NPL) is a condition in which the customer is unable to pay part or all of his/her obligations to the bank. Non-Performing Loan (NPL) reflects credit risk. The number set by Bank Indonesia for the ratio of Non-Performing Loan (NPL) is 5%. The higher the NPL ratio, the worse the credit quality will be, it causes the number of troubled loans is getting bigger so in this case the greater the NPL will lead to a decrease in ROA and if the NPL decreases and becomes smaller, the ROA will increase and the financial performance of the bank will get better.

### **Capital Adequacy Ratio (CAR)**

According to Dendawijaya (2003), Capital Adequacy Ratio (CAR) is bank performance ratio that is to measure the capital adequacy owned by the bank to support assets that contain or generate risks, such as loans. Bank Indonesia set a minimum CAR ratio of 8%. The higher the Capital Adequacy Ratio (CAR), the higher the personal capital used to fund productive assets and the lower the cost of funds (interest funds) issued by the bank. The increase in bank profits will also lower the interest of a bank fund. Similarly, with the increasing cost of funds (interest funds), the personal funds and bank profits will be lower.

### **Loan to Deposit Ratio (LDR)**

Loan to Deposit Ratio (LDR) indicates in what extent the bank's ability in repaying the withdrawal of funds by depositors by relying on the credit given as the source of liquidity (Dendawijaya 2009:118). Bank Indonesia assigns the Loan to Deposit Ratio (LDR) ratio of at least 80% and at maximum 110%, because if the ratio is above 110% then it is considered that the liquidity of the bank is not good because the amount of Third Party Fund is unable to cover the amount of credit that has been given.

### **Operating Expense Ratio (OER)**

According to Dendwajaya (2003), the ratio of OER is used to measure the level of efficiency and ability of banks in conducting their operations. Banks, that are efficient in reducing their operational costs, can reduce losses due to the inefficiency of banks in managing their business so that profits will also increase. Bank Indonesia sets the best rate for OER ratio below 90%, because if the OER ratio exceeds 90% or close to 100% then the bank can be categorized as inefficient in carrying out its operation. The smaller this ratio means the more efficient the operational costs incurred by the bank so that the possibility of a bank to be in the troubled condition is getting smaller.

### **Net Interest Margin (NIM)**

According to Dendwajaya (2009), Net Interest Margin (NIM) is used to measure the ability of bank management in managing its productive assets to generate net interest income. Bank Indonesia set a Net Interest Margin (NIM) ratio of 6% and above. The greater the ratio then the interest income on productive assets managed by the bank will increase so that the possibility of banks to be in the troubled condition is getting smaller.

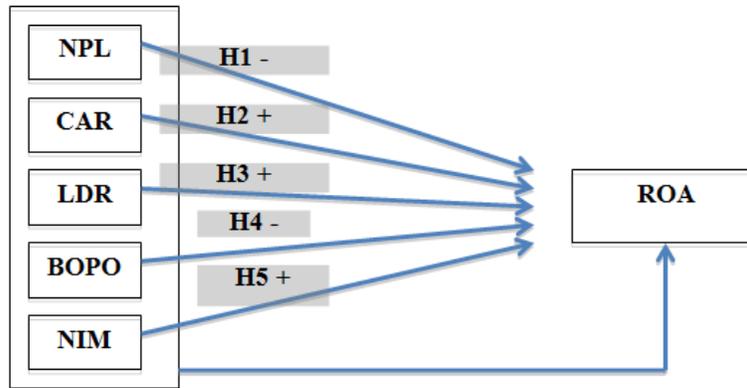


Figure 1. Theoretical Framework

### Hypothesis Formulation

Based on background of the research, theoretical framework and conceptual framework that has been written and discussed, it can be formulated some research hypothesis as follows:

H1 = NPL has negative effect to ROA

H2 = CAR has positive effect to ROA

H3 = LDR has positive effect to ROA

H4 = OER has negative effect to ROA

H5 = NIM has positive effect to ROA

### RESEARCH METHOD

#### Data Types and Data Source

Data types used in this research were bank financial ratios such as: NPL, CAR, LDR, OER, NIM and ROA in which reflecting bank performance. The data were taken from the Annual Financial Report of 10 Commercial Banks in Indonesia in 2011-2016 based on the largest assets which were obtained from the website <http://www.idx.co.id/> and the official website of 10 banks under research.

Table 1. The Largest Assets of 10 Commercial Banks in Indonesia in 2011-2016

No	Name of the Bank	Asset Per December 2016 (Rupiah)
1	Bank Mandiri	1.038.706.009.000
2	Bank BRI	1.003.644.000.000
3	Bank Central Asia	676.739.000.000
4	Bank BNI	603.032.000.000
5	CIMB NIAGA	241.571.728.000
6	Bank BTN	214.168.479.000

Table 1...

7	Bank PANIN	199.180.000.000
8	Bank Permata	165.527.512.000
9	Bank Danamon	174.078.000.000
10	Maybank	166.678.902.000

### Data Analysis Technique

The analysis method used in this research was quantitative method. Quantitative data analysis is a form of analysis using numbers and calculations and statistical methods. Thus, the data should be classified in certain categories by using certain tables to facilitate the analysis by using SPSS 20.00 software.

## FINDINGS AND DISCUSSIONS

### Research Objects

The objects of the research were go-public commercial banks that were listed on Indonesia Stock Exchange in 2011 to 2016 period. The samples used in this research were 10 banks with the largest assets in Indonesia with 60 data as the sample.

### Descriptive Statistics

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
NPL	60	.40	8.80	2.3723	1.20936
CAR	60	11.83	22.93	16.7390	2.56253
LDR	60	61.70	108.86	88.2837	9.70908
BOPO	60	59.93	150.80	77.9395	13.99078
NIM	60	3.60	10.10	6.0073	1.65135
ROA	60	.20	5.15	2.5543	1.22353
Valid N (listwise)					

Based on the above table of descriptive statistics, it shows the following results:

1. The average number of NPL was 2.3723% which indicated the safe limit because according to the rules of Bank Indonesia, the safe average number of NPL must be below 5%.

2. The average number of CAR was 16.7390% which indicated a good capital adequacy level because according to the rules of Bank Indonesia, the safe average number of CAR must be above 8%.
3. The average number of LDR was 88.2837% which indicated that the bank was considered healthy because according to the rules of Bank Indonesia, the safe average number of LDR must be between 80% and 110% in order to avoid liquidity.
4. The average number of OER was 77.9395% which indicated the good result because according to the rules of Bank Indonesia, the best average number of OER must be below 90%.
5. The average number of NIM was 6.0073% which indicated the good result because according to the rules of Bank Indonesia, the best average number of NIM must be above 6%.
6. The average number of ROA was 2.5543% which indicated bank performance in generating good profits because according to the rules of Bank Indonesia, the best average number of ROA must be above 1.5%.

## Normality Test

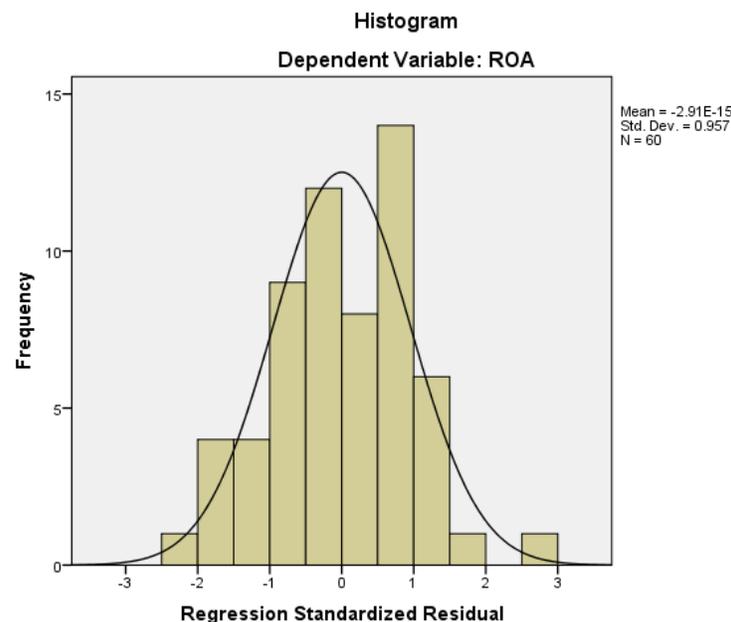


Figure 2. Histogram Chart

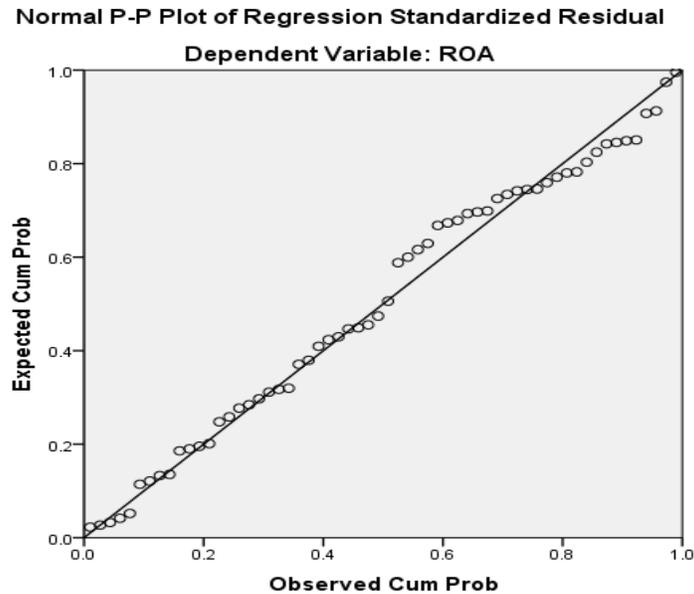


Figure 3. Normal Probability Plot

Based on the display on the figure of histogram chart, it can be seen that the histogram chart has a normal distribution pattern because it has a symmetrical pattern. Based on the display on the figure of normal probability plot, it can be concluded that it is the normal chart pattern because the points spread around the diagonal line and its distribution follows the diagonal line.

Table 3. Kolmogorov-Smirnov (Independent Variable)

One - Sample Kolmogorov - Smirnov Test		NPL	CAR	LDR	BOPO	NIM
N		60	60	60	60	60
Normal Parameters <sup>a,b</sup>	Mean	2.3723	16.7390	88.2837	77.9395	6.0073
	Std. Deviation	1.20936	2.56253	9.70908	13.99078	1.65135
Most Extreme Differences	Absolute	.141	.118	.093	.113	.170
	Positive	.141	.118	.083	.113	.170
	Negative	-.115	-.057	-.093	-.099	-.101
Kolmogorov-Smirnov Z		1.088	.910	.717	.876	1.319
Asymp. Sig. (2-tailed)		.187	.378	.683	.427	.062

a. Test distribution is Normal.

b. Calculated from data.

Table 4. Kolmogorov-Smirnov (Dependent Variable)

One - Sample Kolmogorov - Smirnov Test		
		ROA
N		60
Normal Parameters <sup>a,b</sup>	Mean	2.5543
	Std. Deviation	1.22353
Most Extreme Differences	Absolute	.149
	Positive	.149
	Negative	-.064
Kolmogorov-Smirnov Z		1.156
Asymp. Sig. (2-tailed)		.138
a. Test distribution is Normal.		
b. Calculated from data.		

Based on the Kolmogorov-Smirnov of Independent Variable and Dependent Variable, it shows the results of 5 (five) independent variables (NPL, CAR, LDR, OER, and NIM) and 1 dependent variable (ROA) that indicate a significance level which is above 0.05 or 5 %. It means that all independent variables are normally distributed.

### The Results of Heteroscedasticity Test

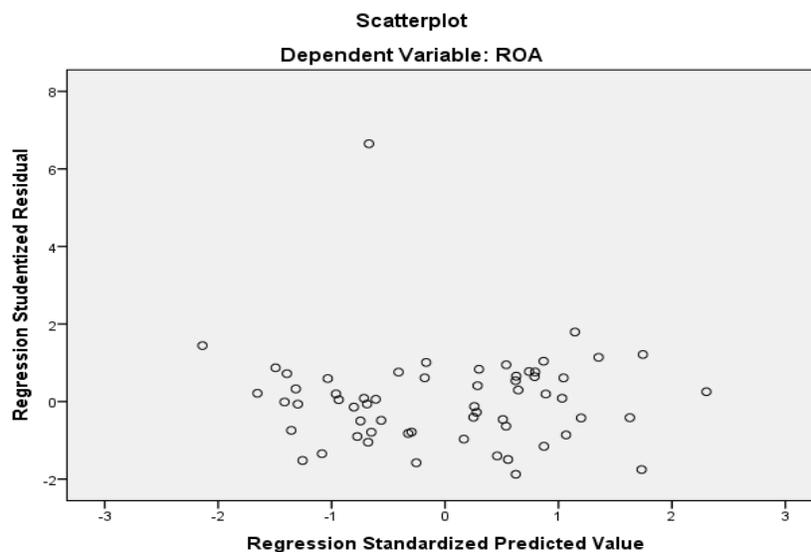


Figure 4. Heteroscedasticity Test

From the picture above, there is a plot chart showing that there is no clear pattern and there are dots that spread above and below the number 0 and on the Y axis. Therefore, it shows no heteroscedasticity.

### The Results of Autocorrelation Test

Table 5. Autocorrelation Test

<b>Model Summary<sup>b</sup></b>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.777 <sup>a</sup>	.604	.568	.80462	1.540

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

Based on the analysis results inside the table, it can be seen that the value of Durbin-Watson is 1.540. Based on the test criteria, if Durbin Watson D-W is 1.5 to 2.5 then there is no auto correlation so that the data is normally distributed.

### The Result of Multicollinearity Test

Table 6. Multicollinearity Test

<b>Coefficients<sup>a</sup></b>			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	NPL	.313	3.194
	CAR	.672	1.489
	LDR	.799	1.251
	BOPO	.251	3.990
	NIM	.653	1.531

**a. Dependent Variable: ROA**

From the results of the above five independent variables, it shows that the Variance Inflation Factor (VIF) value is less than 10 ( $VIF < 10$ ) and Tolerance value is less than 1 (Tolerance  $< 1$ ). Thus, it can be concluded that each independent variable is not correlated or does not occur multicollinearity.

## The Result of Multiple Linier Regression Estimation of Data Panel

### The Result of *t*-statistic Test

Table 7. *t*-statistic Test Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.616	1.445		5.963	.000
NPL	.365	.155	.360	2.356	.022
CAR	-.033	.050	-.069	-.663	.510
LDR	-.057	.012	-.453	-4.734	.000
BOPO	-.039	.015	-.449	-2.623	.011
NIM	.288	.078	.388	3.663	.001

a. Dependent Variable: ROA

Based on the above table, it can be seen that the multiple regression equations of this research are as follows:

$$\text{ROA} = 8.616 + 0.365 X_1 - 0.033 X_2 - 0.057 X_3 - 0.039 X_4 + 0.288 X_5$$

$$t \text{ count} = 5.963 + 2.356 X_1 - 0.663 X_2 - 4.734 X_3 - 2.623 X_4 + 3.663 X_5$$

$$t \text{ table} = 2.00$$

Description: a = Constants

X1 = Non Performing Loan (NPL)

X2 = Capital Adequacy Ratio (CAR)

X3 = Loan to Deposit Ratio (LDR)

X4 = Operating Expense Ratio (OER)

X5 = Net Interest Margin (NIM)

The interpretation results are as follows:

- The constant regression coefficient of 8.616 shows that if X1 (NPL), X2 (CAR), X3 (LDR), X4 (OER), and X5 (NIM) are 0 then Y (ROA) is 8.616.
- The regression coefficient of NPL (X1) variable of 0.365 means that if the NPL variable has increased by IDR 1 then ROA (Y) will increase by 0.365 with the assumption that other variables are considered constant.
- The regression coefficient of CAR (X2) variable of 0.033 means that if the CAR variable has increased by IDR 1 then ROA (Y) will decrease by 0.033 with the assumption that other variables are considered constant.

- d) The regression coefficient of LDR (X3) variable of 0.057 means that if the LDR variable has increased by IDR 1 then ROA (Y) will decrease by 0.057 with the assumption that other variables are considered constant.
- e) The regression coefficient of OER(X4) variable of 0.039 means that if the OER variable has increased by IDR 1 then ROA (Y) will decrease by 0.039 with the assumption that other variables are considered constant.

The regression coefficient NIM (X4) variable of 0.288 means that if the NIM variable has increased by IDR 1 then ROA (Y) will decrease by 0.288 with the assumption that other variables are considered constant. From the results of multiple linear regression equation above, the results of the test of each independent variable on the dependent variable can be analyzed as follows:

### **Non-Performing Loan (NPL) to Profitability (ROA)**

Based on the results of multiple linear regression test, it can be explained that the value of t count is 2.356 with the significance level of  $0.022 < 0.05$ . Based on this result, it can be concluded that NPL variable shows positive result but is not significant to ROA. Therefore, the hypothesis stating that NPL has negative effect to ROA is rejected.

*H1 = NPL has positive and insignificant effect on ROA variable*

The result of the regression coefficient indicates positive result which means that the increasing NPL value tends to increase ROA. These results are in contrast to the existing theory which states that the NPL has negative effect to the ROA; the higher the NPL value, the lower the profit received by the bank. On the other side, if the NPL decreases then the ROA will increase. NPL reflects credit risk in which the smaller the NPL, the smaller the risk borne by the bank. It is because the Provision for Earning Assets Losses (PPAP) can still cover the troubled loans. Bank profits can still increase with high NPL because banks can still obtain sources of profits not only from interest but also from other sources of income such as fee based income which also gives a relatively high effect to ROA level.

### **Capital Adequacy Ratio (CAR) to Profitability (ROA)**

Based on the results of multiple linear regression test, it can be explained that the value of t count is -0.063 with the significance level of  $0.063 > 0.05$ . The result of the test indicates that the independent variable of CAR partially has no effect on the dependent variable of ROA. Based on this result, it can be concluded that H0 is accepted, which means that CAR variable partially has no effect to ROA.

*H2 = CAR has no effect on ROA*

The greater the CAR then the ROA received by the bank will be greater and vice versa. It is because the greater the CAR, the higher the capital ability of the bank in maintaining the possibility of the risk of loss of business activities but not necessarily significantly has effect to the raising ROA of the Commercial Bank. On the other hand, high CAR of Commercial Bank can decrease bank ability to expand its business due to the increasing capital reserves that are used to cover the risk of loss. Inhibition of business expansion is caused by high CAR which will finally affect the financial performance of the bank.

After being reviewed, CAR has no effect to ROA of possibilities that may because of banks that operate in that year strongly maintain the amount of existing or owned capital. It was due to the existence of Bank Indonesia regulations requiring a minimum CAR of 8% which made the banks always tried to keep the CAR owned in accordance with applicable regulations. The CAR value is derived from bank capital in Risk Weighted Assets (RWA). Thus, the greater the Risk Weighted Asset (RWA) will decrease the CAR value and otherwise the smaller the RWR will increase the CAR value. On the other hand, the loans granted to the public may open the bank's opportunity to earn income from the loan interest. Therefore, another possibility that the CAR has no effect to ROA is the bank has not been able to throw credit in accordance with the requirements or is not optimal. However, the theory of this result has been in accordance with the results of previous research that the CAR has negative effect to profitability.

#### Loan to Deposit Ratio (LDR) to *Profitability* (ROA)

Based on the results of hypothesis tested with t test, it can be seen that the Loan to Deposit Ratio (LDR) variable has the result of t value of -4.734 with a significance value of  $0.000 < 0.05$ , which means that this variable has significant and negative effect to Return on Assets (ROA).

#### *H3 = LDR has significant and negative effect on ROA*

The results of this research are not in line with the hypothesis and the theory that the higher the LDR then the ROA obtained will be high. It may be due to the high increase of LDR to exceed the maximum limit that causes Return on Assets to decrease. Another possibility is that the number of loans given by the bank is too low then the level of public confidence decreases. By the decrease, ROA will decrease because there is no income of capital source from society or third party funds.

#### *Operating Expense Ratio to Profitability (OER)*

Based on the results of hypothesis tested with t test, it can be seen that the Operating Expense Ratio (OER) variable has the result of t value of -2.623 and significance value of 0.011 which means that it has significant and negative effect to Return on Assets (ROA).

*H4 = OER has significant and negative effect on ROA*

The results of this research are in accordance with the hypothesis and theory that the greater the OER, the ROA will decrease which is caused by the poor performance of bank management in managing the available resources. This indicates that the operational costs are not matched by the increase in operating income so that the bank is not efficient in managing the operational income that has been received because the operational cost has a direct relationship with the business activities of banks such as interest costs, foreign exchange fees, labor costs, depreciation costs, as well as other costs.

*Net Interest Margin to Profitability (ROA)*

Based on the results of multiple linear regression test, it can be concluded that the value of t count is 3.663 with a significance level of  $0.001 < 0.05$ . The results of this test indicate that the independent variable of NIM partially has an effect to the dependent variable ROA. Based on this result, it can be concluded that H0 is accepted, which means that the NIM variable has an effect to the ROA variable partially.

*H5 = NIM has positive effect on ROA*

Any increase in net interest income, which represents the difference between the total interest cost and the total interest income, leads to an increase in profit before tax, which in turn leads to an increase in Return on Assets (ROA). It is in accordance with the previous theory in which the theory explains that the greater NIM achieved by a bank will increase interest income on productive assets managed by the bank, so the bank profit (ROA) will increase. Thus, it can be formulated that NIM has positive and significant effect to ROA. Based on the results, this research supports the research conducted by Sianturi (2012) and Raharjo (2013) which stated that the NIM had effect to the ROA of banking companies.

**Simultaneous Effect Test (F-Test)**

Table 8. Simultaneous Regression Calculation Result

<b>ANOVA<sup>a</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.364	5	10.673	16.485	.000 <sup>b</sup>
	Residual	34.961	54	.647		
	Total	88.324	59			

a. Dependent Variable: ROA

Based on the output of SPSS version 20.00 in the above table, it can be seen that the F test value is 16.485 and the significant value is  $0.000 < 0.05$ . Therefore, the hypothesis is accepted, which means that the independent variables (NPL, CAR, LDR, OER, and NIM) have effect to dependent variable (ROA).

### ***The Result of Determination Coefficient Test ( $R^2$ )***

Table 9. The Result of Determination Coefficient Analysis ( $R^2$ )

<b>The Model of Summary<sup>b</sup></b>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.777 <sup>a</sup>	.604	.568	.80462	1.540

a. Predictors: (Constant), NPL, CAR, LDR, OER, NIM    b. Dependent Variable: ROA

The table 9 shows that coefficient of determination ( $R^2$ ) is 0.604. It means that the variation of banking performance variables (ROA) which can be explained by the NPL, CAR, LDR, OER and NIM variables is 60.4% while the remaining 39.6% is influenced by other variables outside the research model.

## **CONCLUSIONS**

Based on the results of data analysis and discussion, it can be concluded as follows:

1. Partially, NPL and CAR has no effect to ROA. OER has significant and negative effect to ROA, NIM has significant and positive effect to ROA and LDR has significant and negative effect to ROA.
2. Simultaneously, independent variables (NPL, CAR, LDR, OER, and NIM) can explain the model of profitability or dependent variable (ROA).
3. To further research about NPL, CAR, LDR, BOPO and NIM on ROA of Banking, it may examine how to manage banking crisis across countries. In addition, other issues relating to banking relationships, fragility, and asset liabilities should also be examined deeply to realize better banking business.

## **SUGGESTIONS**

Based on the fact found in the research entitled THE EFFECT OF NPL, CAR, LDR, OER AND NIM TO BANKING RETURN ON ASSET, following suggestions are made:

1. For banking practitioners, the existence of Conventional Bank is needed for the society of Indonesia. It is in accordance with the principle of Conventional Bank that is to set the

interest as a price, both for savings products such as savings, time deposits, or loan products (credit) that are given based on certain interest rates.

2. Then, for the investors should pay attention to the Return On Asset (ROA) because by looking at ROA level we know how much profit generated by Conventional Bank and it can be a benchmark for us to be able to have an investment in Conventional Bank.
3. For the next researchers, this research can be continued using more variables and using longer periods in order to provide more accurate research results. Limitation of this study is that it only examines macro variables such as NPL, CAR, LDR, OER and NIM. Further research is expected to examine more variables because based on the ability of model research prediction of 60.4% that is indicated on the value of adjusted  $R^2$ , it means that there is a rest of 39.6% which is explained by other variables other beyond the model of this research.

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