

Influence of Car, Ldr, Npl and Bopo on Roa on Commercial Banks Listed on the Indonesia Stock Exchange in 2010-2016

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ABSTRACT: This study aims to test how much influence Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non Performing Loan (NPL), Operational Revenue Expense (BOPO) to ROA; how much influence the CAR, LDR, NPL and BOPO simultaneously against ROA at commercial banks listed on the Indonesia Stock Exchange 2010-2016. The data used is secondary data in the form of financial ratios with the amount of 140 observations. Sampling is done by purposive sampling with the number of 20 banks, namely the largest commercial banks listed on the Indonesia Stock Exchange in terms of assets position of December 2016. Statistical test of SPSS which is used to test classical assumptions and multiple regression analysis. The results showed that CAR had no effect on ROA with a value of 0.2%. LDR has no effect on ROA with a value of 1.4%. NPL has a negative and significant effect on ROA with a value of 25.7%. BOPO has a negative and significant effect on ROA with a value of 77.2%. Simultaneously CAR, LDR, NPL, and BOPO have a significant influence on ROA at commercial banks listed on the Stock Exchange in 2010-2016. The prediction ability of these four variables on ROA is 81.60%, while the rest is influenced by other factors outside the research model.

KEYWORDS: CAR, LDR, NPL, BOPO, ROA

1. INTRODUCTION

The banking industry is an important part of a Country's economy, namely as an intermediary in serving economic activities or as an *Intermediary Institution*. *Intermediary Institution* (financial intermediary) is an institution that is able to channel funds owned by *surplus* economic units (excess funds) to economic units that need financial assistance (deficit). Setiawan (2009) stated that profitability is the most appropriate indicator to measure a bank's performance. ROA focuses the company's ability to make a profit in its operations. Some factors that affect the bank's profitability are *Capital Adequacy Ratio* (CAR), *Loan to Deposit Ratio* (LDR), *Non Performing Loan* (NPL) and Operating Income Operating Expenses (BOPO).

Capital is a very important starting foundation to note if an economic entity is going to set up a business. The greater the capital value, the entity can start its business well, such as carrying out its operational activities and developing its business scale, as well as banking. All banks in Indonesia are required to provide minimum capital or minimum capital provision obligations (KPMM). The purpose of the bank's minimum capital is to cover the possibility of risk-risk losses from risky assets. The minimum capital fulfillment provisions of banks are reflected in CAR. Thus CAR has an influence on the bank's performance.

The ability of banks to provide loans to the public must certainly be balanced with the amount of deposits obtained by banks. Banks cannot run without public acceptance in the form of deposits. However, the bank is also unable to maximize its profits simply by receiving deposits from the public. Therefore, a balance between the loan disbursed and the deposit received (intermediation function) is required. According to Pasaribu and Sari (2011) the indicator used to measure the running of an intermediation function is the *Loan to Deposit Ratio* (LDR). Thus, LDR has an influence on bank performance.

Banks in providing credit to the public must pay attention to matters related to the business of prospective debtors, in other words the bank must assess whether its efforts are appropriate to finance or not. Furthermore, the bank must pay attention to the use of credit provided, including monitoring the business development of its prospective debtors. The purpose of this anticipation is so that there are no irregularities in the use of credit so that the opportunity to become non-performing loans becomes small or even non-existent. The ratio that can be used as an indicator in this case is NPL, which is a ratio that describes a bank's ability to control non-performing loans or a ratio that indicates the quality of bank assets.

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Operational efficiency is carried out by the bank in order to find out if the bank in its operations related to the principal business of the bank, is carried out correctly (in accordance with the expectations of the management and shareholders) and used to show whether the bank has used all its production factors appropriately and successfully. Thus, the operating efficiency of a bank that is proxied with the BOPO ratio will affect the bank's performance.

This study aims to find out how much influence CAR, LDR, NPL and BOPO have on ROA and how much influence CAR, LDR, NPL and BOPO simultaneously have on ROA in commercial banks listed on the Indonesia Stock Exchange in 2010-2016.

Banks are an industry engaged in the field of trust that connects debtors and lenders of funds. From all the above understandings can be explained more broadly that the bank is a company engaged in finance, meaning that banking activities are always related in the field of finance so that talking about banks will not be separated from financial problems. According to Cashmere (2012: 19-24) the type of bank can be reviewed from 3 facets, namely its function, ownership, and status. In terms of the function of banks can be distinguished into 2, namely commercial banks and people's credit banks (BPR). Commercial banks are banks that carry out business activities conventionally and or based on sharia principles, which in their activities provide services in payment traffic. Unlike commercial banks, BPR does not provide services in payment traffic. This means that the banking services offered by BPR are much narrower when compared to the activities or services of commercial banks. In terms of ownership, banks can be distinguished into 4, namely government-owned banks, national privately owned banks, foreign-owned banks and mixed banks while in terms of bank status can be distinguished into 2, namely foreign exchange banks and non-foreign exchange banks.

According to Harmono (2009: 104), financial statements are an analysis tool for the company's comprehensive financial management, can be used to detect / diagnose the level of health of the company, through cash flow conditions or the company's operational performance both partial and organizational performance as a whole. In general, there are four forms of basic financial statements produced by the company, namely balance sheet statements, profit and loss statements, capital change reports, and cash flow statements. Of the four reports, only two types are commonly used as analysis, namely balance sheet statements and profit and loss statements. In general the objectives of the financial statements according to Veithzal Rivai (2007: 616) are as follows: (1) Provide cash information about the company's financial position in a certain period; (2) Provide financial information about the company's business results during a certain accounting period; (3) Provide information that can help interested parties to assess the condition and potential of a company; and (4) Provide other important information relevant to the needs of interested parties with financial statements.

Financial ratio is an instrument of analysis of the company's achievements that explains various financial relationships and indicators. This financial ratio *is very* important to analyze the financial condition of the company. The goal is to show changes in operating performance in the past and help illustrate the trend patterns of the company, to then show the risks and opportunities inherent in the company in question (Irham Fahmi, 2012: 46). The company's financial and performance ratios are closely related. There are many financial ratios and each ratio has its own uses. So, to assess the condition and financial performance of the company can be used ratios that suit the needs of users.

Profitability or commonly referred to as rentability is the ability of a company to make a profit over a certain period. The profitability of the company shows a comparison between profit and assets or capital that generates such profit. Profitability has a causality relationship to the value of the company. This causality relationship shows that if the company's management performance is measured using profitability ratio in good condition, it will have a positive impact on investors' decision in the capital market to invest in the form of capital investment.

According to Setiawan (2009), the common measure of profitability used *by companies is return on equity (ROE)*, while for the banking industry the indicator used is return on *assets (ROA)*. ROA focuses the company's ability to earn *earnings in the company's* operations. Furthermore, explained by Karya and rakhman as quoted by Wibowo (2013), ROA level is used to measure bank profitability because Bank Indonesia as the supervisor and supervisor of banks prioritizes the profitability value of a bank as measured by assets whose funds come from most public deposit funds. In accordance with the Circular Letter issued by Bank Indonesia, namely SE No.13/24/DPNP dated October 25, 2011, the ideal minimum ROA provision for banks is 1.5%. This means that if the bank gains profit below the value set by Bank Indonesia, the bank is declared still not optimal in managing its assets.

Based on SE BI No.15/41/DKMP dated October 1, 2013, CAR or the ratio of Minimum Capital Provision Obligation hereinafter abbreviated as KPM is the ratio between capital and risk-weighted assets as referred to in Bank Indonesia regulation on the obligation to provide minimum capital of commercial banks. The issue of capital adequacy is important in the banking business. Banks that have a good level of capital adequacy, show indicators as a healthy bank. Based on Bank Indonesia Regulation, minimum capital adequacy that must be met by each bank is 8% (PBI No.15/12/PBI/2013 concerning Minimum Capital Provision

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Obligation of Commercial Banks). CAR has a function to identify, measure, monitor, and control the risks that arise that can affect the amount of bank capital.

LDR is the ratio of credit given to third parties in Rupiah and foreign currencies, excluding credit to other banks, to Third Party Funds (DPK) which includes current accounts, savings accounts, and deposits in Rupiah and foreign currencies, excluding interbank funds. The lower limit provision for LDR is 78% and the tolerable upper limit is 100% (SE BI No.15/41/DKMP dated October 1, 2013). The LDR ratio states how far the bank can go in repaying depositors' withdrawals by relying on credit provided as a source of liquidity. In other words, how far credit is given to customers can offset the obligation of banks to immediately meet the demand of depositors who want to withdraw their money that has been used by banks to provide credit.

NPL is a financial ratio that shows the credit risk faced by banks due to lending and investment of bank funds in different portfolios. According to Taswan (2010), NPL is a comparison between non-performing loans and total loans. Furthermore, it is explained that the higher the NPL ratio, indicating the worse the credit quality. Every bank investment needs to be assessed quality by determining the level of collectibility that is whether smooth, doubtful or stuck. Based on SE BI No.13/30/DPNP dated December 16, 2011, it is stipulated that the NPL ratio should not exceed 5%. Each bank should be aware of the collectibility of the credit provided. It is necessary to know the amount of minimum reserves of productive assets that must be provided by the bank to cover possible losses that occur.

The BOPO ratio is a comparison between operating costs and operating income. This ratio is also referred to as the efficiency ratio used to measure the bank's management ability to control operating costs to operating income. The BOPO ratio indicates the operational risks borne by the bank. Operational risks occur due to uncertainty regarding the bank's business, including possible losses from operations in the event of a decrease in profits affected by the structure of the bank's operating costs and the possibility of failure of new services and products offered. In Bank Indonesia Circular Letter No. 15/7/DPNP dated March 8, 2013, BOPO benchmark is set for commercial banks of business group (BUKU) I with a maximum of 85%. BOOK II range 78% - 80%, BOOK III 70-75% and BOOK IV 60% - 65%. Benchmark is the average BOPO of banks by group. Buku is a grouping of banks based on core capital. This means that the BOPO ratio that commercial banks must maintain is not more than 85%.

2. METHODS

The approach used in this research is quantitative approach, because it emphasizes on testing theories through measuring research variables with numbers and doing data analysis with statistical procedures. This type of research is an associative research that aims to find out the influence or relationship between two or more variables. Data analysis in this study used multiple linear regression with a total of 140 observations.

According to Sugiyono (2013: 3), research variables are attributes or traits or values of people, objects or activities that have certain variations set by researchers to be studied and drawn conclusions. The research variables used in this study consisted of two types of variables namely Dependent Variable and Independent Variable.

Dependent variables (Variable Y) are variables whose values are influenced by independent variables. The dependent variables in this study were aspects of profitability measured by ROA (Y).

ROA is a profitability ratio used to measure the effectiveness of the company in generating profits by utilizing its total assets. Based on SE BI No.13/30/DPNP dated December 16, 2011 the formula used in roa calculation is as follows:

$$\text{Roa} = \frac{\text{Profit Before Tax}}{\text{Average Total Assets}}$$

Independent variables (variable X) are variables that are the cause of the occurrence or influence of dependent variables. Independent variables in this study are financial ratios in the form of CAR (X1), LDR (X2), NPL (X3) and BOPO (X4).

CAR is a ratio that shows how much all risk-containing assets (credit, investment, securities, bills at other banks) are financed from their own capital in addition to obtaining funds from sources outside the bank. Based on SE BI No.13/30/DPNP dated December 16, 2011 the formula used in car calculation is as follows:

$$\text{CAR} = \frac{\text{Bank Capital}}{\text{Total ATMR}}$$

LDR is the ratio of credit given to funds received by banks (current accounts, savings accounts, deposits). Based on SE BI No.13/30/DPNP dated December 16, 2011 the formula used in LDR calculation is as follows:

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$$\text{LDR} = \frac{\text{Total Credits}}{\text{Total Third Party Funds}}$$

NPL is the ratio between total non-performing loans and loans provided by banks. Based on SE BI No.13/30/DPNP dated December 16, 2011 the formula used in NPL calculation is as follows:

$$\text{NPL} = \frac{\text{Total Non-Performing Loans}}{\text{Total Credits}}$$

BOPO is an efficiency ratio that measures the bank's management ability to control operating costs to operating income. Based on SE BI No.13/30/DPNP dated December 16, 2011 the formula used in BOPO calculation is as follows:

$$\text{BOPO} = \frac{\text{Total Operating Expenses}}{\text{Total Operating Income}}$$

Data collection techniques are an effort to obtain the data needed for this research. In order to obtain relevant data to match the problems faced, the data used in this research is documentation data or secondary data, so that the method of data collection using *non participant observation method*. Documentation data in this research was obtained from the Indonesia Stock Exchange (IDX) and browsing on the official website of IDX namely www.idx.co.id or from the bank publication report on the www.ojk.go.id. In addition, data collection is also done by studying literatures in the form of books, journals, and articles related to this research.

Sampling techniques used in this study are *non-probability sampling purposive sampling with a type of sampling method based on judgment sampling*. *Judgment sampling* is a type of random selection of samples whose information is obtained using certain considerations (generally tailored to the purpose or problem of research). Sampling in this study uses the following criteria: (1) Banks listed on the Indonesia Stock Exchange (IDX) during the research period from 2010 to 2016; (2) Banks that published the full annual financial statements in the period of research from 2010 to 2016; (3) 20 Banks with the largest assets in December 2016; and (4) The banks studied are still operating in the research period from 2010 to 2016. Based on the sample criteria, the number of samples that are eligible for use in this study is as many as 20 banks.

The analysis method used in this research is to perform quantitative analysis expressed by the numbers in its calculation using statistical methods assisted by a statistical data processing program known as SPSS. The methods used are descriptive analysis, classical assumption test, R2 determination coefficient, individual parameter significance test (t statistical test) and simultaneous significance test (F statistic test).

RESULTS AND DISCUSSION

Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|-----|---------|---------|---------|----------------|
| CAR | 140 | 9.92 | 45.75 | 17.0016 | 4.13640 |
| LDR | 140 | 40.22 | 113.30 | 83.4945 | 12.51162 |
| NPL | 140 | .23 | 8.83 | 2.3634 | 1.24489 |
| BOPO | 140 | 59.93 | 111.53 | 81.6560 | 10.02172 |
| Roa | 140 | -4.89 | 5.03 | 2.0632 | 1.37783 |
| Valid N (listwise) | 140 | | | | |

Source: Processed secondary data

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Based on the table above, the description of research data can be explained as follows:

1. The standard value of CAR deviation is 4.13640, where the value is much smaller than the mean value, so it can be said that the CAR variable data is good.
2. The standard LDR deviation value represents a number of 12.51162 that is still below the mean value of the LDR variable. Then it can be said that the LDR variable data is good.
3. The standard deviation value for the NPL variable is 1.24489 which is less than the mean value. So it can be said that the data on npl variables is good.
4. The standard deviation value of 10.02172 is much lower than the mean value, so it can be said that bopo variable data is good.
5. The standard deviation of 1.37783 indicates a relatively small deviation of data because the value is less than the mean value of the ROA variable. That way, it can be concluded that roa variable data is good.

Coefficients^a

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | It's getting you out of here |
|-------------|-----------------------------|------------|---------------------------|---------|------------------------------|
| | B | Std. Error | Beta | | |
| 1(Constant) | 11.205 | .532 | | 21.075 | .000 |
| CAR | .019 | .012 | .056 | 1.505 | .135 |
| LDR | .002 | .004 | .017 | .465 | .643 |
| NPL | -.231 | .044 | -.209 | -5.228 | .000 |
| BOPO | -.111 | .006 | -.808 | -20.054 | .000 |

a. Dependent Variable: ROA

Source: Processed secondary data

By paying attention to the model of multiple linear regression equations and the results of regression analysis table above, the equation is obtained as follows:

$$ROA = 11,205 + 0,019 CAR + 0,002 LDR - 0,231 NPL - 0,111 BOPO + e$$

From the above multiple linear regression equation, it is known to have a constant value of 11,205, meaning that if all independent variables are 0, then the dependent variable value (ROA) is 11,205. Then for the direction of the relationship, car and LDR variables have a positive direction towards ROA. The positive value of the CAR coefficient of 0.019 indicates that if CAR increases by one unit (assuming another independent variable remains) then the ROA value increases by 1.9% and the positive value of the LDR coefficient by 0.002 indicates that if the LDR increases by one unit (assuming another fixed independent variable) then the ROA value increases by 0.2%. Conversely, NPL and BOPO variables have a negative direction towards ROA. The negative value of the NPL coefficient of -0.231 indicates that if the NPL increases by one unit (assuming another independent variable remains) then the ROA value decreases by 23.1% and the negative value of the BOPO coefficient of -0.111 indicates that if the BOPO rises by one unit (assuming another independent variable remains) then the ROA value decreases by 11.1%.

From the calculation of regression analysis for car variables, a significance value of 0.135 is obtained while the regression coefficient is 0.019. The value of t significance is greater than the significance level of 0.05 (sig t > 0.05). Because the significance value exceeds 0.05, in this case the influence of CAR on ROA cannot be interpreted. So the conclusion is that H_0 was accepted and H_a was rejected so it can be concluded that CAR has no effect on ROA in commercial banks registered in the IDX in 2010-2016. LDR variables, a significance value of 0.643 was obtained while the regression coefficient was 0.002. The value of t significance is greater than the significance level of 0.05 (sig t > 0.05). Because the significance value exceeds 0.05, in this case the influence of LDR on ROA cannot be interpreted. So the conclusion is that H_0 was accepted and H_a was rejected so that it can be concluded that LDR has no effect on ROA in commercial banks listed in the IDX in 2010-2016. NPL variables, a significance value of 0.000 was obtained while the regression coefficient was -0.231. The value of t significance is less than the significance level of 0.05 (sig t < 0.05). Because the significance value is less than 0.05, the conclusion is H_0 is rejected and H_a is accepted so that it can be concluded that THE NPL has a negative and significant effect on ROA in commercial banks registered in the IDX in 2010-2016. For the

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regression coefficient of -0.231 means that each NPL increase of 1% will decrease roa by 0.231%. BOPO variables, a significance value of 0.000 is obtained while the regression coefficient is -0.111. The value of t significance is less than the significance level of 0.05 (sig t < 0.05). Because the significance value is less than 0.05, the conclusion is H_0 is rejected and H_a is accepted so that it can be concluded that BOPO has a negative and significant effect on ROA in commercial banks registered in the IDX in 2010-2016. For the regression coefficient of -0.111 means that each 1% increase in BOPO will decrease roa by 0.111%.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .903 ^a | .816 | .811 | .59921 |

Source: Processed secondary data

Based on the table above obtained the value of determinant coefficient (R^2) of 0.816. This indicates that the percentage of ROA variations that can be explained by variations of the four free variables namely CAR, LDR, NPL, and BOPO is 81.6%, while the remaining 19.4% is explained by other factors outside the model. Then partially the four free variables namely CAR, LDR, NPL, and BOPO affect how much roa can be seen in the following table:

CONCLUSION

Car's influence on ROA in commercial banks registered in the IDX in 2010-2016 was only 0.2%, with a regression coefficient of 0.019 and a significance of 0.135. This indicates that CAR has no effect on ROA.

The influence of LDR on ROA in commercial banks registered in IDX in 2010-2016 was only 1.4%, with a regression coefficient of 0.002 and a significance of 0.643. This indicates that LDR has no effect on ROA.

The influence of NPL on ROA in commercial banks registered in idx in 2010-2016 is quite large at 25.7%, with a regression coefficient of -0.231 and significance of 0.000. This indicates that NPL has a negative and significant effect on ROA.

Bopo's influence on ROA in commercial banks registered in the IDX in 2010-2016 was very high at 77.2%, with a regression coefficient of -0.111 with a significance of 0.000. This indicates that BOPO has a negative and significant effect on ROA.

Variables CAR, LDR, NPL and BOPO jointly (simultaneously) have a significant effect on ROA in commercial banks registered in the IDX in 2010-2016. This is indicated by a calculated F value of 149,982 and a significance of 0,000. The result of determinant coefficient test (R^2) obtained R^2 value of 0.816 which means that the regression model capability consisting of CAR, LDR, NPL and BOPO as independent variables is able to explain the variation of ROA changes as dependent variables of 81.60% and the remaining 19.40% described by other variables outside the model.

The average value of CAR is in the range of 17 percent. This is quite good because the standard set by Bank Indonesia is 8 percent. But capital reserves also need to be considered because the condition of banks that are too solvabel will make it difficult for banks to make a profit.

The average LDR is quite sufficient at 83.49 percent, above the minimum standard set by Bank Indonesia of 78 percent. This indicates that lending is optimal enough that banks do not need to be aggressive in adding credit schemes. Average NPL value of 2.36 percent meets Bank Indonesia's criteria because the maximum tolerable limit is 5 percent. Its value is quite good when it comes to the quality of productive assets. Even though it meets Bank Indonesia's maximum criteria, the NPL value still needs to be lowered because the smaller NPL will increase the profit. Average BOPO value is still quite large at 81.65 percent. If referring to *the BOPO benchmark* with a minimum value of 60 percent for BOOK IV and a maximum of 85 percent for BUKU I, then the value of 81.65 percent is still quite large indicating that the bank is still inefficient. Therefore, banks still need to make efforts to streamline costs because smaller costs will guarantee greater profits. Average ROA of 2.06 percent meets Bank Indonesia's minimum criteria of 1.5 percent. Even though it meets Bank Indonesia's minimum criteria, the ROA value still needs to be increased. Banks need to make efforts such as credit expansion and operational cost suppression to increase ROA value.

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