

# Determining Factors of Banking Performance in Indonesia



Kevin Salim, Ignatius Roni Setyawan

**Abstract:** Motivated by the large number of banking studies in Indonesia that have not included NOP (Net Open Position) in profitability modeling, our research aims to realize this. As for the reason for the importance of the Net Open Position (NOP) variable, it is almost certain that all banks will use foreign currency items in their asset and liability management activities. All commercial banks in the BUKU level 1, 2, 3 and 4 will definitely be involved in demand deposits as a consequence of continuing financial market activities to safeguard the economic activities of a country. By referring to previous research models from Al-Omar, et.al. (2008), Albulescu (2015), Muhmad & Hashim (2015), Menicucci & Paolucci (2016) and Saputri & Oetomo (2016) then identified four determinants of bank profitability variables, namely CAR, NPL, NOP and LDR. These four variables will then be defined conceptually and formulas referring to banking theory applicable in Indonesia, namely CAMEL (Capital, Management, Asset, Earning and Liquidity). Each variable will function as a bank specific factor that will determine the profitability of the bank both grossly as measured by ROA and net measured by ROE. Results of the test with panel data regression show that the NOP variable is always a determining factor in the ROA and the ROE models. This also provides evidence that NOP is indeed very important in determining ROA and ROE for bankers. With the proven NOP as the main determinant, the argument is supported that commercial banks must pay attention to the foreign exchange items in their asset and liability management. In addition to NOP, NPL is also important for determining ROA and ROE of banks.

**Keywords :** Loan to Deposit Ratio (LDR), Net Open Position (NOP), Non-Performing Loan (NPL), Capital Adequacy Ratio (CAR), Bank's Profitability, BUKU Level 1, 2, 3 & 4.

## I. INTRODUCTION

In 2012, Bank Indonesia issued a regulation concerning Commercial Banks Business Activities based on Bank Core Capital. Every bank, both commercial banks and sharia banks, must have a capital called "Core Capital" in its operations. This Core Capital consists of paid up capital plus profits from the banking industry after tax deduction. This core capital is important because it involves the level of security and strength of the bank in dealing with operational risks. In other words, the greater the Core Capital, the more secure the customer's funds deposited in the Bank.

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Based on the core capital owned by the Bank grouped into 4 business groups [Commercial Banks Business Group or Bank Umum Kelompok Usaha (BUKU)] as follows:

- BUKU 1, Banks with core capital of less than IDR 1 trillion;
- BUKU 2, Banks with core capital of IDR 1 Trillion to less than IDR 5 Trillion;
- BUKU 3, Banks with core capital of IDR 5 Trillion up to less than IDR 30 Trillion; and
- BUKU 4, Banks with core capital above IDR 30 Trillion.

In 2017, digital technology is becoming a trend and concern in the banking and financial services industry. A number of large banks in Indonesia, namely Bank Mandiri, Bank Rakyat Indonesia, Bank Negara Indonesia, Bank Central Asia, and CIMB Niaga reportedly issued investment budgets of 1–4 trillion rupiah in digital technology to develop digital banking (Saraswati, 2017). Indonesian people have previously known digital banking in the form of electronic banking services such as ATMs, EDCs, internet banking, mobile banking, SMS banking and phone banking.

Banks play an important role in economic stability and development through contributions expected to improve the efficiency of reallocation and use of funds and ultimately resources in the economy. Therefore the profitability of the banking sector is very important for the stability and overall growth of the economy (AL-Omar and AL-Mutari, 2008). Financial statements are important indicators in evaluating the performance of a bank. In financial statements, factors that influence bank performance can be sourced from various indicators which are shown through several banking ratios. Ratios that are generally used in measuring bank financial performance are liquidity ratios, profitability or profitability and solvency ratios (Kasmir, 2008: 281).

Financial performance can be measured through profitability. Profitability shows how efficient a company is in creating profits by using all available sources (Olalekan and Adeyinka, 2013). The profitability performance of a bank shows management success and is one of the most important performance indicators for investors (Menicucci and Paolucci, 2016). In the literature, bank profitability is usually measured using Return on Assets (ROA) and Return on Equity (ROE). Bank Indonesia, in measuring the soundness of a bank by looking at the value of its profitability, prioritizes the measurement of using assets because most of the funds come from public savings (Dendawijaya, 2009). However, the weakness of ROA is the possibility of assets outside the balance sheet that are a source of profit but are not taken into account.

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Therefore, Petria et al. (2015) argue that the use of ROE is more appropriate. ROE shows the company's ability to generate profits from its capital. So in this study using Return on Assets (ROA) and Return on Equity (ROE) as a measure of bank profitability performance. Therefore our study intends to improve the results of previous studies by contributing a new determinant of bank performance in Indonesia, namely the NOP (Net Open Position).

### II. THEORETICAL REVIEW

*Signaling Theory.* Signal theory states that good quality companies will intentionally give signals to the market, thus the market is expected to be able to distinguish good and bad quality companies (Hartono, 2005: 35). The concept of signal theory is generally the availability of information for outsiders. The information provided can be in the form of financial statements which for investors are a tool for conducting fundamental analysis for decision making. High profitability shows a good company performance, so investors who catch the signal will be interested in investing their funds in the form of buying shares or other securities to the company.

*Anticipated Income Theory.* The anticipated income theory is a theory which states that banks should be able to provide long-term credit where the repayment, namely principal loan installments plus interest with a payment schedule that will provide cash flow positively to meet bank liquidity (Siamat, 2005: 343). The anticipated income theory starts from the low credit application to banks which results in excess liquidity and low profits earned by banks, especially when the economy is experiencing a recession. With this theory, banks are encouraged to be more aggressive by providing long-term credit. The link between the use of the anticipated income theory is related to the long-term provision of credit as the main source of bank income. The low credit given will increase bank liquidity which impact on the low profitability of banks.

*Agency Theory.* In the banking sector, agency theory is unique because this sector is different from other industries. One of them is the existence of very strict regulations, which results in the application of agency theory in banking accounting to be different from accounting for non-banking companies. With this regulation, there are other parties involved in the agency relationship, namely the regulator in this case the government through Bank Indonesia (BI) which acts as the principal and banks in Indonesia as their agents. BI is tasked with overseeing banking activities and performance in Indonesia. In banking companies, in addition to the relationship between agents and regulators, there is also a relationship between agents and debtors and agents and owners.

*Liquidity Ratio.* It is used to measure the ability of banks to meet their short-term obligations when billed. The indicator used in this liquidity ratio is Loan to Deposit Ratio (LDR). Kasmir (2014: 225) states that "LDR is a ratio used to measure the composition of the amount of credit given compared to the amount of public funds and own capital used". Liquidity has a negative relationship with profitability where if the level of company liquidity is higher then it can be said to be the level the profitability of the

company will be lower. If a company has high liquidity, the company loses the opportunity to get additional profits, because the funds that should be used for profitable investments are used to meet liquidity. The higher LDR indicates that the bank is lending all of its funds or becoming illiquid. Based on the description above, the relationship between LDR and profitability is positive. If the LDR of a company is high, it indicates that the company has given full credit, then the income earned on interest is also high. So that the higher the LDR, the higher the bank's profitability. Research conducted by Albuлесcu (2015), and Saputri and Oetomo (2016) show that the LDR has a positive effect on bank profitability. While research conducted by Nurhayati (2013) shows different results, namely LDR has a negative effect on bank profitability.

*Net Open Position (NOP).* It is one of the important factors in managing foreign exchange transaction risk that is used as a controller of foreign exchange management positions due to fluctuations in exchange rate changes that are difficult to predict. According to Indriastuti and Ifada (2016) Every sale and purchase transaction of foreign exchange risk because it contains leads to open positions in a particular currency can be a speculative tool for banks with the aim of gaining profits from foreign exchange. An open position causes a potential profit if the exchange rate strengthens in a long position or weakens the exchange rate when a short position and the potential loss if the exchange rate strengthens in a short position or weakens the exchange rate when a long position. Which means a long position is a condition where assets are greater than liabilities in foreign currencies and the intended currency is a condition where the short position in foreign currency assets is smaller than foreign currency liabilities. NOP is used to control the position of foreign exchange management, because in foreign exchange management, the focus of management is on limiting the overall position of each foreign currency and monitoring foreign exchange trading in a controlled position. The control of the foreign currency is intended to fulfill obligations in foreign currencies and to obtain the highest income, obtained from the difference between the selling and buying rates of the foreign exchange. The results of this study are in line with research conducted by Putra (2013), Andriyani (2013), Susila (2013), Ratnasari (2014) which states that NOP has a significantly negative effect on bank profitability.

*Non-performing Loans (NPL).* It is known as problem loans. According to Saputri and Oetomo (2016) "NPL is a comparison between total non-performing loans and total loans given to debtors". Mienucci and Paolucci (2016) explain if NPLs are getting higher, it shows low credit quality. Therefore the coefficient between NPLs and the profitability of the banking sector is negative because bad loans are expected to reduce profitability (Albuлесcu, 2015). Based on this description, the higher the NPL ratio of a bank, the bank's profitability will be lower. Research conducted by Ofoeda et al. (2016) shows that NPL has a positive and significant effect on bank profitability.

While different results are shown from research conducted by Capraru and Inhatov (2014), Albulescu (2015), Saputri and Oetomo (2016), and Menicucci and Paolucci (2016) which show that NPL has a significantly negative effect on bank profitability.

**Solvency ratio.** It is a measure of the ability of banks to find sources of funds to finance their activities. The solvency ratio indicator used in this study is the Capital Adequacy Ratio (CAR). According to Kasmir (2014: 46) "CAR is a ratio between the ratio of capital to risk-weighted assets (RWA) in accordance with government regulations". A high CAR shows the ability of banks to bear credit / risk assets that are at higher risk. So banks that have a good capital adequacy will increase investor confidence to invest their capital so that stock prices will increase and the value of the company can increase. Increased company value can reflect the company's future prospects that are getting better and create high profitability for the company. From this description it can be concluded that CAR has a positive relationship to profitability. According to the research of Olalekan and Adeyinka (2013), Capraru and Inhatov (2014), Albulescu (2015), Saputri and Oetomo (2016), Menicucci and Paolucci (2016), show that CAR has a significantly positive effect on profitability. A different thing is shown by Nurhayati's (2013) research: CAR has a negative and significant effect on profitability.

Based on previous explanation, we can propose several alternative hypothesis such as:

- H1: LDR has a positive effect on bank profitability.
- H2: NOP has a positive effect on bank profitability.
- H3: NPL has a positive effect on bank profitability.
- H4: CAR has a positive effect on bank profitability.

### III. RESEARCH METHOD

This research is focused on banking companies listed on the Indonesia Stock Exchange for the period 2012-2017. This study uses purposive sampling with determined criteria, namely: (a) Companies engaged in the banking sector and listed on the Indonesia Stock Exchange, (b) Banks that fall into the category of BUKU III and BUKU IV Banks, (c) Annual reports of banks that have been audited and available in the 2012-2017 period, (d) Banks that have complete data. Based on these criteria, we get 16 banks for 96 observations.

Operational variables in this study consist of Loan to Deposit Ratio (LDR), Net Open Position (NOP), Non-performing Loans (NPL), Capital Adequacy Ratio (CAR) which are independent variables and bank profitability as the dependent variable.

Bank profitability in this study is represented by Return on Assets (ROA) and Return on Equity (ROE).

Where Return on Assets (ROA) compares net income with total assets with the formula:

$$ROA = (\text{Net Income}) / (\text{Total Assets}) \dots\dots\dots (1)$$

Where Return on Equity (ROE) compares net income with total equity using the formula:

$$ROE = (\text{Net Income}) / (\text{Total Equity}) \dots\dots\dots (2)$$

Loan to Deposit Ratio (LDR) in this study compares the amount of funds channeled to the community in the form of credit with the amount of community funds and own capital

used by the formula:

$$LDR = (\text{Total Loans}) / (\text{Total Deposit} + \text{Equity}) \dots (3)$$

Net Open Position (NOP) sum of the absolute value of the net difference between assets and liabilities in the balance sheet for each foreign currency expressed in Rupiahs plus the net difference in claims and commitment and contingent liabilities, recorded in administrative accounts, for each foreign currency, which is stated in Rupiah.

$$NOP = (\text{Asset Valuation} - \text{Valuation}) + (\text{Charges for Values}) / \text{Capital} \times 100\% \dots\dots\dots (4)$$

Non-performing Loans (NPL) compare total non-performing loans to total loans granted with the formula:

$$\text{Gross NPL} = (\text{Total Non-performing Loans}) / (\text{Total Loans}) \dots\dots\dots (5)$$

Capital Adequacy Ratio (CAR) compares own capital to Risk Weighted Assets (ATMR) with the formula:

$$CAR = (\text{Own Capital (Core Capital} + \text{Complementary Capital)}) / (\text{RWA (Balance Sheet Assets} + \text{Balance Sheet Administration)}) \dots\dots\dots (6)$$

In our study we present two models to test the hypotheses of bank-specific factors on their performance as follows:

**Model 1:**

$$ROA_{it} = \alpha_0 + \beta_1 LDR_{it} + \beta_2 NOP_{it} + \beta_3 NPL_{it} + \beta_4 CAR_{it} + \varepsilon_{it} \dots\dots (7)$$

**Model 2:**

$$ROE_{it} = \alpha_0 + \beta_6 LDR_{it} + \beta_7 NOP_{it} + \beta_8 NPL_{it} + \beta_9 CAR_{it} + \varepsilon_{it} \dots\dots (8)$$

Where:

- ROA = Return on Assets
- ROE = Return on Equity
- $\alpha$  = constant

- LDR = Loan to Deposit Ratio
- NOP = Net Open Position
- NPL = Non Performing Loan
- CAR = Capital Adequacy Ratio
- $\beta_1$  to  $\beta_4$  = regression coefficients
- $\varepsilon$  = Error or residual
- i = bank, t = period of year t

The first model is intended to test the effectiveness of bank specific factors on ROA as the bank's gross performance, and the second model is used to prove the effectiveness of ROE as the bank's net performance. H1 until H4 will be accepted if  $\beta_1, \beta_2, \dots, \beta_9$  has positive value or larger than zero respectively. Two models above will be executed by data panel regression.

### IV. RESULT & DISCUSSION

#### A. Statistical Test Results

Descriptive statistical analysis aims to find a general description of all the variables used in this study, by looking at descriptive statistical tables that show the results of measurements of the mean, minimum and maximum values, and standard deviations of all these variables.

**Table 1. Descriptive Statistics**

| Variables | Mean   | SD     | Observ. |
|-----------|--------|--------|---------|
| ROA       | 0.0224 | 0.0132 | 96      |
| ROE       | 0.1571 | 0.0941 | 96      |
| LDR       | 0.8723 | 0.1049 | 96      |
| NOP       | 0.0204 | 0.0280 | 96      |
| NPL       | 0.0244 | 0.0140 | 96      |
| CAR       | 0.1750 | 0.0340 | 96      |





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Based on the results of the descriptive statistical analysis in table 1, it can be concluded that the Return on Asset (ROA) variable in this study has an average value of 0.0224 with a standard deviation of 0.0132. The maximum value of 0.0515 owned by Bank Rakyat Indonesia Tbk in 2012 and the minimum value of -0.049 owned by Bank Purnata Tbk in 2016. ROE has an average value of 0.1571, a standard deviation of 0.0941, a maximum value of 0.3866 owned by Bank Rakyat Indonesia Tbk in 2012 and a minimum value of -0.383 which is the value of Bank Permata Tbk in 2016. For the variable Loan to Deposit Ratio (LDR) has a mean value of 0.8723, a standard deviation of 0.1049, a maximum value of 1.0886 is owned by Bank Tabungan Negara Tbk in 2014 and a minimum value of 0.5239 owned by Bank Mega Tbk in 2012. The average value of the Net Open Position (NOP) variable in this study was 0.0204. While the standard deviation is 0.0280. The maximum value of NOP in this study is 0.1970 which is owned by Bank Permata Tbk in 2016 while the minimum value of NOP in this study is 0.0001 which is owned by the National Retirement Savings Bank Tbk in 2016. Non-performing Loans (NPL) in this study have an average value average of 0.0244 with a standard deviation of 0.0140. The maximum value of 0.088 owned by Bank Purnata Tbk in 2016 and the minimum value of 0.004 owned by Bank Central Asia Tbk in 2013. The Capital Adequacy Ratio (CAR) variable has an average value of 0.1750. The standard deviation value of the CAR is 0.0340. The maximum value of 0.2621 owned by Bank Mega Tbk in 2016 and the minimum value of 0.1044 owned by Bank Mayapada International Tbk in 2014.

Multicollinearity Test. According to Ajija et al. (2011: 35) multicollinearity means that there is a perfect linear relationship or certain, among some or all variables that explain the regression model.

**Table 2. Pearson Correlation of Independent Variables**

| Variables | LDR | NOP  | NPL  | CAR    |
|-----------|-----|------|------|--------|
| LDR       | 1.  | -0.2 | 0.11 | -0.003 |
| NOP       |     | 1    | 0.34 | -0.13  |
| NPL       |     |      | 1    | -0.23  |
| CAR       |     |      |      | 1      |

Based on table 2 above, the resulting value of each variable, namely LDR, NOP, NPL, and CAR has a correlation with the independent variable or other independent variables other than itself smaller than 0.8, it can be concluded that in this study multicollinearity did not occur. Panel model data analysis using Chow Test and Hausman Test. The Chow Test is used to select techniques using the Pooled Least Square (PLS) or Fixed Effect (FE) approach model. While the Hausman Test aims to determine between the Fixed Effect (FE) approach or the Random Effect (RE) method. Chow Test Results of the first model and the second model of this study show the Chi-square cross-section probability value of 0.0000 and the cross-section F probability value of 0.0000. So the conclusion from the Chow test results is that H0 is rejected, so the fixed effect method is better to be used in this study. Whereas based on the hausman test conducted with econometrics software Eviews 9, the results of testing for the first model

random cross-section probability value of 0.4781, for the second model the value of the random cross-section probability of 0.9142 Both models in this study show a probability value of more than 0.05 so it can be concluded that H0 is rejected, so the random effect method is better to be used in both models of this study.

Furthermore, the multiple regression analysis equation of panel data using the random effect method in this study for the first model is as follows:

$$\text{ROA} = 0.0544 - 0.0224 \text{ LDR} - 0.1017 \text{ NOP} - 0.3978 \text{ NPL} - 0.0032 \text{ CAR}$$

From the above equation it can be concluded that if there is an increase in one unit in the Loan to Deposit Ratio (LDR) variable, while other independent variables are controlled, the ROA will decrease by 0.0224 units. If there is an increase in one unit in the Non-performing Loan (NOP) variable, while other independent variables are controlled, the ROA will decrease by 0.1071 units. If there is an increase in one unit in the variable Capital Adequacy Ratio (NPL), while other independent variables are controlled, then ROA will decrease by 0.3978 units. If there is an increase in one unit in the Economic Value Added (CAR) variable, while other independent variables are controlled, then the ROA will decrease by 0.0032 units. If the LDR, NOP, NPL, and CAR variables are 0, the ROA value is 0.0544.

While the equation of the multiple regression analysis of panel data using the random effect method in this study for the second model is as follows:

$$\text{ROE} = 0.5379 - 0.1906 \text{ LDR} - 0.5465 \text{ NOP} - 4.0119 \text{ NPL} - 0.6028 \text{ CAR}$$

From the above equation it can be concluded if there is an increase in one unit in the Loan to Deposit Ratio (LDR) variable, while other independent variables are controlled, the ROE will decrease by 0.1906 units. If there is an increase in one unit in the Non-performing Loan (NOP) variable, while other independent variables are controlled, then ROE will decrease by 0.5465 units. If there is an increase in one unit in the variable Capital Adequacy Ratio (NPL), while other independent variables are controlled, then the ROE will decrease by 4.0119 units. If there is an increase in one unit in the Economic Value variable Added (CAR), while other independent variables are controlled, the ROE will decrease by 0.6028 units. If the LDR, NOP, NPL, and CAR variables are 0, then the ROE value is 0.5379.

Hypothesis testing. The F test is used to test the regression coefficients together ie, to test whether all independent variables simultaneously have an influence on the dependent variable. The results of the first model F test and the second model in this study obtained a probability value (F-Statistic) of 0.0000 so that the conclusion obtained H05 is rejected, meaning that there is at least one independent variable that affects bank profitability with a confidence level of 95%. Hypothesis testing with a t test (partial test) is carried out to determine the effect of partially independent variables on the dependent variable if the other independent variables are considered constant.

In the following explanation we will display the results of hypothesis testing through table 3 for ROA and table 4 for ROE.

**Table 3. Result of Panel Data Regression for ROA**

| Variables          | Coefficient    | T-Stat         | Prob.         |
|--------------------|----------------|----------------|---------------|
| C                  | 0.0544         | 3.7929         | 0.0003        |
| LDR                | -0.0224        | -1.3741        | 0.1735        |
| NOP                | <b>-0.1017</b> | <b>-2.9352</b> | <b>0.0044</b> |
| NPL                | <b>-0.3978</b> | <b>-6.2079</b> | <b>0.0000</b> |
| CAR                | -0.0032        | -0.1080        | 0.9143        |
| Adj-R <sup>2</sup> | 0.7974         |                |               |
| F-Stat             | 20.6803        |                |               |
| D-W                | 1.5072         |                |               |

Table 3 above shows only NPLs and NOPs that are significant to ROA. This means that when pursuing ROA, bankers must pay attention to these two factors.

**Table 4. Result of Panel Data Regression for ROE**

| Variables          | Coefficient    | T-Stat         | Prob.         |
|--------------------|----------------|----------------|---------------|
| C                  | 0.5379         | 4.7504         | 0.0000        |
| LDR                | -0.1906        | -1.4765        | 0.1439        |
| NOP                | <b>-0.5465</b> | <b>-1.9961</b> | <b>0.0495</b> |
| NPL                | <b>-4.0119</b> | <b>-7.9238</b> | <b>0.0000</b> |
| CAR                | <b>-0.6028</b> | <b>-2.5510</b> | <b>0.0128</b> |
| Adj-R <sup>2</sup> | 0.7506         |                |               |
| F-Stat             | 16.0502        |                |               |
| D-W                | 1.6488         |                |               |

The opposite is seen in table 4 when bankers want to set targets for achieving ROE then not only NOP and NPL but also CAR. The adjusted R<sup>2</sup> analysis aims to find out the magnitude of the development of the independent variable on the dependent variable. In this study, the value of the first model R<sup>2</sup> is 0.7974. It means that 79.74% of the variation of the dependent variable (ROA) in this study can be explained by the independent variables in this study, while the remaining 20.26% is explained by other variables not used in this study. For the second regression equation for the second model in this study, the adjusted R<sup>2</sup> is 0.7506. That is, as much as 75.06% variation of the dependent variable (ROE) in this study can be explained by the independent variables in this study, while the rest of 0.2494 or 24.94% is explained by other variables not used in this study.

**B. Discussion**

Based on the multiple regression analysis in this study the LDR variable has a negative coefficient for both models. These results are not in line with the hypothesis stated earlier in this study. This can occur if other variables more strongly influence a bank. Other variables that can affect the relationship between LDR and profitability can be in the form of interest rates and levels of problem loans. If the interest rate of a bank increases, it will certainly affect the level of acquisition of incoming third party funds. Lending a lot of credit can also increase the probability of problem loans. So that the higher the LDR, which indicates that the higher the credit is, the level of problem loans will also be higher and in the end if the credit reaches a loss, it will reduce profitability. So that the higher the LDR of a bank,

the lower the profitability of the bank. In addition, the results of statistical tests with partial tests indicate that the LDR variable does not have a significant effect on ROA and ROE. The insignificance of the LDR variable on profitability can be influenced by the high level of data variation and other factors. So that the Loan to Deposit Ratio (LDR) variable cannot be used as an indicator in determining the profitability of banks listed on the Indonesia Stock Exchange (IDX).

The results of statistical tests show that NOP variables have a negative and significant effect on bank profitability measured using ROA and ROE so that this research is in accordance with the theory included in the negative influence. The suitability of this study is theoretically caused by the decrease in NOP, which means that the foreign exchange rate tends to decrease, so the decline in foreign exchange earnings is greater than the decrease in foreign exchange costs. As a result, bank profits fell, so bank ROA should also be decreased. However, during the study period the ROA of the sample bank also increased, because the increase in profit before tax was greater than the increase in total assets.

Statistical test results show that NPL variables have a negative and significant effect on bank profitability as measured using ROA and ROE. Thus, the NPL variable can be used as one indicator in determining profitability of banking companies listed on the Indonesia Stock Exchange (IDX). Statistical test results show that the CAR variable has a negative and significant effect on bank profitability as measured by ROE. The results of the study are in accordance with the hypothesis described earlier. However, the statistical test results of CAR variables on ROA show that CAR has a negative and not significant effect on bank profitability as measured by ROA. This can occur because during the 2012-2017 study period, ROA values from 16 banks experienced a decline while CAR values did not decline. The insignificant effect of CAR on ROA could have occurred because in 2014 Indonesia's economic condition was declining according to BPS data. That is due to the weakening of investment and export growth so that the credit given by banks is smaller compared to other years.

**V. CONCLUSION**

This study tries to add a new variable in determining bank performance, namely NOP (Net Open Position). This is on the basis that commercial banks in Indonesia will use foreign currency items to streamline their asset and liability management activities. In general, based on model 1 (ROA) and model 2 (ROE), several significant variables have been found that are bank specific factors. The most influential variables are NOP and NPL in both types of models. Meanwhile, CAR only applies to Model 2 (ROE). This result shows that bankers in Indonesia will always pay attention to NOP and NPL in pursuing the target of achieving ROA and ROE. But apparently not paying attention to the LDR variable. What is likely to happen is that there is no difference between bankers' perceptions at BUKU level 1, 2, 3 and 4 in the LDR problem when ROA and ROE will be targeted. The problems in the BUKU level 1, 2, 3 and 4 can be interesting studies in subsequent research of banking.

## REFERENCES

1. Ajija, Shochrul R. dkk. (2011). Cara Cerdas Menguasai Eviews. Jakarta: Salemba Empat.
2. AL-Omar, Husain dan AL-Mutari, Abdullah. (2008). Bank-Specific Determinants of Profitability: The case of Kuwait. *Journal of Economic and Administrative Sciences*, 24(2), 20–34.
3. Albulescu, Claudiu Tiberiu. (2015). Banks' Profitability and Financial Soundness Indicators: A Macro-Level Investigation in Emerging Countries. *Procedia Economics and Finance*, 23(2015), 203–209.
4. Andriyani, D. R. (2013). Pengaruh Likuiditas, Kualitas Aktiva, Sensitifitas, Efisiensi, Solvabilitas terhadap ROA Bank Go Public. *Jurnal Ilmu Akuntansi dan Keuangan*, 1(2013), 1–17
5. Aritonang, Lerbin R. (2007). Teori dan Praktek Riset Pemasaran. Bogor: Ghalia Indonesia.
6. Bank Indonesia. <http://www.bi.go.id>
7. Brigham, Eugene F. dan Houston, Joel F. (2014). *Essentials of Financial Mangement*. Third Edition. Singapore: Cengage Learning Asia Pte Ltd.
8. Capraru, Bogdan dan Ilnatov, Iulian. (2014). Banks' Profitability in Selected Central and Eastern European Countries. *Procedia Economics and Finance*, 16(2014), 587–591.
9. Dendawijaya, L. (2009). *Manajemen Perbankan*. Bogor: Ghalia Indonesia.
10. Gitman, Lawrence J. dan Zutter, Chad J. (2015). *Principles of Managerial Finance*. 14th Edition. Global Edition: Pearson Education Limited.
11. Greuning, H. V., dan Bratanovic, S. B. (2011). *Analisis Risiko Perbankan*. Edisi Ketiga. Jakarta : Salemba Empat.
12. Hartono, J. (2000). *Teori Portfolio dan Analisis Investasi*. Edisi Kedua. Yogyakarta: BPFE Yogyakarta
13. \_\_\_\_\_. (2005). *Analisis dan Desain Sistem Informasi: Pendekatan Terstruktur Teori dan Praktek Aplikasi Bisnis*. Yogyakarta: Andi Offset.
14. Hasibuan, Malayu S. P. (2009). *Manajemen: Dasar, Pengertian, dan Masalah*. Edisi Revisi. Jakarta: Bumi Aksara.
15. Indonesia Stock Exchange. <http://www.idx.co.id/>
16. Indriastuti, M. dan Ifada, L. M. (2016). CAMELS: THE TROUBLE BANK PREDICTION. *The International Journal of Organizational Innovation*, 8(3), 137–145.
17. Kasmir. (2008). *Manajemen Perbankan*. Jakarta: PT RajaGrafindo Persada.
18. \_\_\_\_\_. (2014). *Dasar-dasar Perbankan*. Edisi Revisi 2008. Jakarta: PT RajaGrafindo Persada.
19. Manurung, Mandala, dan Pratama Rahardja. (2004). *Uang, Perbankan, dan Ekonomi Moneter (Kajian Kontekstual Indonesia)*. Jakarta: Lembaga Penerbit FEUI.
20. Menicucci, Elisa dan Paolucci, Guido. (2016). The Determinants of Bank Profitability: Empirical Evidence from European Banking Sector. *Journal of Financing Reporting and Accounting*, 4(1), 86 – 115.
21. Misbahuddin dan Hasan, Iqbal. (2013). *Analisis Data Penelitian Dengan Statistik*. Jakarta: Bumi Aksara.
22. Muhmad, S. N. dan Hashim, H. A. (2015). Using The Camel Framework in Assessing Bank Performance in Malaysia. *International Journal of Economics, Management and Accounting*, 23(1), 109-127.
23. Olalekan, Asikhia dan Adeyinka, Sokefun. (2013). Capital Adequacy and Banks' Profitability: An Empirical Evidence From Nigeria. *American International Journal of Contemporary Research*, 3(10), 87 - 93.
24. Otoritas Jasa Keuangan, <http://www.ojk.go.id>
25. Petria, N., Capraru, B., dan Ilnatov, I. (2015). Determinants of Banks' Profitability: Evidence From EU 27 Banking Systems. *Procedia Economics and Finance*, 20(2015), 518-524.
26. Puspitasari, D. (2009). Analisis Pengaruh CAR, NPL, PDN, NIM, BOPO, LDR, dan Suku Bunga SBI terhadap ROA. *Jurnal Ilmu Manajemen dan Keuangan*, 3(2009), 17–49.
27. Rivai, Veithzal. (2007). *Bank and Financial Institute Management*. Jakarta: PT. Raja Grafindo Persada.
28. Saputri, S. F. Henny dan Oetomo, Hening W. (2016). Pengaruh CAR, BOPO, NPL, dan FDR terhadap ROE pada Bank Devisa. *Jurnal Ilmu dan Riset Manajemen*, 5(5), 1–19.
29. Siamat, Dahlan. (2005). *Manajemen Lembaga Keuangan: Kebijakan Moneter dan Perbankan*. Edisi Kesatu. Jakarta: Fakultas Ekonomi Universitas Indonesia.
30. Simorangkir. (2000). *Pengantar Lembaga Keuangan Bank dan Non Bank*. Bogor: Ghalia Indonesia.
31. Sipahutar, M. A. (2007). *Persoalan-Persoalan Perbankan Indonesia*. Jakarta: Gorga Media.
32. Sugiyono. (2010). *Metode Penelitian Kuantitatif, Kualitatif dan R & D*. Bandung: Alfabeta.
33. \_\_\_\_\_. (2014). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R & D*. Bandung: Alfabeta.
34. William, H. Meckling dan Michael, Jensen. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
35. Winarno, W. W. (2007). *Analisis Ekonometrika dan Statistika dengan Eviews*. Yogyakarta: Unit Penerbit dan Percetakan Sekolah Tinggi Ilmu Manajemen YKPN.