# The Effect of Capital Adequacy Ratio, Loan to Deposit Ratio, and Operational Costs than Operating Revenue on Return on Assets: Study on Conventional Banks in Indonesia

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## Abstract

This study aims to determine the effect of Capital Adequacy Ratio (CAR) and Operating Income Operating Costs (BOPO) on Profitability Return On Assets (ROA) in conventional banks in Indonesia. The data obtained is sourced from financial statements listed on the Indonesia Stock Exchange for the period 2013–2017. Data analysis was carried out using quantitative descriptive statistical methods. From this study, it can be concluded that the results of the Simultaneous Test show that CAR, LDR, and BOPO have a significant simultaneous effect on ROA at conventional banks in Indonesia in 2017 and CAR and BOPO have a partially significant effect on ROA at banks. conventional method in Indonesia in 2017. LDR has no effect on ROA.

**Keyword**: Capital Adequacy Ratio, Operational Cost of Operational Income, Return on Assets

## INTRODUCTION

All companies try to get as much profit as possible. Profit can be known after making financial statements. Financial statements can be used as material for measuring financial performance. Measurement of financial performance can be used as an indicator to improve the company's operational activities. Improvements in operational performance are expected to allow the company to experience better financial growth so that it can win against the competition with the company. Financial statements are reports that show the company's finances for a certain period (Faud, 2015: 9). Sadeli (2010: 18) explains that financial statements are written reports that provide quantitative information about the financial position, its changes, and those achieved during a certain period. The financial position provides an overview of how the composition of the wealth owned by the company and the sources of that wealth were obtained. Changes in financial position indicate the company's progress and provide an overview of whether the company is making a profit in carrying out its activities and whether the company is experiencing developments that show management has managed the company well.

Manulang (2008: 308) suggests that financial statements consist of a balance sheet and profit and loss account, analysis of wealth or changes in financial position and reconciliation of own capital (changes in capital), and statements of company cash flows. The balance sheet shows the total assets, liabilities, and capital of a company at a certain time. The calculation of the income statement informs the results that have been achieved by the company and the costs incurred during a certain period.

Faud (2015: 9) also states that the contents of the financial statements consist of a balance sheet, income statement, statement of changes in equity, cash flow statement, and notes to financial statements. This report aims to provide information about the financial position, performance, changes in equity, cash flows, and other information that is useful for making strategic decisions in an effort to increase profits.

The company's profit can be shown by calculating the profitability ratio. Profitability ratio is the ratio used to measure the company's ability to generate profits from normal business activities. The company's operational objective is to maximize profits, both short-term and long-term profits. The hope is to increase returns for company owners and improve employee welfare (Hery, 2015: 226). One of the financial ratios used to measure the company's profit is the profitability ratio. This ratio is a ratio to assess the company's ability to seek profit or profit within a certain period. This ratio also provides a measure of the effectiveness of a company's management as indicated by the profit generated from sales or from investment income. This ratio can be measured by calculating the Return On Assets (ROA).

Profitability can be known through the calculation of Return On Assets (ROA). ROA is the ability of capital invested into all company assets to generate profits. The higher the profit generated, the higher the ROA, it means that the company is more effective in the use of assets to generate profits. ROA is calculated based on the comparison of profit before tax and average total assets. Return on Assets (ROA) can be influenced by the Capital Adequacy Ratio (CAR), Operating Costs compared to Operating Income (BOPO) and Loan to Deposit Ratio (LDR). CAR is a bank performance ratio to measure capital adequacy in supporting risky assets. LDR is a ratio that measures the ratio of the amount of credit provided by the bank to the funds received by the bank. BOPO is a ratio that describes the efficiency of operational costs compared to the bank's operating income.

## LITERATUR REVIEW

### 1. Financial Report

The financial report is a periodic report that contains a summary of the company's activities. Financial statements are generally used by financiers such as creditors, investors, and by the company itself related to managerial interests and performance appraisal of companies including banks.

According to Harmono (2009: 104), financial statements are an analytical tool for comprehensive corporate financial management, which can be used to detect/diagnose levels. company health, through cash flow conditions or the company's operational performance, both partial and overall organizational performance.

### 2. Financial Statement Analysis

Financial statement analysis is a process to dissect financial statements into their elements and examine each of these elements with the aim of obtaining a good and appropriate understanding and understanding of the financial statements themselves. Analyzing financial statements means assessing the company's performance, both internally and for comparison with other companies in the same industry. This is useful

for the direction of the company's development by knowing how effectively the company's operations have been running. Financial statement analysis is very useful not only for internal companies, but also for investors and other stakeholders (Hery, 2015: 132).

## 3. Ratio Analysis in Financial Statements

A financial ratio is a ratio calculation using financial statements that serve as a measuring tool in assessing the financial condition and performance of the company. A financial ratio is a number obtained from the comparison between one financial statement item and another item that has a relevant and significant relationship. Comparisons can be made between one post and another in a financial report or between posts between financial statements (Hery, 2015: 161).

Broadly speaking, currently, in practice there are at least 5 (five) types of financial ratios that are often used to assess the company's financial condition and performance. The five types of financial ratios are:

a. Liquidity Ratio

According to Alma (2010: 259) the definition of liquidity includes the liquidity of business entities, companies, and an asset. The liquidity of a business entity is the ability of the business entity to pay off any outstanding receivables. The company's liquidity means the company's ability to issue tools on time for the production process. Asset liquidity is the ability of assets or assets to be converted into cash at a certain time. Liquidity Ratios include Current Ratio, Very Current Ratio or Quick Ratio (quick ratio or acid test ratio), Cash Ratio.

b. Solvency Ratio or Capital Structure Ratio or Leverage Ratio

Solvency ratio or capital structure ratio is a ratio that describes the company's ability to fulfill all its obligations. Just like the liquidity ratio, the solvency ratio is also needed for credit analysis or financial risk analysis.

Capital is a net asset. Profits increase capital or net assets. Profit is the flow of wealth, while capital is the deposit of wealth. Therefore, the determination of profit, namely the determination of the increase in capital is also a matter of price as well. Capital can mean financial capital where the emphasis is the money value of assets minus the value of liabilities which is the owner's money contribution to the company. Physical capital, which here is focused on the physical ability of the capital to produce goods and services, not on the value of money. The size is the production capacity of the assets owned (Harahap, 2011: 305).

c. Activity Ratio

The activity ratio is the ratio used to measure the efficiency level of utilizing the company's resources. Or to assess the company's ability to carry out its daily activities. This ratio is also known as the asset utilization ratio, which is the ratio used to assess the effectiveness and intensity of the company's assets in generating sales.

d. Profitability ratio

The use of profitability ratios can be done by using comparisons between the various components in the balance sheet financial statements and the income statement. Measurements can be made for several operating periods. The goal is to see the company's development within a certain period, either a decrease or an increase, while at the same time looking for the causes of these changes (Kasmir, 2015: 196).

The use of all or part of the profitability ratios depends on management policy. The more complete the type of ratio used, the more perfect the results will be. This means

that knowledge about the condition and position of the company's profitability can be known perfectly. (Kasmir, 2015: 198).

e. Investment Ratio

The definition of investment ratio is a ratio that measures the company's ability to provide returns or rewards to funders, especially investors in the capital market within a certain period. The purpose of the financial ratio analysis has a value of the benefit for investors according to the function of financial statements for investors to assess the performance of stock securities in the capital market.

## RESEARCH METHODS

1. **Research Design**

     This study uses expalanatory research methods with survey techniques to analyze the causal relationship between compensation and employee performance, the causal relationship between CAR and ROA, the causal relationship between LDR and ROA, and the causal relationship between BOPO and ROA, and the causal relationship between CAR, LDR, and BOPO with ROA on conventional in Indonesia for the 2017 period.

2. **The scope of research**

     This study analyzes the effect of CAR, LDR, and ROA on the ROA of conventional banks in Indonesia for the period 2017. CAR, LDR, BOPO, and ROA are included in the scope of the discussion of Financial Management. Thus the scope of this research is Financial Management.

3. **Research variable**

     There are two variables in this study, namely the independent variable and the dependent variable. There are 3 independent variables, namely Capital Adequacy Ratio denoted by (X1), Loan to Deposit Ratio denoted by (X2), and Operating Expenses to Operating Income (BOPO) denoted by (X3). The dependent variable of this research is Return On Assets denoted by (Y).

4. **Conceptual Definition of Research**

   a. *Return On Asset*

      This ratio is a ratio that shows the results (return) on the use of company assets in creating net income, in other words, this ratio is used to measure how much net profit will be generated from each rupiah of funds embedded in total assets. Return On Asset (Return on Assets) is calculated using the following formula.

      $$\text{Hasil pengembalian atas aset} = \frac{\text{Laba bersih}}{\text{Total aset}}$$

       (Hery, 2015: 168).

   b. *Capital Adequacy Ratio*

      CAR is the ratio or comparison between bank capital and risk-weighted assets (RWA). CAR is a guideline for banks to expand in the credit sector. In practice, the calculation of CAR, which Bank Indonesia calls the Bank's Minimum Capital Adequacy Requirement (CAR), is not simple. CAR is the ratio between Capital and Risk-Weighted Assets. Both RWA and Bank Capital require details and a common understanding of what is included as a component to calculate RWA and how to calculate it. Likewise, with Capital, it is necessary to specify what can be classified and calculated as Bank Capital. The basic guidelines regarding this matter are regulated by Bank Indonesia through the provisions of SE BI No. 26/1/BPPP dated May 29, 1993.

In assessing the capital of a bank, the Capital Adequacy Ratio (CAR) formula can be used. CAR Formula:

$$Capital\ Adequacy\ Rasio\ (CAR) = \frac{Modal}{Aktiva\ Tertimbang\ Menurut\ Resiko}$$

(Harmono, 2014: 116)

b. Loan to Deposit Rasio

The loan to deposit ratio is a ratio to measure the composition of the amount of credit given compared to the number of public funds and own capital used. The maximum loan to deposit ratio according to government regulations is 110% (Kasmir, 2011: 290).

LDR is a ratio that measures a bank's ability to meet financial obligations that must be met. The obligation is in the form of call money which must be fulfilled when there is a clearing obligation, where the fulfillment is carried out from current assets owned by the company. LDR is calculated from the comparison between total credit and third-party funds. Total credit in question is credit extended to third parties (not including credit to other banks). The third-party funds in question are, among others, demand deposits, savings, and time deposits (excluding interbank). The formula to find the loan to deposit ratio is as follows:

$$Loan\ To\ Deposit\ Ratio = \frac{Total\ loans}{Total\ deposit + equity} \times 100\%$$

(Kasmir, 2011: 290).

c. Operating Expenses to Operating Income (BOPO)

BOPO is a ratio that describes the efficiency of operating costs compared to the bank's operating income. The BOPO ratio shows how much a bank can reduce its operational costs on the one hand, and how much it can increase its operating income on the other. According to Harmono (2013: 120) Operating Expenses to Operating Income (BOPO) can be calculated by the following formula.

$$BOPO = \frac{Biaya\ Operasional}{Pendapatan\ Operasional} \times 100\%$$

5. **Operational definition**

a. *Return On Asset* (ROA)

Return on Assets is a ratio that shows the results (return) on the use of company assets in creating net income, in other words, this ratio is used to measure how much net profit will be generated from each rupiah of funds embedded in total assets. The formula used to calculate Return On Assets (ROA):

$$Return\ On\ Asset\ (ROA) = \frac{Laba\ Sebelum\ Pajak}{Rata-rata\ Total\ Asset\ Satu\ Periode}$$

b. *CapitalAdequacy Ratio* (CAR)

Capital Adequacy Ratio (CAR) is a ratio or comparison between bank capital and risk-weighted assets (RWA). In practice, the calculation of CAR, which Bank Indonesia calls the Bank's Minimum Capital Adequacy Requirement (CAR), is not simple. CAR is the ratio between Capital and Risk Weighted Assets (RWA). Both RWA and Bank Capital require details and a common understanding of what is included as a

component to calculate RWA and how to calculate it. Likewise with Capital, it is necessary to specify what can be classified and calculated as Bank Capital. The capital variable in this study was identified by the Capital Adequacy Ratio (CAR) taken directly from the Indonesian banking directory. The formula uses the formula:

$$Capital\ Adequacy\ Ratio\ (CAR) = \frac{Modal}{Aktiva\ Tertimbang\ Menurut\ Resiko}$$

c. *Loan to Deposit Ratio* (LDR)

Liquidity in this study is the bank's ability to meet short-term obligations, which is measured by comparing the total credit extended to the total Third Party Funds (DPK) collected by the bank and known as the Loan to Deposit Ratio (LDR). LDR is a ratio that measures a bank's ability to meet financial obligations that must be met. The obligation is in the form of call money which must be fulfilled when there is a clearing obligation, where the fulfillment is carried out from current assets owned by the company. The data is taken from published financial reports published by Bank Indonesia in the form of the Indonesian Banking Directory. The formula used to calculate LDR:

$$Loant\ o\ Deposit\ Ratio\ (LDR) = \frac{Totak\ Kredit}{Total\ Dana\ Pihak\ Ketiga}$$

$$atau\ Loan\ to\ Deposit\ Ratio\ (LDR) = \frac{Jumlah\ Kredit}{Jumlah\ aset}$$

d. Operating Expenses to Operating Income (BOPO)

BOPO is a ratio that describes the efficiency of operating costs compared to the bank's operating income. The BOPO ratio shows how much a bank can reduce its operational costs on the one hand, and how much it can increase its operating income on the other hand. Operating Expenses to Operating Income (BOPO) can be calculated by the following formula.

$$BOPO = \frac{Biaya\ Operasional}{Pendapatan\ Operasional} \times 100\%$$

6. Population and Sample

a. Research Population

The population is the entire object that is the target of research (Wahyuni, 2011: 4). The population is a generalization area consisting of objects/subjects that have certain characteristic qualities that are determined by researchers to be studied and then conclusions are drawn (Sugiyono, 2017:80). The population of this research is all conventional banks in Indonesia. The population is the entire research subject, the population in this study are banking sub-sector companies listed on the Indonesia Stock Exchange for the period 2013-to 2017.

b. Research Sample

Sampel penelitian adalah bagian dari populasi yang menjadi objek penelitian. Teknik pengambilan sampel menggunakan metode sensus. Sampel penelitian ini semua bank konvensional di seluruh Indonesia. Populasi merupakan keseluruhan subjek

penelitian, populasi dalam penelitian ini adalah perusahaan sub sektor perbankan yang terdaftar di Bursa Efek Indonesia periode 2013-2017.

7. **Data collection technique**

The data in this study were obtained from the Bank's Financial reports. Thus the data collection technique used is documentation of financial statements related to ROA, CAR, LDR, and BOPO of conventional banks in Indonesia. Documentation is a technique for finding data about things or variables in the form of notes, transcripts, newspaper books, magazines, inscriptions, meeting minutes, longer, agenda, and others (Arikunto, 2010: 274).

8. **Data Analysis Techniques**

The data analysis of this research used multiple linear regression analysis. Multiple regression is an analysis used to determine the relationship between one dependent variable and two or more independent variables. The following are data analysis techniques used in this study:

a. Analysis Description

Descriptive analysis is an analysis conducted to explain data from one variable. Descriptive measures used to describe the data of this study are frequency and average (Sanusi, 2012: 116). Descriptive statistical analysis includes statistics used to analyze data by describing or attaching data that has been collected as it is without intending to make conclusions that apply to the public or generalizations (Sugiyono, 2014: 206). Through this analysis, the ROA, CAR, LDR, and BOPO of conventional banks in Indonesia are described.

The purpose of the descriptive statistical test is to test and explain the characteristics of the observed sample. The results of descriptive statistical tests are usually in the form of a table containing at least the names of the observed variables, the mean, standard deviation, maximum, and minimum, which is then followed by an explanation in the form of a narrative explaining the interpretation of the table contents (Chandarin, 2018: 139).

b. Multiple Regression Analysis

Multiple regression analysis is an extension of simple regression by increasing the number of independent variables (multiple regression) (Sanusi, 2012: 134). The data analysis of this research used multiple regression analysis with least squares equation (OLS). The form of the model used from the basic model of the effect of CAR, LDR, and BOPO on ROA is as follows:

$ROA = a + X1\ \beta1 + X2\ \beta2 + X3\ \beta3 + e$

The magnitude of the constant is reflected in "a" and the magnitude of the regression coefficient of each independent variable is indicated by X1, X2, and X3.

$Y$ = ROA

$\alpha$ = Constan

$\beta1, \beta2,$ dan $\beta2$ = Regression Coefficient

X1= CAR

X2= LDR

X3= BOPO

E= Standard error (possible storage, which is 0.05)

c. Hypothesis test

1) The calculated F value > F table with a value of < 0.05, the alternative hypothesis (Ha) is accepted and the research model made is correct. If the

calculated F value < F table and > 0.05, the alternative hypothesis (Ha) is rejected (Misbahuddin and Hasan, 2013: 157).

2)  The value of t arithmetic > t table and significance > 0.05, then the hypothesis that shows a partial effect is accepted. The largest t value indicates the dominant variable affects the independent variable

# RESULTS AND DISCUSSION

## Research result

The description of data on ROA, CAR, LDR, and BOPO of Conventional Banks in 2017 listed on the Stock Exchange (IDX) is known as follows:

1.  ROA in 2017

| No. | Bank | Kuartal 1 | Kuartal 2 | Kuartal 3 | Kuartal 4 | Trend |
|---|---|---|---|---|---|---|
| 1 | BRI | 3,34 | 3,31 | 3,34 | 3,69 | Naik |
| 2 | BCA | 3,48 | 3,67 | 3,83 | 3,89 | Fluktuatif |
| 3 | BNI | 2,76 | 2,72 | 2,80 | 2,75 | Fluktuatif |
| 4 | BANK MANDIRI | 2,38 | 2,61 | 2,17 | 2,72 | Naik |
| 5 | BMAY BANK INDONESIA | 1,37 | 1,46 | 1,37 | 1,23 | Turun |
| 6 | BANK CIMB N | 1,45 | 1,57 | 1,62 | 1,67 | Naik |
| 7 | BANK PAN INDINESIA | 1,88 | 1,78 | 1,84 | 1,87 | Fluktuatif |
| 8 | BTPN | 2,43 | 2,30 | 2,17 | 1,19 | Turun |
| 9 | BANK BUKOPIN | 1,35 | 1,12 | 0,97 | 0,09 | Turun |
| 10 | BANK DANAMON | 2,84 | 2,57 | 2,73 | 2,47 | Turun |

Source: Indonesia Stock Exchange, 2018

The table above contains the Return on Assets (ROA) for the first quarter to the fourth quarter of 2017. The highest return on assets (ROA) for the first quarter of 3.34 was achieved by Bank BCA. The lowest Return on Assets (ROA) of 1.35 was achieved by Bank Bukopin. Return on Assets (ROA) in the second quarter, the highest of 3.31, was achieved by Bank BCA. The lowest Return on Assets (ROA) of 1.12 was achieved by Bank Bukopin. The highest return on assets (ROA) in the third quarter of 3.83 was achieved by Bank BCA. The lowest Return on Assets (ROA) of 0.97 was achieved by Bank Bukopin. Return on Assets (ROA) in the fourth quarter, the highest of 3.89, was achieved by Bank BCA. The lowest Return on Assets (ROA) of 0.09 was achieved by Bank Bukopin.

Return on Assets (ROA) is an indicator for measuring banking financial performance because Return on Assets (ROA) is used to measure the effectiveness of the company in generating profits by utilizing existing assets in the bank. Return on Assets (ROA) is the ratio between profit before tax to total assets. The greater the Return on Assets, the better the financial performance, because the higher the rate of return. If the Return on Assets increases, it means that the company's profitability increases so that the final impact is an increase in profitability for shareholders (Husnan, 1998). This ratio is a ratio that shows the results (return) on the use of company assets in creating net income, in other words, this ratio is used to measure how much net profit will be generated from each rupiah of funds embedded in total assets.
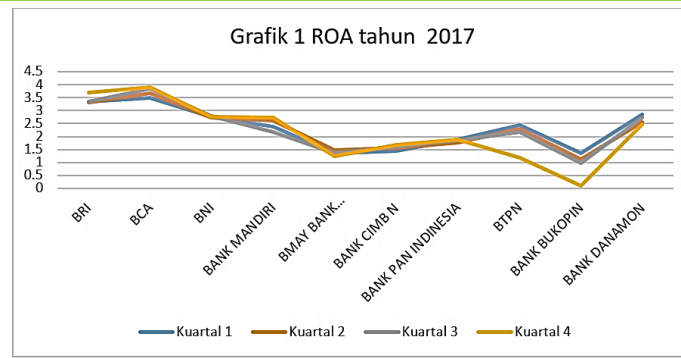
Figure 1 Graph 1 ROA in 2017

2. CAR Tahun 2017
   The following is the 2017 CAR table for the 10 (ten) banks studied:

Table 2 CAR 2017

| No. | Bank | Kuartal 1 | Kuartal 2 | Kuartal 3 | Kuartal 4 | Keterangan |
|---|---|---|---|---|---|---|
| 1 | BRI | 20,86 | 21,67 | 22,17 | 22,96 | Naik |
| 2 | BCA | 23,10 | 22,10 | 23,62 | 23,06 | Tutun |
| 3 | BNI | 19,00 | 18,99 | 19,01 | 18,53 | Tutun |
| 4 | BANK MANDIRI | 21,11 | 21,55 | 21,98 | 21,64 | Tutun |
| 5 | BMAY BANK INDONESIA | 16,98 | 16,91 | 17,71 | 17,63 | Tutun |
| 6 | BANK CIMB N | 18,21 | 18,14 | 18,6 | 18,22 | Naik |
| 7 | BANK PAN INDINESIA | 21,03 | 22,43 | 23,57 | 22,26 | Tutun |
| 8 | BTPN | 24,56 | 24,52 | 25,23 | 24,91 | Tutun |
| 9 | BANK BUKOPIN | 17,02 | 16,34 | 15,70 | 10,52 | Tutun |
| 10 | BANK DANAMON | 23,24 | 23,19 | 23,81 | 23,24 | Tutun |

Source: Indonesia Stock Exchange, 2018

The assessment is based on the capital owned by one of the banks. One of the usual assessments is the CAR (capital adequacy ratio) method, namely by comparing capital to risk-weighted assets (RWA) (Kasmir, 2011: 273).

CAR is the ratio or comparison between bank capital and risk-weighted assets (RWA). CAR is a guideline for banks to expand in the credit sector. In practice, the calculation of CAR, which Bank Indonesia calls the Bank's Minimum Capital Adequacy Requirement (CAR), is not simple. CAR is the ratio between Capital and Risk-Weighted Assets (RWA). Both RWA and Bank Capital require details and a common understanding of what is included as a component to calculate RWA and how to calculate it. Likewise, with Capital, it is necessary to specify what can be classified and calculated as Bank Capital. The basic guidelines regarding this matter are regulated by Bank Indonesia through the provisions of SE BI No. 26/1/BPPP dated May 29, 1993.

Capital (Capital Adequacy) shows the ability of banks to maintain sufficient capital and the ability of bank management to identify, supervise and control the risks that arise that can affect the amount of bank capital (Sufa, 2008). The Capital Adequacy Ratio (CAR) is used to measure the ability to exist capital to cover possible losses in credit activities and securities trading. Capital Adequacy Ratio (CAR) according to Achmad and Kusuno (2003) is a capital ratio that shows the bank's ability to provide funds for business development purposes and accommodate the possible risk of losses caused by bank operations. The greater the ratio, the better the capital position.

Capital Adequacy Ratio (CAR) has a function to identify, measure, monitor, and control the risks that arise that can affect the amount of bank capital. The calculation of capital adequacy

is based on the principle that every investment that contains risk must be provided with a certain percentage of capital (risk margin) to the total investment (Mudrajat Kuncoro, 2002: 562). CAR is an analytical tool used to find out how much capital is adequate to support its operational activities and reserves to absorb losses that may occur (Mudrajat Kuncoro, 2002: 573). The higher the CAR, the higher the own capital that can be used to fund productive assets or cover the risk of loss from investing in assets, so that the cost of funds issued by the bank will be lower. Thus, the lower the cost of funds issued, the bank's profit will increase.

The highest CAR (capital adequacy ratio) in the first quarter of 23.10 was achieved by Bank BCA and the lowest of 16.98 was achieved by Bank Maybank Indonesia. The highest CAR (capital adequacy ratio) in the second quarter of 22.43 was achieved by Bank Pan Bank Indonesia and the lowest was achieved by Bank Bukopin of 16.34. The highest CAR (capital adequacy ratio) in the third quarter was 25.23, achieved by Bank BTPN and the lowest at 16.34, by Bank Bukopin. Bank BTPN achieved the highest CAR (capital adequacy ratio) of 24.91 and Bank Bukopin reached the lowest of 10.52.

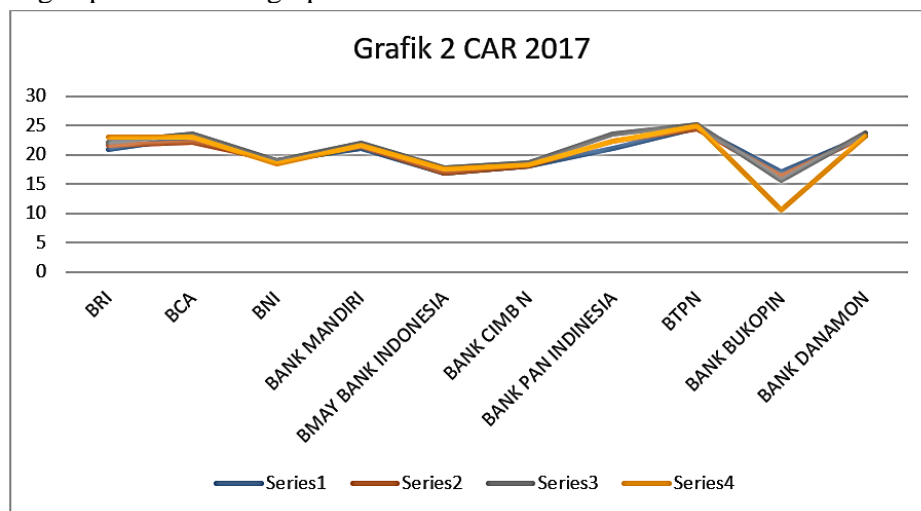The following is presented in a graph of 2 CAR in 2017:



Figure 2 Graph 2 CAR in 2017

3. LDR 2017

The following is a table of LDR 2017:

Table 3 LDR 2017

| No. | Bank | Kuartal 1 | Kuartal 2 | Kuartal 3 | Kuartal 4 | Keterangan |
|---|---|---|---|---|---|---|
| 1 | BRI | 93,15 | 89,76 | 90,39 | 88,13 | Turun |
| 2 | BCA | 75,05 | 74,49 | 74,74 | 78,22 | Naik |
| 3 | BNI | 89,33 | 88,93 | 87,86 | 85,58 | Turun |
| 4 | BANK MANDIRI | 89,22 | 88,61 | 89,05 | 88,11 | Turun |
| 5 | BMAY BANK INDONESIA | 88,40 | 86,66 | 87,63 | 88,12 | Turun |
| 6 | BANK CIMB N | 95,65 | 99,14 | 91,99 | 94,67 | Turun |
| 7 | BANK PAN INDINESIA | 86,58 | 93,30 | 91,20 | 92,10 | Naik |
| 8 | BTPN | 94,63 | 95,41 | 94,59 | 96,62 | Naik |
| 9 | BANK BUKOPIN | 75,85 | 75,07 | 78,65 | 81,34 | Naik |
| 10 | BANK DANAMON | 92,80 | 89,57 | 93,78 | 93,29 | Turun |

Source: Indonesia Stock Exchange, 2018

The first quarter Loan to Deposit Ratio (LDR) was highest at 95.65 by Bank CIMB N and the lowest at 75.05 by Bank BCA. The second quarter Loan to Deposit Ratio (LDR) was highest at 99.14 by Bank CIMB N and the lowest at 74.49 by Bank BCA. The third quarter Loan to Deposit Ratio (LDR) was highest at 94.59 by Bank CIMB N and the lowest at 74.74 by Bank BCA. Loan to Deposit Ratio (LDR) in the fourth quarter of 96.62 was achieved by Bank CIMB N and the lowest was 78.22 by Bank BCA

One of the liquidity ratios that is often used in assessing the performance of a bank is the Loan to Deposit Ratio (LDR). According to Lukman Dendawijaya (2003: 118), LDR is the ratio between the total amount of credit granted by the bank to the funds received by the bank. The loan to deposit ratio is a ratio to measure the composition of the amount of credit given compared to the number of public funds and own capital used. The maximum loan to deposit ratio according to government regulations is 110% (Kasmir, 2011: 290).

LDR is a ratio that measures a bank's ability to meet financial obligations that must be met. The obligation is in the form of call money which must be fulfilled when there is a clearing obligation. Fulfillment is done from the current assets owned by the company. LDR is calculated from the comparison between total credit and third-party funds. Total credit in question is credit extended to third parties (not including credit to other banks). The third-party funds in question are, among others, demand deposits, savings, and time deposits (excluding interbank).

Loan to Deposit Ratio (LDR) shows a comparison between the volume of credit compared to the volume of deposits held by banks (Muljono, 1999). Loan to Deposit Ratio (LDR) is used to assess the liquidity of a bank by dividing the amount of credit by the amount of funds. Loan to Deposit Ratio (LDR) is also a ratio that shows the ability of a bank to provide funds to debtors with capital owned by the bank or funds that can be collected from the public (Kasmir, 2011: 290).

The lower limit set by Bank Indonesia for the LDR ratio is 78%, meaning that if a commercial bank disburses credit below this figure, the bank is still considered inefficient in lending. However, if the amount of credit disbursement exceeds the upper limit of 100%, then the bank is considered too aggressive so that it can increase the risk exposure faced. Therefore, the bank's LDR number must be maintained in the ideal range that has been set.
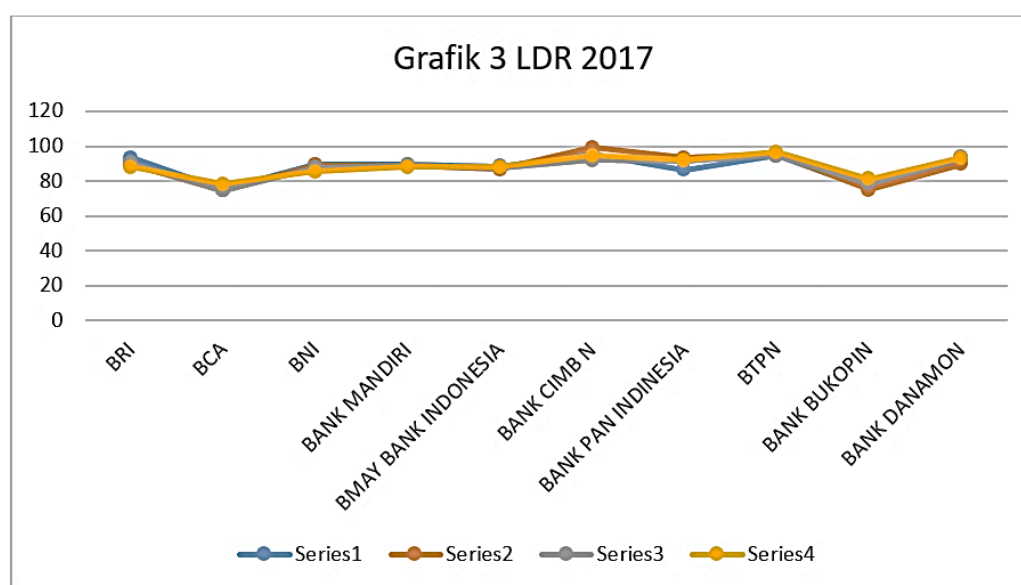
The following is a graph of 3 LDR in 2017:



Grafik 3 LDR 2017

Figure 3 Graph 3 LDR in 2017

4. BOPO 2017
The following is the BOPO table for 2017:

| No. | Bank | Kuartal 1 | Kuartal 2 | Kuartal 3 | Kuartal 4 | Keterangan |
|---|---|---|---|---|---|---|
| 1 | BRI | 71,73 | 72,55 | 73,32 | 69,14 | Turun |
| 2 | BCA | 65,20 | 61,83 | 59,86 | 58,65 | Turun |
| 3 | BNI | 70,49 | 71,02 | 70,30 | 70,99 | Naik |
| 4 | BANK MANDIRI | 75,98 | 73,17 | 71,85 | 71,78 | Turun |
| 5 | BMAY BANK INDONESIA | 85,57 | 84,93 | 85,43 | 86,97 | Naik |
| 6 | BANK CIMB N | 85,42 | 84,29 | 83,89 | 83,27 | Turun |
| 7 | BANK PAN INDINESIA | 79,41 | 80,03 | 79,25 | 78,79 | Turun |
| 8 | BTPN | 84,15 | 83,58 | 84,23 | 90,86 | Naik |
| 9 | BANK BUKOPIN | 86,73 | 89,14 | 90,40 | 99,04 | Naik |
| 10 | BANK DANAMON | 69,80 | 70,60 | 70,89 | 72,11 | Naik |

Source: Indonesia Stock Exchange, 2018

BOPO (Operating Costs for Operational Income) in the first quarter of 86.73 was achieved by Bank Bukopin and the lowest at 65.20 by Bank BCA. BOPO (Operating Costs for Operational Income) in the second quarter of 89.14 was achieved by Bank Bukopin and the lowest at 61.83 by Bank BCA. Bank Bukopin achieved the highest BOPO (Operating Costs for Operational Income) in the fourth quarter of 99.04 and Bank BCA achieved the lowest of 58.65.

Profitability can be seen from BOPO (Operational Cost of Operational Income). The ratio of operating costs is the comparison between operating costs and operating income. This ratio is often referred to as the efficiency ratio which is used to measure the ability of bank management to control operational costs against operating income. The BOPO ratio indicates the existence of operational risk borne by the bank. Operational risk occurs due to uncertainty regarding the bank's business, including possible losses from operations if there is a decline in profits that are affected by the bank's operating cost structure and the possibility of failure of new services and products offered.

The ratio of operating expenses to operating income (BOPO) is often called the efficiency ratio which is used to measure the ability of bank management to control operational costs against operating income. The smaller this ratio means the more efficient the operational costs incurred by the bank concerned (Almilia and Herdiningtyas, 2005). The success of a bank based on a quantitative assessment of bank profitability can be measured using the ratio of operating costs to operating income (Kuncoro and Suhardjono, 2002). According to Dendawijaya (2003), the ratio of operational costs is used to measure the level of efficiency and ability of the bank in carrying out its operations.

Bank Indonesia Circular Letter No. 15/7/DPNP dated March 8, 2013, set the BOPO benchmark for business group commercial banks (BUKU) I at a maximum of 85%. BUKU II ranges from 78% - 80%, BUKU III 70-75% and BUKU IV 60% - 65%. Benchmark is the average BOPO of banks by a group. Meanwhile, BUKU is a grouping of banks based on core capital. This means that the BOPO ratio that must be maintained by commercial banks is not more than 85%. The BOPO ratio shows how much a bank can reduce its operational costs on the one hand, and how much it can increase its operating income on the other hand. BOPO influences bank profitability because it shows how much the bank can perform cost-efficiency incurred (Lukman Dendawijaya, 2003:112).

The smaller the BOPO ratio, the more efficient the operational costs incurred so that the possibility of the bank obtaining profits will be greater. On the other hand, the greater the BOPO ratio indicates the more inefficient a bank is in carrying out its business operations, so the possibility of making a profit is also smaller.
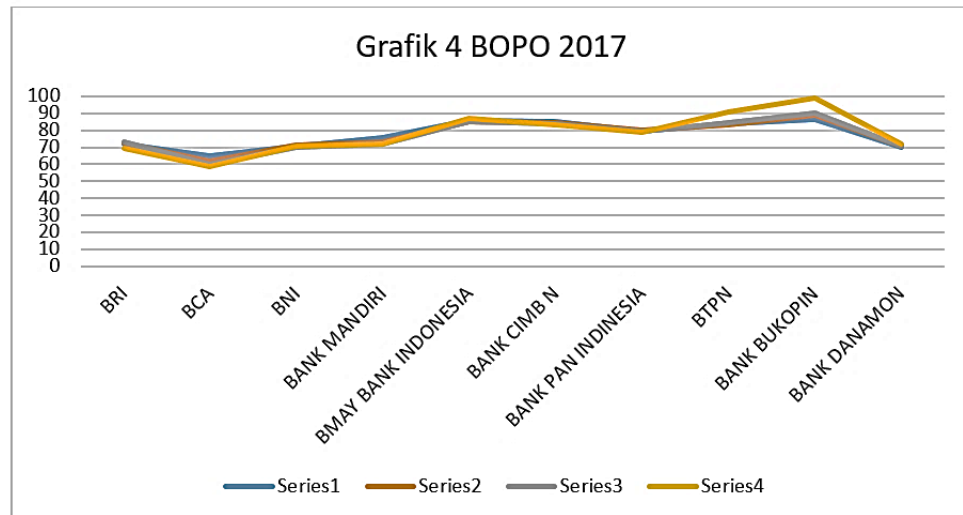
The following is a graph of 4 BOPO in 2017:



Figure 4 charts of 2017

## Analysis Results

1. Regression Analysis Results

   The following table of regression analysis results:

Table 5 Regression Coefficient

| | | Coefficients^a | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | | Collinearity Statistics | |
| Model | | B | Std. Error | Beta | | | Zero-order | Partial | Part | Tolerance | VIF |
| 1 | (Cons) | 7,721 | ,814 | | 9,489 | ,000 | | | | | |
| | X1 | ,048 | ,021 | ,168 | 2,242 | ,031 | ,626 | ,350 | ,121 | ,520 | 1,92 |
| | X2 | ,000 | ,009 | -,002 | -,031 | ,975 | -,149 | -,005 | -,002 | ,698 | 1,43 |
| | X3 | -,083 | ,007 | -,844 | -11,466 | ,000 | -,936 | -,886 | -,619 | ,538 | 1,86 |

The effect of CAR, LDR, and BOPO on ROA can be predicted by regression coefficients. In table 4.8 the regression coefficient of significance value is used to determine the partial effect of CAR, LDR, and BOPO on ROA. The provisions used are if the significance is < 0.05 then the effect of CAR, LDR, and BOPO on ROA is partially accepted.

The significance of CAR to ROA is 0.031. This means that the hypothesis containing the effect of CAR on ROA is accepted. The significance of the effect of LDR on ROA is 0.975. This means that the hypothesis containing the effect of LDR on ROA is not accepted. Significance of the effect of BOPO on ROA 0.00. This means that the hypothesis that contains the effect of BOPO on ROA is accepted. The regression equation line:

$$ROA = a + X1\ \beta_1 + X2\ \beta_2 + X3\ \beta_3 + e$$

$$ROA = 7{,}721 + X10{,}048 + X20{,}00 + (-{,}083)X3 + e$$

2. Determinant Coefficient Results

Table 6 Determinant Coefficient

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,946[a] | 0,895 | 0,886 | 0,30383 |

Percentage of influence of CAR. LDR and BOPO to ROA of Conventional Banks listed on the stock exchange and IDX in 2017 can be predicted by R2 (R square). The R-value of 0.946 is squared to produce an R square of 0.895. The value of R square is multiplied by 100% so that the percentage of the effect of CAR, LDR, and BOPO on ROA is 89.5%. This shows that the influence of CAR, LSR, and BOPO on ROA is very large. The remaining 10.05% ROA is influenced by other variables besides the CAR, LDR, and BOPO variables.

3. F Test Result

Table 7 F . Test

| Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|
| 28,361 | 3 | 9,454 | 102,407 | ,000[b] |
| 3,323 | 36 | ,092 | | |
| 31,684 | 39 | | | |

The F test can be used to predict the effect of CAR, LDR, and BOPO on ROA. The criteria used are if F count > F table with a significant < 0.05 then the hypothesis containing the effect of CAR, LDR, and BOPO has a significant effect on ROA is accepted.

The calculated F value in the table above is 102.407 with a significance of 0.000. The value of F table on df 3 and df 36 is 2.84. Thus the hypothesis containing the effect of CAR, LDR, and BOPO simultaneously on ROA is accepted.

**Discussion**

This study proves that CAR, LDR, and BOPO have a significant simultaneous effect on ROA of conventional banks in Indonesia in 2017. This study also proves that CAR and BOPO have a significant partial effect on ROA of conventional banks in Indonesia in 2017.

The amount of credit provided by the bank did not have a significant effect on the bank's finances. This could be due to the large number of creditors. Although the funds provided for lending, the number of borrowers did not increase. In addition, the smooth payment of credit by creditors will also have an impact on the Bank's profits.

Capital Adequacy Ratio (CAR) or capital adequacy ratio, which means the amount of own capital needed to cover the risk of losses arising from investing in risky assets and financing all fixed assets and bank investments. All banks in Indonesia are required to provide a minimum capital of 8% of RWA. The greater the Capital Adequacy Ratio (CAR), the greater the bank's profits. In other words, the smaller the risk of a bank, the greater the profit earned by the bank (Kuncoro and Suhardjono, 2002).

According to Gary C. Zimmerman (2000); capital (capital) is one of the variables that can be used as a basis for measuring bank performance, which is reflected in the CAMEL rating component (Capital, Asset, Management, Earning, Liquidity). Therefore, the amount of capital of a bank will affect the amount of productive assets, so that the higher the asset utilization (Timothy, 2000), the larger the capital must be. So it can be concluded that the greater the Capital Adequacy Ratio (CAR), then the Return on Assets (ROA) will also be greater, in this case the banking performance is increasing or improving. The results of research conducted by Werdaningtyas (2002); Mawardi (2005); Suyono (2005) and Merkusiwati (2007) showed that the Capital Adequacy Ratio (CAR) had a positive and significant effect on Return On Assets (ROA).

Loan to Deposit Ratio (LDR) is used to measure how big the bank's ability to fulfill the loan request submitted without any suspension (Payamta and Machfoedz, 1999). According to Bank Indonesia, a bank's liquidity capacity can be proxied by the Loan to Deposit ratio (LDR), which is a comparison between credit and Third Party Funds (DPK). This ratio is used to assess the liquidity of a bank by dividing the amount of credit extended by the bank to third party funds.

The standard used by Bank Indonesia for the Loan to Deposit Ratio (LDR) is 80% to 110%. If a bank's Loan to Deposit Ratio (LDR) is below 80% (say 70%), it can be concluded that the bank can only distribute 70% of the total funds raised. If the bank's Loan to Deposit Ratio (LDR) reaches more than 110%, it means that the total credit extended by the bank exceeds the funds raised. The higher the Loan to Deposit Ratio (LDR) indicates the riskier the bank's liquidity conditions, conversely the lower the Loan to Deposit Ratio (LDR) indicates the bank's lack of effectiveness in channeling credit so that the bank's opportunity to earn profits is lost. Changes in the Loan to Deposit Ratio (LDR) of a bank which is at the standard set by Bank Indonesia (80% - 110%), then the change in profit earned by the bank will increase (assuming that the bank is able to channel its credit effectively). The bank's LDR ratio reaches more than 110%, meaning that the total credit extended by the bank exceeds the funds raised. Because the funds collected from the public are small, the bank in this case can also be said to not carry out its function as an intermediary (intermediary) properly. If the bank's Loan to Deposit Ratio (LDR) is at the standard set by Bank Indonesia, the profit earned by the bank will increase (assuming the bank is able to channel its credit effectively). With the increase in profit, the return on assets (ROA) will also increase, because profit is a component that makes up the return on assets (ROA). Research conducted by Usman (2003); Suyono (2005) and Merkusiwati (2007) show that the Loan to Deposit Ratio (LDR) has a positive and significant effect on Return On Assets (ROA).

The increasing BOPO ratio reflects the bank's lack of ability to reduce its operational costs which can cause losses because banks are less efficient in managing their business (Bank Indonesia, 2004). Bank Indonesia sets the best figure for the BOPO ratio below 90%, because if the BOPO ratio exceeds 90% to close to 100%, the bank can be categorized as inefficient in carrying out its operations. This ratio, which is often called the efficiency ratio, is used to measure the ability of bank management to control operational costs against operating income.

The smaller this ratio means the more efficient the operational costs incurred by the bank concerned so that the possibility of a bank in a problematic condition is getting smaller. According to Bank Indonesia, operating efficiency is measured by comparing total operating costs with total operating income or what is often called BOPO. So that it can be arranged a logic that the operating efficiency variable as proxied by BOPO has a negative effect on banking performance as proxied by Return on Assets (ROA). So that the larger the BOPO, the smaller/decrease the financial performance of banks, and vice versa, if the BOPO is getting smaller, it can be concluded that the financial performance of a company (banking) is increasing or improving. The results of research conducted by Mawardi (2005) show the results that BOPO has a negative effect on Return On Assets (ROA).

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusion

The results of data analysis and discussion in this study indicate that the effect of CAR, LDR, and BOPO on ROA of Conventional Banks listed on the Indonesia Stock Exchange (IDX) in 2017. The effect of CAR, LDR, and BOPO on ROA of Conventional Banks listed on the Stock Exchange Indonesia (IDX) in 2017 can be concluded as follows:

1. CAR, LDR, and BOPO simultaneously have a significant effect on ROA at conventional banks in Indonesia in 2017.
2. This study also proves that CAR and BOPO have a significant partial effect on ROA at conventional banks in Indonesia in 2017. LDR has no effect on ROA.

### Recommendations

The results of the research discussion and conclusions can be taken into consideration in providing advice to the bank. The suggestions given are as follows.

1. Banks are advised to increase LDR and BOPO because they can have a significant effect on increasing ROA.
2. Banks need to consider the number of creditors who borrow funds and their ability to repay credit so that there is no loss to the bank.

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