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Determinants of Return on Assets (ROA) On Conventional Banks Listed On Indonesian Stock Exchange (IDX) Period 2013 - 2017

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Abstract: *This is the study of the effect of Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non Performing Loans (NPL), Net Interest Margin (NIM) and Operating Expenses to Operating Income Ratio (OEOI) on Return on Assets (ROA) listed in Indonesian Stock Exchange (IDX) during 2013 to 2017. The sample used in this study consists of 35 conventional commercial banks listed in IDX. The study utilized panel data obtained from the Bank of Indonesia's report and audited financial reports listed in banking firms listed in IDX. By using Fixed Effect Model in Eviews, the F test result showed that the variable CAR, LDR, NPL, NIM and OEOI simultaneously affect significantly to RO, such as the Heteroscedasticity Test. According to the t test result, it can conclude a positive relation of NIM and ROA with strong statistical importance. LDR has no impact on ROA. While, CAR, NPL and OEOI have a negative and significant impact on ROA. Prediction capability from these five variables toward ROA is 94.60% where 5.40% is affected by other factors that are not added in the model.*

Keywords*: Capital Adequacy Ratio, Loan to Deposit Ratio, Non Performing Loan, Net Interest Margin, Operating Expenses to Operating Income Ratio, Return on Assets*

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I. Introduction

Since mid 2013, Bank Indonesia (BI) started to increase BI rate. One of the main reason of this action is to control bank credit growth. During the last 3 years, banks profitability is continually decreasing, one of the cause behind this is the high numbers of credit ratio and regulation. Figure 1 shows ROA of conventional bank tends to go down from 2013 to 2017, in contrast with ROA of sharia bank which is fluctuating. Quoting business financial magazines, bank profitability is continually going down during the last 5 years because of increasing loans distribution, along with the high numbers of bad credit and the high cost of removal fees, also strict regulations from OJK (Financial Service Authority) and BI.

Significant decrease occurs in 2014-2015, when initial ROA 2.85% went down to 2.32%, whereas sharia bank experience growth from 0.79% to 1.25%. In 2017, ROA started to increase as an effect of increasing net profit in third quarter of 2017 because better credit quality also enhance the profitability.

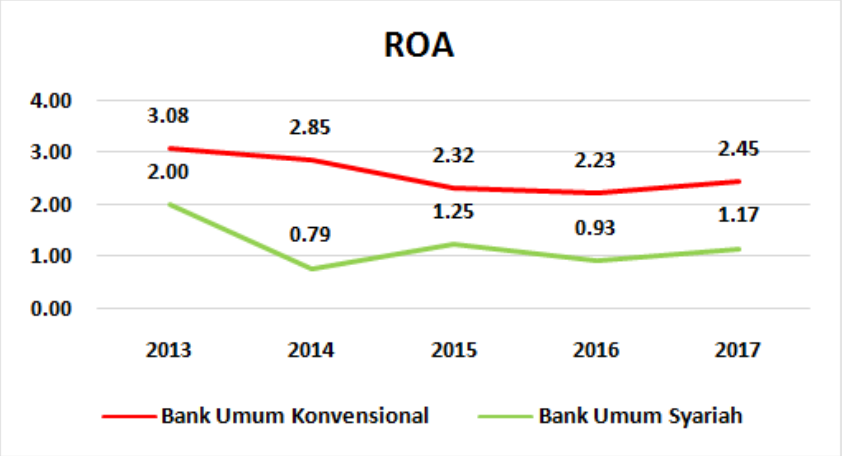
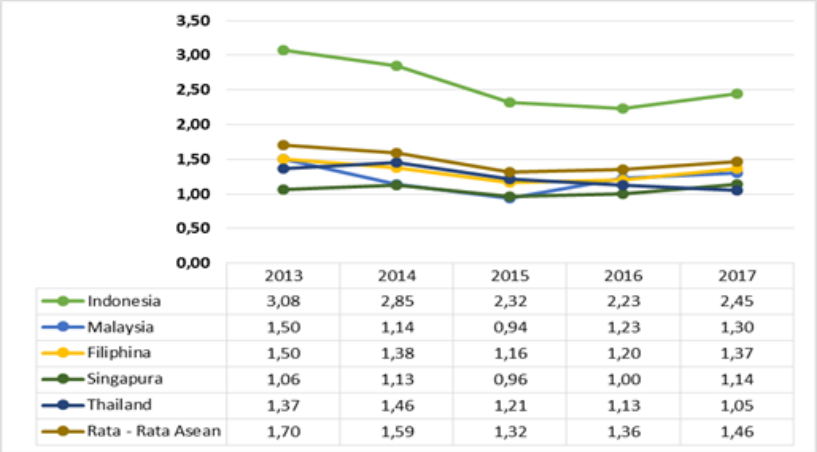


Figure 1. ROA Comparison of Conventional Bank and Sharia Bank
Source : OJK Annual Report



	2013	2014	2015	2016	2017
Indonesia	3,08	2,85	2,32	2,23	2,45
Malaysia	1,50	1,14	0,94	1,23	1,30
Filiphina	1,50	1,38	1,16	1,20	1,37
Singapura	1,06	1,13	0,96	1,00	1,14
Thailand	1,37	1,46	1,21	1,13	1,05
Rata - Rata Asean	1,70	1,59	1,32	1,36	1,46

Figure 2 ROA Comparison of ASEAN countries
Source: Federal Reserve Economic data

In Comparison among ASEAN countries, Indonesian conventional bank placed above average of other ASEAN countries i.e Malaysia, Philipines, Singapore and Thailand despite the inclination of decrease. The average of ROA in ASEAN countries in 2013 is 1,7% whereas Indonesian bank ROA is 3.08%, and in the end of the research in 2017 the average ROA in ASEAN is 1,46% and Indonesian bank ROA is far above the average with 2.45%.

This study choose banking company because its differrence with other companies which collects fund from the society in the form of savings and distribute it back through loans. In addition, because it is often highlighted by government in the banking restructuration program in an effort to improve national economy from the effect of monetary crisis in 1997 and global financial crisis in 2008.

Banking measurement used in this study is financial performance, can be shown from the company financial statement listed by IDX (Indonesian Stock exchange). ROA is used as performance parameter to measure company efectivity to yield a profit by using their owned activa. In purpose of determining bank soundness level, BI is more concerned about ROA assesment than ROE, prioritize bank profitability rate measured by asset whose fund mostly comes from customers savings thus ROA is more representative to measure bank profitability rate.

II. Literature Review

2.1. Bank

According to the Law of the Republic of Indonesia Number 7 of 1992 regarding Banking as amended by Law Number 10 of 1998. Bank definition is a business entity that collects funds from the community in the form of deposits and distributes them to the community in the form of loans and / or other forms in order to improve the lives of many people.

2.2. Profitability

Profitability ratios measure the effectiveness of banks making profits, in addition of being used as a measure of financial health, profitability ratios are very important to observe given the adequate benefits needed to maintain the flow of bank capital resources. According to Bank Indonesia regulations profitability is one of the main elements assessed in determining the soundness of the bank and one of the indicators commonly used in measuring bank profits is the ratio of Return on Assets (ROA).

2.3. Basel II according to the Basel Committee on Banking Supervision

In general, the basel framework II consists of three pillars, namely Pillar 1. Minimum Capital Needs establish minimum capital requirements associated with credit risk, market risk and operational risk. Pillar 2. The Supervision Review Process requires a review process carried out by the supervisor to ensure that bank capital is sufficient to cover the bank's risk as a whole. Pillar 3. pillar 3 Basel II establishes disclosure requirements that allow market participants to assess key information regarding risk exposure, the process of measuring risk and bank capital adequacy.

2.4. Efficiency Theory

According to Bhuia *et al.*, (2012), in recent years the problem of performance measurement for financial institutions has attracted much attention, because the structure of the financial services industry is changing rapidly, it is quite interesting to measure efficiency and explain variations in financial institution inefficiencies. According to Burger and Humphrey (1997). Megginson (1996, p. 388), the more efficient the financial markets provide services, the more productive the economy will be and the higher net returns for debtor and creditor. This is in line with economic development that requires financing by developing efficient methods of channeling savings to productive investments as a source of financing.

2.5. Risk Based Bank Rating

Measurements that used to assess performance is depend on how the organizational unit will be assessed and how the objectives will be achieved. The targets set as the strategy formulation stage in a strategic management process (considering profitability, market share, and cost reduction, from various other measures) must be used to measure the company's performance during the strategy implementation period (Hoque and Rayhan, 2013). According to Bank Indonesia circular letter number 13 / 24 / DPNP / 2011 and also consider of rapid development of the banking sector and changes in business complexity and bank risk profile, there are also methodological changes in the assessment of bank conditions that are applied internationally.

2.6. Return On Assets (ROA)

ROA describes asset turnover as measured by sales volume. This ratio measures the ability of banks to obtain overall profits (Endri, 2018a). The level of ROA is getting higher reflects the increasing level of profit achieved by the bank and the better the bank's position in terms of asset usage so that ROA percentage can show the ability of bank to gain profit from the total assets owned.

Based on Bank Indonesia circular letter number 6/23/DPNP dated May 31, 2014 ROA can be calculated by :

$$ROA = \frac{After\ Tax\ Profit}{Total\ \ Assets}\ x\ 100\ \%$$

2.7. Capital Adequacy Ratio (CAR)

Capital is one of the important factors for banks in developing their business. Capital for banks serves as a buffer against the possibility of losses in addition to serve as the main source of financing for operational activities as a company in general. The capital owned by a bank basically must be sufficient to cover all business risks faced by the bank. Based on Bank Indonesia circular letter number 6 / 23 / DPNP dated 31 May 2004 CAR can be calculated by:

$$\text{Owned equity}$$

$$\text{CAR}: \frac{\text{Core Capital} + \text{ Complementary Capital}}{\text{ATMR}}\ \text{x}\ 100\%$$

2.8. Loan Deposit Ratio (LDR)

On the liability side, banks should be able to fulfill their obligations to customers everytime of their deposits in the bank is withdrawn, on the asset side, the bank should undertake the loan disbursement agreed upon. If both aspects or one of these aspects can not be fulfilled, the bank will lose public trust. Bank liquidity is the ability of banks to fulfill the possibility of withdrawal of deposits by depositors or meet the needs of the community in the form of credit. Based on circular letter number 6 / 23 / DPNP dated 31 May 2004 CAR can be calculated by:

$$\text{LDR}: \frac{\text{Credit}}{\text{Third} - \text{party fund}}\ \text{X}\ 100\%$$

2.9. Non Performing Loan (NPL)

The development of credit that is not encouraging for the bank is if the credit it provides turns out to be problem loans. This is also explained in Financial Accounting Standard number 31 (revised 2000) which states: "Non-performing loans in general are loans whose payment of principal installments / or interest has passed ninety days or more after maturity or credit whose timely payment is very doubtful. Based on circular letter number 6 / 23 / DPNP dated 31 May 2004, NPL can be calculated by:

$$\text{NPL}: \frac{\text{Bad credit}}{\text{Total credit}}\ \text{X}\ 100\%$$

2.10. Net Interest Margin (NIM)

Net Interest Margin (NIM) is a ratio used to measure the ability of bank management to manage their productive assets to generate net interest income. The greater the ratio, the higher interest income on productive

assets managed by the bank, so the possibility of a bank in problematic conditions is getting smaller. Based on circular letter number 6 / 23 / DPNP dated 31 May 2004, NIM can be calculated by:

$$NIM : \frac{Net\ Interest\ Income}{Productive\ Activa}\ X\ 100\%$$

2.11. Operational Income Operating Costs (BOPO)

According to Bank Indonesia Circular Number 15/29 / DKBU July 31, 2013 Operational Income Operational Costs (BOPO) is a ratio that measures the comparison of Operating Expenses to Operating Revenues to determine the level of efficiency and ability of the Bank to carry out its operations by dividing the total expenses operational and total operating income calculated per position (not annualized). Based on circular letter number 6 / 23 / DPNP dated 31 May 2004 BOPO can be calculated by:

$$\text{BOPO} : \frac{\text{Operating Costs}}{\text{Operational Income}}\ \text{X}\ 100\%$$

2.12. Theoretical framework

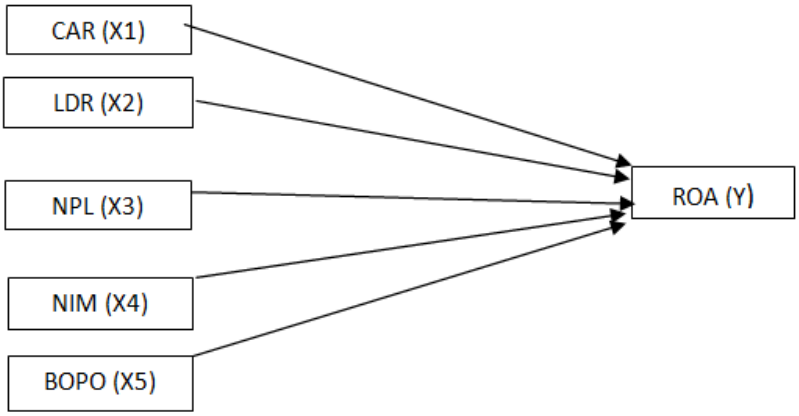


Figure 3 Theoretical Idea Framework

2.13. Hypothesis

a. Effect of CAR on ROA

CAR is a ratio that describes the use of bank assets that contain risks (credit, participation, securities, bills on other banks) which are also financed by the bank's own capital funds in addition to being financed by other party funds such as public funds, loans (debt), etc. . The higher the CAR percentage results reflects the greater capital owned by the bank so that it affects the level of public trust which leads to an increase in bank profit (ROA). According to Wibowo (2013), the amount of bank capital adequacy (CAR) does not necessarily affect the amount of bank profits. Thus it can be formulated that CAR has a significant negative effect on ROA. This negative relationship is in line with the results of research conducted by Buyuksalvarci and Abdiglu (2013) and Harly (2011) which states that CAR has a negative effect on ROA.

H1: CAR is thought to have a negative effect on ROA

b. Effect of LDR on ROA

The loan to deposit ratio (LDR) states the ability of a bank to fulfill the depositors withdrawal of funds that have been used by banks to provide credit to other parties. Loan to Deposit Ratio (LDR) is a ratio of credit given by the bank and funds collected by the bank. The higher percentage of LDR results in higher profits because banks are considered capable or effective in managing funds entrusted by customers. Likewise, vice versa, the lower the value of the LDR percentage indicates that the profits obtained by the bank will be lower. Thus it can be formulated that the LDR has a positive effect on ROA. This is in accordance with the results of research conducted by Gizaw (2015) and Shirley and Hsu (2014),

H2: LDR is thought to have a positive effect on ROA

c. Effect of NPL on ROA

A high NPL will increase costs, so that it has the potential for bank losses. The higher the ratio, the worse the quality of bank credit, which causes the number of problem loans to increase, and therefore the bank must bear losses in its operational activities so that it affects the decrease in profit (ROA) obtained by the bank (Endri, 2018b). It can be concluded that the greater the NPL of a bank, the lower the change in profit earnings,

so that the NPL has a negative effect on ROA. This is in accordance with the research conducted by Balango *et al.,* (2017) and Yudha (2017) which states that NPL has a positive effect on ROA .
H3: NPL is thought to have a negative effect on ROA

d. Effect of NIM on ROA

Net Interest Margin (NIM) is used to measure the ability of bank management to manage their productive assets to generate net interest income. Net Interest Margin (NIM) is a ratio that compares between net interest income and average earning assets. The higher the percentage of NIM, the higher the income or profit obtained by the bank. The income of a bank is very dependent on interest difference gained from the distributed loan with the net interest income obtained by the bank. The higher the NIM, the profit (ROA) will increase, and vice versa. Tus the NIM is in line or directly proportional to ROA. This is consistent with the results of research conducted by Fajri (2017), and Hakim and Sugianto. (2018) which states that NIM has a positive effect on ROA .
H4: NIM is thought to have a positive effect on ROA

e. Effect of BOPO on ROA

BOPO is the ratio of operational costs used to measure the level of efficiency and ability of banks to carry out their operations Dendawijaya (2009). The increasing BOPO ratio reflects the lack of ability of banks to reduce their operational costs which can cause losses because banks are less efficient in managing their business. This ratio, often called the efficient ratio, is used to measure the ability of bank management to control operational costs against operating income. The smaller BOPO means the more efficient operational costs incurred by the bank and vice versa. A high BOPO percentage results in a low profit obtained by a bank. Therefore the BOPO value is inversely proportional to the value of ROA. This is consistent with the results of Ho and Zhu (2005) and Patni and Gede (2017) who stated that BOPO had a negative effect on ROA.
H5: BOPO is thought to have a negative effect on ROA

III. Methodology

This study aims to determine the correlation between two or more variables, this study uses a correlation or associative research design and according to the nature of the correlation, this research uses a causal relationship or commonly referred to as causal. In this study the independent variable consists of Capital Adequacy Ratio, Loan to Deposit Ratio, Non Performing Loan, Net Interest Margin and Operational Costs to Operating Income and the dependent variable is Return On Assets.

The population used in this study were all conventional banking companies listed on the Indonesia Stock Exchange (IDX) in the research period (period 2013 - 2017) of 36 banks, but 1 bank left the IDX so the number of research samples was 35 conventional commercial banks that listed on the IDX.The data analysis technique used in this study is descriptive statistical analysis and panel data regression analysis with the fixed effect method. The equation of the panel data regression model in this study are:

$Yit = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \varepsilon$

Note :
Y = ROA
X1 = CAR
X2 = LDR
X3 = NPL
X4 = NIM
X5 = BOPO
α = constanta
β 1... β 5 = *slope*

IV. Results and Discussion

4.1. Descriptive Statistics

The following is a summary of descriptive statistical data from the variables used in this study.

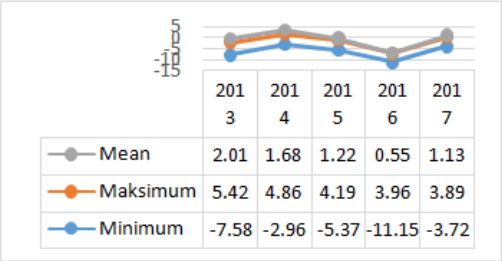


Figure 4. Descriptive Statistics of Variable Return on Assets (ROA)

The lowest ROA ratio is equal to -11.15, namely Bank of India Indonesia in 2016 and the highest is 5.42 namely Bank Mestika Dharma in 2013, and seen from the average ROA each year shows that during the study period and statistically it can be explained that the rate of return Banking profits listed on the Indonesia Stock Exchange fall into the "sufficient" category, according to the ranking criteria set by Bank Indonesia. This means that some conventional commercial banks listed on the Indonesia Stock Exchange have utilized total assets as a whole to make a profit.

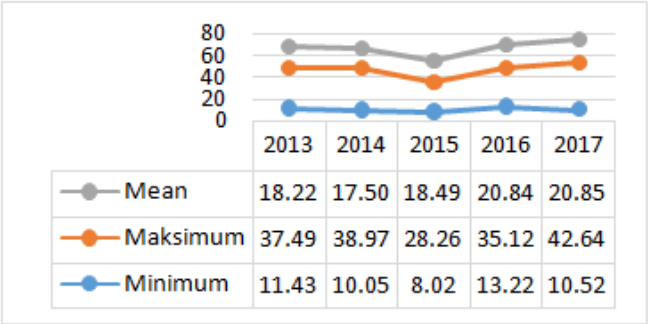


Figure 5. Descriptive Statistics of Variable Capital Adequacy Ratio (CAR)
Source: data processed with eviews 10

The lowest CAR value is 8.02, namely the Banten Regional Development Bank in 2015 and the highest namely Bank of India Indonesia of 42.64 in 2017. This shows that statistically, during the research period the CAR ratio of banking companies listed on the IDX has met the standard set by Bank Indonesia is at least 8%. So that it can be said that the bank capital adequacy ratio listed on the IDX is high.

Figure 6 Descriptive Statistics of the Variable Loan to Deposit Ratio (LDR)

The LDR ratio has the lowest data of 42.02, namely Bank Mitra Niaga in 2017 and the highest is 140.72, namely Bank Woori Saudara in 2013. Statistically, it can be concluded that the level of liquidity achieved by banks listed on the IDX has exceeded the standards set by the Bank Indonesia which is 80% - 110%

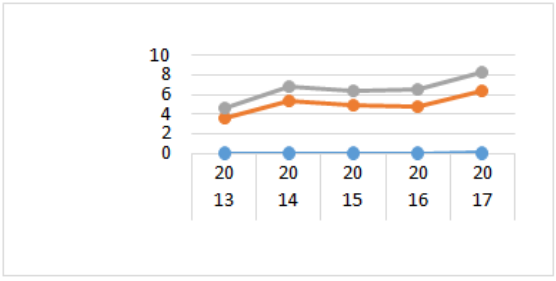
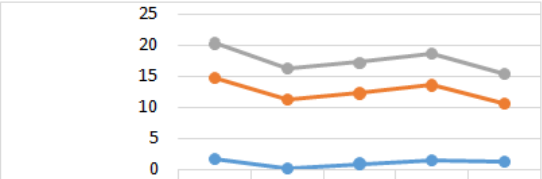


Figure 7 Descriptive Statistics of Non Performing Loan (NPL) Variables

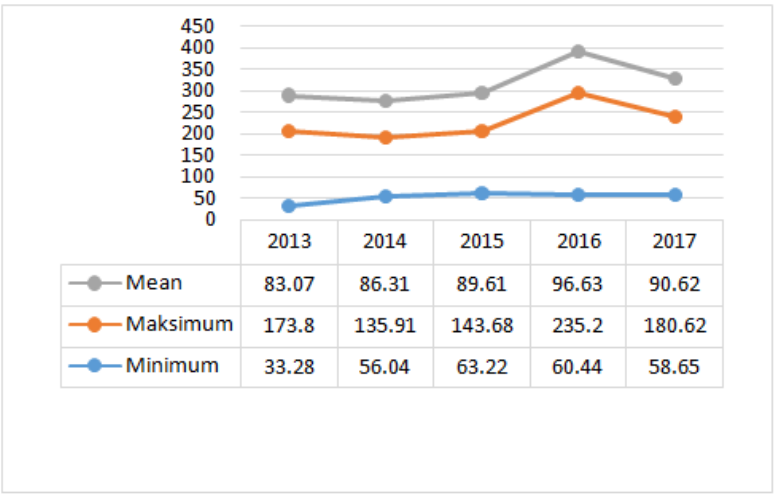
The lowest NPL ratio of 0.00 is Bank Nasional Nobu and the highest is 6.37, namely Bank Bukopin in 2017. Thus, it can be concluded that statistically, during the study period, the banking NPL level listed on the IDX was in the healthy category, although there were still several banks with the high level of bad credit is above the maximum amount allowed by Bank Indonesia regulation of 5%.



	2013	2014	2015	2016	2017
Mean	5.61	5.03	5.07	5.16	4.88
Maksimum	13.04	10.97	11.27	11.98	9.32
Minimum	1.67	0.24	0.93	1.53	1.22

Figure 8. Descriptive Statistics of Variable Net Interest Margin (NIM)

The lowest NIM ratio is 0.24, that is, at Bank JTrust Indonesia in 2014 and the highest NIM data ratio is 13.04, namely in Bank Pembangunan Daerah Banten in 2013. Thus, it can be concluded statistically as described earlier, during the period of bank NIM level research conventional public listed on the IDX still does not meet the standards set by Bank Indonesia, which is at least 6%.



	2013	2014	2015	2016	2017
Mean	83.07	86.31	89.61	96.63	90.62
Maksimum	173.8	135.91	143.68	235.2	180.62
Minimum	33.28	56.04	63.22	60.44	58.65

Figure 9 Descriptive Statistics of Operational Load Variables towards Operating Income (BOPO)

The lowest BOPO ratio was 33.28, namely Bank Woori Saudara in 2013 and the highest was 235.20, namely Bank of India Indonesia in 2016. Thus, it can be concluded that statistically, during the study period the efficiency level of banking operations listed on the IDX was still inefficient, because the average BOPO is above 80%.

4.2. Fixed Effect Model

Table 1 Estimated Data Panel Regression (Fixed Effect)

Dependent Variable: ROA
Method: Panel Least Squares
Sample: 2013 2017
Periods included: 5
Cross-sections included: 35
Total panel (balanced) observations: 175

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.956591	0.890428	10.05875	0.0000

CAR	-0.076915	0.014959	-5.141639	0.0000
LDR	0.001005	0.008380	0.119890	0.9047
NPL	-0.139207	0.067459	-2.063579	0.0410
NIM	0.137475	0.059199	2.322266	0.0217
BOPO	-0.075563	0.003538	-21.35526	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.946039	Mean dependent var	1.316514
Adjusted R-squared	0.930450	S.D. dependent var	2.267348
S.E. of regression	0.597954	Akaike info criterion	2.007025
Sum squared resid	48.26908	Schwarz criterion	2.730405
Log likelihood	-135.6147	Hannan-Quinn criter.	2.300448
F-statistic	60.68685	Durbin-Watson stat	1.745482

Based on the results of the multiple regression analysis above, a regression line equation can be obtained as follows:

ROA = 8.956591– 0.076915 CAR + 0.001005 LDR - 0.139027 NPL + 0.137475 NIM- 0.075563 BOPO

These equations can be interpreted as follows:

1. Constant C of 8.956591 states that if the variable CAR, LDR, NPL, NIM and BOPO is constant, hence the variable ROA is 8.956591.
2. CAR regression coefficient of - 0.076915 states that each increase in CAR by 1% will have an impact on the decrease in ROA of 0.076915 assuming the other independent variables are constant.
3. LDR regression coefficient of 0.001005 states that each increase in LDR by 1% will have an impact on increasing ROA of 0.001005 assuming the other independent variables are constant.
4. The NPL coefficient of - 0.139027 states that any increase in NPL of 1% will have an impact on increasing ROA of 0.0137475 assuming the other independent variables are constant.
5. The NIM regression coefficient of 0.137475 states that any increase in NIM of 1% will have an impact on decreasing ROA of 0.137475 assuming the other independent variables are constant.
6. BOPO regression coefficient of - 0.075563 states that any increase in BOPO of 1% will have an impact on increasing BOPO of 0.075563 assuming the other independent variables are constant.

4.2.1. Simultaneous Significance Test (Test Statistic F)

Based on the results of processed statistical data in the table above, it can be seen that the constant value C has a coefficient of 8.956591. Thus it can be interpreted that overall the independent variables positively influence the dependent variable. The value of the Prob (F-Statistic) is 0.0000 smaller than $\alpha = 0.05$, this means that H0 is rejected and Ha is accepted.

This shows that independent variables such as CAR, LDR, NPL, NIM and BOPO have a simultaneously significant effect on ROA of the banking companies studied with a confidence level of 95 percent.

4.2.2. Goodnes of Fit Test (R2)

The panel data regression estimation results in Table 4.9 with the Fixed Effect model for testing "goodness of fit", shows the coefficient of determination $R^2 = 0.946039$. This means that all Independent Variables; CAR, LDR, NPL, NIM and BOPO can explain variations in the ups and downs of banking companies ROA of 94.60%, while the remaining 5.40% is explained by other factors not included in this model. While the determination coefficient value is adjusted $R^2 = 0.930450$, which means that after considering the degrees of freedom, all the independent variables used in this study are able to explain the variation in ups and downs of ROA conventional public banking companies listed on the Stock Exchange amounted to 93.04%.

4.2.3. Partial Test (t)

Based on the above table it can be seen that the influence between the independent variables on the dependent variable is as follows:

Table 2 Relationship of Free Variables to ROA

Var	Initial Hypothesis	Regression Results
CAR	Negative	Negative Significant
LDR	Positive	Has No Effect
NPL	Negative	Negative Significant
NIM	Positive	Positive Significant
BOPO	Negative	Negative Significant

Source: Data analysist (2018)

V. Discussion

5.2. CAR effect on ROA

Based on the results of the regression test, it can be interpreted that the relationship that occurs between the CAR and ROA variables is a negative and significant effect according to the hypothesis that was made previously, and not in accordance with the theory stated by Sepehrdoost and A'aeini (2015) that CAR is directly proportional to ROA.

In fact, CAR has a negative effect on ROA, as happened in banks listed on the IDX in the period of 2013 - 2017. This indicates that the size of CAR will not affect the increase or decrease of ROA. While being reviewed from the empirical conditions of the object of research, it will appear that most banks have CARs above 8%, CAR in this study is above the conditions set by the Bank. It occurs due to Bank Indonesia regulations that require a CAR of at least 8%, causing the bank to strive to always keep the CAR owned in accordance with applicable regulations. CAR value can reduce the ability of banks to expand their business because the larger capital reserves are used to cover the risk of losses. The inhibition of business expansion due to high CAR, will ultimately affect the bank's financial performance. The results of this study support the results of research from Hantono (2017) and Masood and Ashraf (2012).

5.3. LDR effect on ROA

Based on the results of hypothesis testing that has been done, it can be interpreted that between the LDR and ROA variables are not mutually correlated , contrary to the hypothesis statement that was built previously that the LDR has a positive effect on ROA. In accordance with Basel's theory II, liquidity risk is a risk due to the inability of banks to fulfill maturing obligations from cash flow funding sources and / or high-quality liquid assets that can be pledged, without disturbing the activities and financial condition of the bank.

Liquidity is very important to maintain the business continuity of the bank. The higher LDR percentage results higher profits because banks are considered capable or effective in managing funds entrusted by customers. If the lower percentage value of the LDR indicates that the profits obtained by the bank will be lower and vice versa. However, in fact the LDR does not affect ROA, because the addition of loans distributed by the bank will potentially increase the risk faced by the bank, therefore bank also needs to be selective in providing credit because in addition to providing credit benefits in the form of interest income, improper lending can lead to problem loans.The results of this study support the results of previous studies conducted by Endri (2018b) and Widyastuti (2017) who stated that the LDR did not affect ROA.

5.4. NPL effect on ROA

Hypothesis test results of the relationship that occurs between the NPL and ROA variables show a negative and significant effect, in accordance to the previous hypothesis, the higher the level of the NPL ratio indicates the amount of bad credit experienced by the bank and resulted in losses.

According to Basel II theory, credit risk is a risk of loss associated with the possibility of a party to the transaction will fail to fulfill its obligations when due. This will affect the profitability of the bank because the supposedly received income has failed to be received due to bad credit. In addition to the bank not receiving income, the bank also should keep paying for the operational costs it carries. The results of the study that support that the NPL variable has a negative effect on ROA are studies conducted by Fajri (2017) and Balango (2017)

5.5. NIM effect on ROA

The results of the hypothesis test conducted indicated that the relationship between the NIM and ROA variables is positive and significant. This result is in line with the theory of profitability where the environment triggers banks to partially increase the NIM ratio in accordance with the direction of the bank towards the desired position determined by Bank Indonesia at 1.5%. The large asset growth values of a bank will be followed by capital increase and more ability to generate ROA. In accordance with Ferrier (2001) statement that the NIM is in line or directly proportional to ROA, thus strengthening the Bank ability as a sound financial institution. Net interest is one component of forming profit (income), because profit is a component that forms Return on Assets, then indirectly if net interest income increases the profit generated by the bank also increases.

This supports the results of research conducted by Brockand Rojas-Suarez (2000) and Almazari (2014). which states that NIM has a positive effect on ROA.

5.6. BOPO Effect on ROA

The results of hypothesis testing that conducted showed that the correlation that occurs between the BOPO and ROA variables is a negative effect, according to the efficiency theory, which explains where in all business activities, efficiency will increase profitability and vice versa. The BOPO ratio is a comparison between the amount of operating costs to operating income, hence that if the operational costs incurred are smaller than the bank's operating income, then the bank can be said to be efficient. Referring to the bank main activities which is as an intermediary so that the costs and operating income of the bank are dominated by interest costs and interest income. If the bank operational activities are efficient, then the income that will be obtained by the bank will be maximized or increased. So that banks need to pay attention to operational costs that must be charged and minimize costs that are considered not too important, so that bank profitability can increase. So is the case with operating income where banks are required to continue to increase their income so that bank profitability rises. The results support the results of research conducted by Endri (2018b) and Qin and Pastory (2012). which states that BOPO has a negative effect on ROA.

V. Conclusion

Based on the results of the analysis and discussion, the following are summarized as follows:

1. CAR ratio variables have a negative and significant effect on ROA of conventional banks listed on the Indonesia Stock Exchange in the period of 2013 - 2017. The empirical findings of this study are in accordance with the research hypothesis which states that CAR Variables negatively affect ROA. This proves the size of bank capital adequacy (CAR) does not affect the size of bank profits or ROA.
2. LDR ratio variables do not affect ROA in conventional banks listed on the Indonesia Stock Exchange in the period of 2013 - 2017. The empirical findings of this study do not match the research hypothesis which states that LDR variables have a positive effect on ROA of Conventional banking. This proves that regardless of the value of the LDR ratio does not affect the size of ROA since the addition of loans channeled by banks will potentially increase the risks faced by banks, therefore banks also need to be selective in lending because in addition to providing credit benefits in the form of interest income, lending Inaccurate can also trigger non-performing loans.
3. The NPL variable has a negative and significant effect on the ROA variable in conventional banks listed on the Indonesia Stock Exchange in the period 2013 - 2017. This study result is empirically in accordance with the research hypothesis which states that the NPL variable has a negative effect on bank ROA. This proves that the higher the level of the NPL ratio indicates the amount of bad credit experienced by the bank and resulted in losses. The increase in NPL has resulted in higher cost for asset write off. This is what will affect the profitability of the bank because the income that should be received by the bank failed to be received due to bad credit.
4. The NIM variable has a positive and significant effect on ROA in conventional banks listed on the Indonesia Stock Exchange for the period 2013 - 2017. The empirical findings of the study are in accordance with the research hypothesis which states that the NIM variable has a positive effect on banking ROA. This proves that the higher the percentage of the NIM, the higher the income or profit obtained by the bank.
5. BOPO variables have a negative and significant effect on ROA in conventional banks listed on the Indonesia Stock Exchange. the period 2013 - 2017. The empirical findings of the study are in accordance with the research hypothesis which states that the BOPO variable has a positive effect on banking ROA. This proves that the higher the BOPO ratio, it can be said that the operational activities carried out by the bank are inefficient and vice versa. If the lower the BOPO ratio, the bank's operational activities will be more efficient. If all activities carried out by the bank run efficiently, the profits to be made will also be greater which will ultimately improve the bank's financial performance.

Managerial Implications

Based on the conclusions above, the implications of this research are as follows:

1. Increased bank capital adequacy (CAR) will cause a decrease in the profitability of conventional commercial banks listed on the IDX, thus banks need to maintain the quality of their assets, where bank assets that have the highest risk are credit. Credit distribution must be very controlled because credit with bad collectability has a greater risk, therefore the risk-weighted assets will also be higher.
2. Distribution of third party funds in the form of credit (LDR) apparently did not significantly influence the profitability (ROA) of conventional commercial banks listed on the IDX. Therefore, researchers do not need to convey things that need to be addressed by the management of commercial banks.

3. The decline in non-performing loans (NPLs) of banks will increase the profitability of commercial banks listed on the IDX. In other words, the higher the NPL of a bank, the lower the company's profit, so that the bank must maintain its credit quality. The anticipation step that must be taken to prevent a high NPL is to increase accuracy in the credit analysis phase. Often to increase credit expansion banks are negligent in the initial credit analysis phase, so that loans are given too high or even banks give credit to companies that are not feasible. This credit analysis is not only left to the credit analyst, but the credit breaker must also carefully examine the projections made by the analyst. Likewise in the extension of credit and in several other cases. In addition, after credit is disbursed, the bank credit analyst must ensure that the credit provided is used in accordance with its designation, given the high misuse of credit in the present.e addressed by the management of commercial banks.
4. Increased net interest income (NIM) will increase the profitability of conventional commercial banks listed on the IDX. Therefore, banks need to maximize the distribution of third party funds in the form of credit. As discussed earlier, net interest income is the bank's main income, where net interest income is the difference between interest income from lending and interest expense for third party funds held in the bank.
5. The decrease in the comparison between operating costs and operating income (BOPO) will increase profitability at conventional commercial banks listed on the IDX. Therefore banks need to improve the efficiency of their use of costs. Where bank operational costs not only include interest costs, but also promotional costs, general and administrative costs, and others. Costs that need to be minimized are the costs of internal events that really don't need to be done. On the other hand, banks need to optimize the return of assets that have been deleted from books to minimize company losses.

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