



BANKING RISK ANALYSIS OF BANKING FINANCIAL PERFORMANCE (Empirical Study on LQ45 Registered Banking Period 2014 – 2019)

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ABSTRACT

Banking is one of the institutions that influence economic growth and becomes the only state financial intermediary, this causes the level of public confidence in depositing funds in the banking sector is very high. High public confidence in depositing funds in banks is also an influence and value for financial performance in banks. This banking risk can be minimized if the bank can manage and control the risk properly. Therefore from the beginning the bank must be able to identify problems or risks to come. Not only the banks should be able to identify future risks, the debtor should also be able to identify the risks to a bank by analyzing its financial statements to find out how high the level of health and performance at the bank. To find out how well a bank performs can be seen from profitability

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1. INTRODUCTION

In the economic growth of a country, banking is one of the most influential sectors. The economic growth of a country can also be measured by the number of banks owned by the country, the more banks, the better the economic growth in a country. This is because the banking sector is an institution that acts as a financial intermediary for a country, because it provides a means of payment (money) and becomes a source of funds to increase the country's economic growth. According to the Banking Law Number 10 of 1998, a bank is a business entity that collects funds from the public in the form of savings and distributes it to the public in the form of credit and/or other forms in order to improve the standard of living of the people at large. This shows that the growth and development of banking is in line with Indonesia's economic growth.

Because banking is one of the institutions that influence economic growth and is the only intermediary for state finances, this causes the level of public confidence in saving funds in the banking sector is very high. The high level of public trust in saving funds in banks is also an influence and value for financial performance in banks.

In life, we will always be faced with risk. In all aspects of life that we live there must be big or small risks, this risk is a possibility of loss of a decision that has been taken

or decided. Risk arises when there is more than one possible outcome (outcome), and the ultimate outcome is unknown. Likewise in the banking world there must be a banking risk, because the high level of public trust in the banking sector does not mean that banks do not face a banking risk.

Banking risk is the risk experienced by the banking business sector as a form of various decisions made in various fields, such as decisions on credit distribution, credit card issuance, foreign exchange, collections, and various other forms of financial decisions, which have caused losses to the bank. , and the biggest loss is in the form of finance (Fahmi 2012:122). Actually, this banking risk can be minimized if the banks can manage and control these risks properly. Therefore, from the start, the bank must be able to identify problems or risks that will come. It is not only banks that must be able to identify future risks, debtors should also be able to identify risks to a bank by analyzing its

financial statements to find out how high the level of soundness and performance of the bank is.

To find out how well the performance of a bank can be seen from the profitability of the bank, it is measured by *Return On Assets (hereinafter referred to as ROA)*. Profitability is an indicator to assess the performance of a bank, seen from factors such as operations, liquidity, capital adequacy, and assets owned. All of these factors can be assessed by looking at the financial statements of the bank concerned by looking at the level of profitability. And profitability ratios can be a measure of how much a bank and/or company is making a profit. Measurement of financial performance is generally represented or promoted by *Return On Equity (ROE)* and *Return On Assets (ROA)*. Because ROA is more focused on the company's profit, so in this study profitability will be proxied by ROA. ROA utilizes its assets to measure how high a company's level of effectiveness is in generating profits or profits. So the higher the ROA, the higher the profitability of the company.

This research is important to do because there are so many risks faced by banks, and the importance of banks having good ability in managing financial risk. And from this research also in order to know how high or large the influence of

risk that occurs in banking on the financial performance of the bank. Based on this explanation, a research title was obtained "**Analysis of Banking Risk on Financial Performance**".

2. RESEARCH METHODS

Population and Sample

Population is an area or place that has certain characteristics that will be used as research material. IDX through www.idx.co.id. While the sample is part of the population, what is examined in the sample will be a conclusion for the population. In sampling, the researcher took from the population based on the criteria that had been determined by the researcher. The type of data used by researchers is secondary data.

The object of this research is Conventional Banks listed on LQ45 and on the IDX. There are 5 (five) Conventional Banks to be studied, namely:

1. Bank Negara Indonesia (BNI)
2. Bank Mandiri
3. State Savings Bank (BTN)
4. Bank Central Asia (BCA)
5. Bank Rakyat Indonesia (BRI)

Method Sampling

The research population was obtained from Conventional Banks listed on LQ45 and on the IDX. This study uses quantitative data, namely data that is dominated by numbers. Data collection in the form of secondary data on financial statements of each bank for 2014 – 2019 (for 6 years). There are certain criteria in determining the research sample, the following are sample criteria:

1. Banks listed on LQ45
2. Banks listed on the IDX
3. Types of financial statements in the form of rupiah
4. Banks have the data needed for research
5. There are reports Financial statements for 2014 – 2019

Financial reports were obtained from the official banking website and the IDX official website, www.idx.co.id, namely

Variables and Operational Variables

Independent variables are independent variables, in this study the variables used are the risks contained in banking including operational risk, credit risk, and market risk. As for the dependent variable or the dependent variable used in this study, namely the profitability of bank measured using *Return On Assets (ROA)*.

This study is useful for knowing and explaining the effect of the independent variable (X) on the dependent variable (Y), based on a predetermined method.

Dependent

Variables The dependent variable or the dependent variable is the variable that is affected because of the independent variable. The dependent variable in this study is profitability (Y).

Quoted from Catherine (2018) according to (Tan, Anchor, and Floros, 2017, p.86) financial performance is often associated with company profitability. In this study to measure the profitability of banking is measured by using the ROA ratio, to show the efficiency of the company in maximizing profit or profit.

Here is the ROA Ratio formula:

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets of Independent}}$$

Variables are independent variables that affect the emergence of the dependent variable. In this study, there



are 3 (three) independent variables, namely:

1. Operating Expenses Operating Income (BOPO)

The BOPO ratio is a ratio that compares operating expenses to operating income to measure the level of efficiency of banking operations. Operating expenses are expenses incurred for the company's operational activities, while operating income is income generated from operational activities. The following is the BOPO formula:

$$BPO = \frac{\text{Operating Expenses}}{\text{Operating Income}} \times 100\%$$

2. Non Performing Loans (NPL)

The NPL ratio is the ratio between the number of non-performing loans and the total loans granted by banks. The following is the NPL formula:

$$\frac{\text{Loans}}{\text{Total Loans}} \times 100\%$$

3. Net Open Position (NOP)

The PDN ratio is the calculation of the difference between foreign currency assets and foreign currency liabilities. The following is the formula for PDN:

$$\frac{\text{Assets} + \text{Accounts Adm. Assets} - (\text{Liabilities} + \text{Accounts Adm. Liabilities}) \times 100 \text{ Bank Capital}}{\text{Bank Capital}} \times 100\%$$

Analysis Tool

Classical Assumption Test

assumption test has the purpose of testing the feasibility of the regression model in addition to being used to ensure that the data used is free from autocorrelation, heteroscedasticity and normally distributed.

1. Normality

Test Normality test aims to determine whether the data used is normally distributed data or not. In this study, to determine the normality of the data using the *Kolmogorov Smirnof (KS)* test by looking at the significance value. If the significance value is more than 5%, then the data is normally distributed. On the other hand, if the significance value is less than 5%, the data is not normally distributed.

2. Multicollinearity Test

In the multicollinearity test to determine whether there is a correlation between variables or not. To see if there is a multicollinearity deviation, it can be done by looking at the tolerance value and Variant Information Factors (VIF). If the tolerance value is > 0.10 and the VIF value is < 10, it can be concluded that there is no multicollinearity. However, if the tolerance value is < 0.10 and the VIF value is > 10, then there is multicollinearity.

3. Autocorrelation Test

According to (Pradana & Sampurno, 2013) The autocorrelation test aims to test whether there is a correlation between the nuisance error in a period and the bully error in the previous period. To find out whether there is autocorrelation, the Durbin-Watson (DW) can be used on the test results. The criteria for the Durbin-Watson (DW) test are if the DW value is below -2, it means that there is autocorrelation, if the DW value is between -2 and 2, it means that there is no autocorrelation. And if the DW value is above 2, it means that there is a positive autocorrelation.

4. Heteroscedasticity Test Heteroscedasticity

Test is to test whether there is a residual inequality and variance from one observation to another.

Hypothesis Testing

1. Coefficient of Determination Test

The coefficient of determination test aims to determine the ability of the model to explain the dependent variable (Y). if the value of the coefficient of determination is close to 1 (one), it means that the information to predict the dependent variable (Y) can be explained by the independent variable.

2. Simultaneous Significance Test (F

Test) Simultaneous Significance Test aims to determine whether the independent variable has an effect on the dependent variable or not. If the F test value is less than 5%, it means that the independent variable has an effect on the dependent variable, and if the F test is worth more than 5%, it means that the independent variable has no effect on the dependent variable.

3. Partial Test (t test)

The t test aims to determine whether the independent variable partially affects the dependent variable or not. The hypotheses that can be used to perform the t-test are:

H_0 : The independent variable has no significant effect on the dependent variable.

H_a : The independent variable has a significant effect on the dependent variable.

Testing can be done by looking at the following criteria:

- If the probability is greater than 0.05 then H_0 accepted
- If the probability is less than 0.05 then H_0 rejected

3. DATA ANALYSIS AND DISCUSSION

In this study, the object of research is banking registered in LQ45, the bank itself is a financial institution that has the task of collecting funds, channeling funds, and conducting transactions and/or financial service activities to the public.

In this study there are 4 variables, 1 dependent variable, namely *Return on assets* (ROA) and 3 independent variables consisting of operating income operating expenses (BOPO), *non-performing loans* (NPL), and net foreign exchange position (PDN).

Descriptive Statistical Analysis The

Results of descriptive statistical analysis were obtained based on data processing carried out by researchers based on the processing of 4 variables. The purpose of the descriptive statistical analysis test is to make it easier for readers to understand the description of the research variables consisting of the mean (average value) and standard deviation. The following are the results of descriptive statistical analysis in this study:

Table 1. Results of Descriptive Statistical Analysis

| Descriptive Statistics | | | |
|------------------------|---------|----------------|----|
| | Mean | Std. Deviation | N |
| ROA | .029760 | .0107644 | 30 |
| BOPO | .715607 | .0961961 | 30 |
| NPL | .259757 | .5383657 | 30 |
| PDN | .020560 | .0146220 | 30 |

There are three independent variables in this study, namely BOPO, NPL, and PDN. In table 4.1 the operating income operating expense variable (BOPO) has an average value of 0.715607 and a standard deviation value of 0.0961961, the *non-performing* (NPL) variable has an average value of 0.259757 and a standard deviation value of 0.5383657, while the net foreign exchange position variable (PDN) has an average value of 0.020560 and a standard deviation of 0.0146220. variable *return on assets* has an average value of 0.029760 and a standard deviation of 0.0107644.

Classical Assumption

Test This classical assumption test is conducted to determine whether the data used is a valid regression data model or not, so the normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test are carried out. This data is obtained from the results of data processing conducted by researchers using **SPSS 16**:

Normality

Test Normality test is carried out to determine whether the data used by researchers in regression analysis is normal data or data free from confounding variables. To find out the results of the normality test, the *Kolmogorov-Smirnof (KS) test was used*. test *Kolmogorov-Smirnof (KS)* what is seen is the significance value, if the significance value is more than 5%, the data is normally distributed. On the other hand, if the significance value is less than 5%, the data is not normally distributed.

Table 2. Normality Test Results



One-Sample Kolmogorov-Smirnov Test

| | | Unstandardized Predicted Value |
|--------------------------------|----------------|--------------------------------|
| N | | 30 |
| Normal Parameters ^a | Mean | .0297600 |
| | Std. Deviation | .01042775 |
| Most Extreme Differences | Absolute | .137 |
| | Positive | .110 |
| | Negative | -.137 |
| Kolmogorov-Smirnov Z | | .753 |
| Asymp. Sig. (2-tailed) | | .622 |

a. Test distribution is Normal.

Based on the results of data processing in table 4.1, it can be seen that the *Kolmogorov-Smirnov (KS)* value is 0.753 and the Asymp value. Sig. (2-tailed) of 0.622 means that it is greater than 5% or 0.05. So it can be concluded that the data used is normally distributed.

Multicollinearity Test

The purpose of the multicollinearity test is to find out whether there is a correlation between variables or not. And to find out whether there is a multicollinearity deviation, it can be done by looking at the tolerance value and Variant Information Factors (VIF). If the tolerance value is > 0.10 and the VIF value is < 10, it can be concluded that there is no multicollinearity. However, if the tolerance value is < 0.10 and the VIF value is > 10, then there is multicollinearity.

Table 3. Multicollinearity Test Results
Coefficients^a

| Model | | Collinearity Statistics | |
|-------|------|-------------------------|-------|
| | | Tolerance | VIF |
| 1 | BOPO | .936 | 1.068 |
| | NPL | .986 | 1.014 |
| | PDN | .929 | 1.077 |

a. Dependent Variable: ROA

Based on the results of the researcher's test in table 4.3, it is known that the tolerance value of the BOPO variable is 0.936, the NPL variable is 0.986, and the PDN variable is 0.929. These results indicate that the tolerance value of these variables is more than 0.10. As for the VIF value of the BOPO variable of 1.068, the NPL variable of 1.014, and for the PDN variable of 1.077 these values show results that are less than 10. It can be concluded that there is no multicollinearity between independent variables in the regression model.

Autocorrelation

Test Autocorrelation test was conducted to determine whether there is a linear regression correlation between variables in the confounding error in a certain period with the confounding error in the previous period. To determine whether there is autocorrelation or not, use the Durbin-Watson (DW) quantity, if the DW value is below -2, it means that there is an autocorrelation. If the DW value is between -2 and 2, it means that there is no autocorrelation. And if the DW value is above 2, it means that there is a positive autocorrelation.

Table 4 . Autocorrelation Test Results

Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1 | .969 ^a | .938 | .931 | .0028209 | 1.397 |

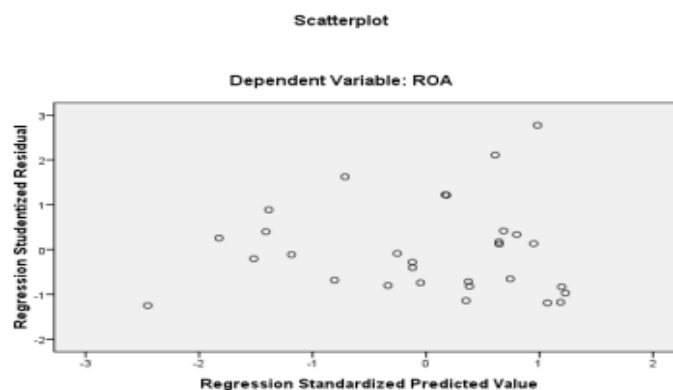
a. Predictors: (Constant), PDN, NPL, BOPO

b. Dependent Variable: ROA

Based on the results of the autocorrelation test in table 4.4, the Durbin-Watson value of 1.397 means that the value is $-2 < 1.397 < 2$, so it can be concluded that there is no correlation.

Heteroscedasticity Test Heteroscedasticity

Test is to test whether there is a residual inequality and variance from one observation to another.

Figure 2. Heteroscedasticity Test Results

It can be seen in Figure 4.1 that the graph does not show a clear pattern accompanied by dots that spread randomly above the value 0 and below the value 0 on the Y axis. It can be concluded that there is no heteroscedasticity in the regression model used by researchers.

Hypothesis

Testing Determination Coefficient Test

The coefficient of determination test aims to determine the ability of the model to explain the dependent variable (Y).

Table 5. Statistical Test Results**Model Summary^b**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .969 ^a | .938 | .931 | .0028209 | .938 | 132.094 | 3 | 26 | .000 | 1.397 |

a. Predictors: (Constant), PDN, NPL, BOPO

b. Dependent Variable: ROA

Based on table 4.5, the Adjusted R Square value is 0.931. It can be said that the magnitude of the influence of the BOPO, NPL, and PDN variables is 93.1% while the remaining 6.9% is influenced by other variables not examined.

Simultaneous Significance Test (F Test)

The purpose of the simultaneous significance test is to determine whether the independent variable has an



effect on the dependent variable or not. If the F test value is less than 5%, it means that the independent variable has an effect on the dependent variable, and if the F test is worth more than 5%, it means that the independent variable has no effect on the dependent variable.

Table 6 F
ANOVA^b

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|---------|-------------------|
| 1 | Regression | .003 | 3 | .001 | 132.094 | .000 ^a |
| | Residual | .000 | 26 | .000 | | |
| | Total | .003 | 29 | | | |

a. Predictors: (Constant), PDN, NPL, BOPO

b. Dependent Variable: ROA

Based on the test results in table 4.6 a significance value of 0.000 which means it is less than 0.05, it can be concluded that the ROA, NPL, and PDN variables affect the ROA variable.

Partial Test (t test)

The t test aims to determine whether the independent variable partially affects the dependent variable or not

Table 7 . Partial Test Results

Coefficients^a

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | |
|--------------|-----------------------------|------------|---------------------------|---------|------|--------------|---------|-------|
| | B | Std. Error | Beta | | | Zero-order | Partial | Part |
| 1 (Constant) | .106 | .004 | | 26.969 | .000 | | | |
| BOPO | -.111 | .006 | -.989 | -19.670 | .000 | -.941 | -.968 | -.957 |
| NPL | -.002 | .001 | -.107 | -2.187 | .038 | -.147 | -.394 | -.106 |
| PDN | .162 | .037 | .220 | 4.350 | .000 | -.039 | .649 | .212 |

a. Dependent Variable:

ROA

Based on the test results contained in table 4.7, the linear regression equation in this study is:

$$\text{ROA} = 0.106 - 0.111 \text{ BOPO} - 0.002 \text{ NPL} + 0.162 +$$

The following is an explanation of the partial test results in table 4.7:

1) Effect of Load Operational Operating Income (BOPO) to Return On Assets (ROA)

The t-test shows a value of 0.000 at Sig. BOPO, this value is smaller than the significance level of 5%. So it can be concluded that the BOPO variable has a significant negative effect on the ROA variable, so that H1 which states that "Operating Operating Income (BOPO) has a negative effect on Return On Assets (ROA)" accepted.

2) Effect of Non-Performing Loans (NPL) on Return On Assets (ROA)

The t-test shows a value of 0.038 at Sig. NPL, this value is smaller than the significance level of 5%. So it can be concluded that the NPL variable has a significant negative effect on the ROA variable, thus H2 which states that "Non-Performing Loans (NPL) has a negative effect on Return On Assets (ROA)" accepted.

3) Effect of Net Open Position (NOP) on Return On Assets (ROA) The t-test shows a value of 0.000 at Sig. PDN and positive value on the regression coefficient of 0.162, the value is smaller than the significance level of 5%. So it can be concluded that the PDN variable has a positive and significant effect on the ROA variable, so that H3 which states that "Net Open Position (NOP) has a negative effect on Return On Assets (ROA)" rejected.

4. DISCUSSION OF RESEARCH RESULTS

1. The Effect of Operating Expenses on Operating Income (BOPO) on Return On Assets (ROA)

Where the value is smaller than the significance level of 5% or 0.05. So from these results it can be concluded that the BOPO variable has a significant negative effect on the ROA variable. BOPO is a comparison between operational costs and operating income. The BOPO ratio is the ability of banks to balance between operating expenses and operating income which affects financial performance. The BOPO ratio is also a comparison of the total operating expenses to the operating income of a company, so if the company issues operating expenses lower than operating income, the company can be said to be efficient. The high value of BOPO indicates a company has not been able to run operational activities efficiently, thus causing a decrease in the value of ROA in the company.

Operational risk has a significant effect on the company's financial performance. The lower the BOPO value means the more efficient the operating activities at a bank, conversely the higher the BOPO value indicates the inefficient operation of the bank. The high value of BOPO causes the profit

received by banks to be low, it means that it can be concluded that BOPO has a significant negative effect on ROA. In accordance with research by Aulia (2018), Catherine (2018), Luh Putu and Ni Putu (2018), and Pauline (2015) who argue that BOPO has a significant negative effect on ROA.

2. Effect of Non Performing Loans (NPL) on Return On Assets (ROA)

Based on the test results in table 4.7 the regression coefficient value on the NPL variable is negative -0.002 and for its significant value is 0.038, which means the value is smaller than 0.05. So it can be concluded that the NPL variable has a negative and significant effect on the ROA variable. This risk has a significant effect on the company because the bank's source of income is one of the credits channeled to customers, namely the community. Credit risk is a risk faced by banks due to the inability of customers to pay principal and interest installments that have been determined by the bank, whether intentionally or not, this risk must still be borne by the bank. If the NPL value is greater then the company is said to have not been optimal in managing credit given to customers. This is also supported by the results of research by Devby (2017), Luh Putu and Ni Putu (2017), and Aulia (2018) that NPL has a negative effect on ROA.

3. Effect of Net Open Position (NOP) on Return On Assets (ROA)

Based on the test results in table 4.7 above, the PDN variable gets a positive regression coefficient value of 0.162 and a significance value of 0.000 where the significance value is less than 0.05. So from these results it can be concluded that PDN has a positive and significant effect on ROA. Market risk is the risk that arises as a result of market activity from the portfolio owned by banks, if the PDN decreases due to foreign exchange activity which is smaller than foreign currency liabilities and causes a decrease in the exchange rate and causes ROA to increase.

5. CONCLUSION

The purpose of this study is to obtain empirical evidence regarding the effect of operational risk (BOPO), credit risk (NPL), and market risk (PDN) on the financial performance (ROA) of banks listed in LQ45 for the period 2014 – 2019. Based on the results of the analysis conducted researchers, it can be concluded as follows:

Partially (t-test):

1. Effect of Operating Expenses on Operating Income (BOPO) on Return On Assets (ROA)

The BOPO variable has a negative and significant effect on the ROA variable of banks listed in LQ45 2014 period – 2019. This means that if banks are able to manage operational costs well, the financial performance of banks will increase.



2. Effect of Non-Performing Loans (NPL) on Return On Assets (ROA) The NPL variable has a negative and significant effect on the ROA variable of banks listed in LQ45 for the 2014 – 2019 period. .
3. Effect of Net Open Position (NOP) on Return On Assets (ROA) The PDN variable has a positive and significant influence on the ROA of banks listed in LQ45 for the 2014 – 2019 period. Thus, the higher the market risk value, the higher the level of banking financial performance. tall.
4. Simultaneously (Test F), the BOPO, NPL, and PDN variables both have an influence on the ROA variable of banks listed in LQ45 for the period 2014 - 2019.

6. SUGGESTIONS

Based on the conclusions above, the following are suggestions that researchers can convey:

1. It is recommended for banks to pay more attention to the risks faced or will be faced by the banking sector. In addition, in making banking decisions related to risk management, it should be considered more carefully, because otherwise it will affect the level of banking financial performance.
2. For further researchers, if they are going to conduct banking risk research, there should be additional variables used. The addition of this variable is useful for adding insight into the risks that exist in banking, but also for further researchers to expand the object of research. Further researchers are also expected to be able to measure the level of financial performance not only in terms of profitability, but also in terms of liquidity and solvency.

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