

Analysis of the Effect of Third Party Funds, Capital Adequacy Ratio, Non Performing Financing, Operational Expenses and Operational Income (BOPO) on the Profitability of Sharia Banks (Evidence from Indonesia)

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Abstract. This study aims to study the effect of Third Party Funds, Capital Adequacy, Non-Performing Loans, Operational Expenses and Operating Income on the profitability of Islamic banks. The sample of this study was determined by purposive sampling and obtained 12 banking companies listed as Islamic commercial banks in the Financial Services Authority (2015-2018). Data obtained from secondary data on banking company annual reports (2015-2018). The results showed that capital adequacy and the comparison of operating expenses to operating income had a significant effect on profitability. Meanwhile, third party funds and non-performing loans have no effect on profitability. Simultaneously all independent variables have an effect on the dependent variable. Research indicates that Islamic banking requires additional capital while increasing the efficiency of its operational activities.

Keywords: *Third Party Funds, Capital Adequacy Ration, Operational Income*

1. INTRODUCTION

The rapid development and success of the sharia system, especially in the economy, has made people pay special attention to the sharia economy. Indonesia is also a country where sharia based financial institutions continue to emerge, especially sharia-based banks.

The development of the Islamic banking system in Indonesia is carried out within the framework of a dual-banking system or a dual banking system within the framework of the Indonesian Banking Architecture (API), to present a more complete alternative banking services to the Indonesian people. Taken together, the Islamic banking system and conventional banking synergistically support the mobilization of public funds more broadly to increase financing capacity for sectors of the national economy.

The characteristics of the Islamic banking system which operates on the basis of the profit sharing principle provide an alternative to the conventional banking system which we are familiar with. The Islamic banking system is a banking system that is mutually beneficial for the public and banks, and emphasizes aspects of fairness in transactions, ethical investment, prioritizes the values of togetherness and brotherhood in production, and avoids speculative activities in financial transactions. By providing a variety of banking

products and services with more varied financial schemes, Islamic banking has become an alternative to a credible banking system that can be enjoyed by all groups of Indonesian people without exception.

According to the statistical data of Islamic banking, the total assets owned by Islamic commercial banks experienced a significant increase in 2015, which was recorded at 213.4 trillion then in 2016 increased by 254.2 trillion and in 2017 of 288 trillion continued to increase quite significantly in 2018 amounting to 316, 7 trillion. The financing sector carried out by sharia banks and sharia businesses includes agriculture and forestry, mining, industry, gas and water electricity, construction, trade, restaurants and hotels, transportation, warehousing and communication, services and social society (Financial Services Authority, 2019).

The more a bank develops, it is always accompanied by the challenges it must face. One of the challenges that often becomes a problem for banks is financial performance. Performance is important for the company, because the banking business is a business of trust, banks must be able to show credibility so that more people will use banking services in making transactions, one of which is through increasing profitability[1]. Profitability is one of the right indicators to measure company performance [2], because the company's

ability to generate profits can be a benchmark for company performance.

In this study, Return On Assets (ROA) was chosen as an indicator for measuring banking financial performance. According to [3], Return On Assets (ROA) is a company's financial ratio related to profit potential measuring the company's strength to produce profits or profit at the level of income, assets and also specific share capital. By knowing ROA, we can judge whether the company has been effective in using its assets in operating activities to generate profits.

OJK's Islamic banking statistics show a significant increase in the level of profitability (ROA) of Islamic commercial banks in 2018. Fitch Rating analyst Dimas Nugroho (Kompas, 2019) stated that the financial performance of the Indonesian Islamic banking sector improved during the third quarter of 2018. This is reflected in higher asset quality, good, higher profitability, and stronger capitalization

Based on data released by the OJK, several internal factors can affect the level of profitability of banking companies. In this study, an independent variable that affects the profitability of Islamic banking is measured by Return On Assets (ROA), one of which is Third Party Funds (DPK), which is the largest source of funds for Islamic banking companies. According to [4] in a bank, funds are the blood of a business entity and the main problem. Without funds, banks can do nothing in carrying out their functions. Research on the effect of TPF on ROA was conducted by [5] who suggested that TPF had a positive effect on ROA. However, in research [6] states that TPF has no effect on ROA.

After that the Capital Adequacy Ratio (CAR), which is the level of bank capital capacity. [4] states that CAR is a ratio that shows how much all bank assets that carry the risk of being financed from the bank's own capital besides obtaining funds from outside the bank. The results of research conducted by [7] state that CAR has a positive effect on ROA. This shows that the increase or decrease in ROA can be influenced by CAR. Thus a company that is able to maintain the CAR value can increase its profitability value. However, research conducted by [5] stated that the result of CAR does not affect ROA.

The next financial ratio is Non Performing Financing (NPF) which is the risk of bad credit. The higher this ratio shows the inability of a bank to manage credit or non-performing loans, of course this will affect the level of profitability obtained by the bank [5]. Research conducted by [8] states that

NPF has a negative effect on ROA. This shows that the higher the NPF ratio, the lower the company's profitability. [6] also stated the same thing that NPF has a negative effect on ROA. However, the research of [9] shows that NPF has no effect on ROA.

Other financial ratios that can affect profitability are Operating Expenses and Operating Income (BOPO), which is the ratio between operating expenses and income. This ratio is used to measure the level of efficiency and the ability of a bank to carry out its operational activities. The smaller the BOPO ratio means the more efficient the operational costs incurred by the bank concerned, and any increase in operating income will result in reduced profit before tax which will reduce the profitability of the bank concerned [10]. The results of research conducted by [11] state that OEOI has a negative effect on ROA.

The purpose of this study was to determine the effect of Third Party Funds, CAR, NPF, and BOPO on the profitability of Islamic commercial banks within Indonesia cases.

2. LITERATURE REVIEW AND HYPOTHESIS FORMULATION

2.1 *The Effect of Third Party Funds (TPF) on Profitability*

The largest funds owned by the bank are third party funds collected from the public. [4] states that a bank is a financial institution, funds are the blood of a business entity and the most important problem. Without funds, banks cannot perform their functions at all. Therefore, the amount of third party funds collected by the bank can determine the level of profitability. In line with research [5] which concluded that TPF has a positive effect on ROA profitability. Likewise, research by [8] shows that TPF has an influence on ROA. Based on these references the first hypothesis is.

H1: TPF has a positive effect on profitability

2.2 *Effect of Capital Adequacy Ratio (CAR) on Profitability*

A bank that has a higher CAR is very good because it is able to bear the risks that arise. If a high CAR value (according to BI regulations) means that the bank is able to finance bank operations, a favorable situation for the bank will contribute significantly to profitability (Suhardjono, 2002). As stated in the research by [7] it can be shown that CAR does have a positive effect on ROA profitability. Based on these references the second hypothesis is.

H2: CAR has a positive effect on profitability

2.3 The Effect of Non Performing Financing (NPF) on Profitability

NPF reflects the amount of non-performing loans in the bank. According to [4] the amount of problematic credit causes a loss of opportunity to earn income from the credit provided. The amount of non-performing loans faced, banks with prudential principles will be more careful and selective in channeling their financing and tend to reduce financing to reduce risk and increase public confidence in the next period which will certainly affect the decline. Return On Asset (ROA). In accordance with research conducted by [6], [5] [7] and [8] which show that NPF has a negative and significant effect on ROA. Based on these references the third hypothesis is

H3: NPF has a negative effect on profitability

2.4 Effect of Operational Expenses and Operating Income (BOPO) on Profitability

BOPO is a ratio used to measure the level of efficiency and effectiveness of a bank in reducing operating costs as an effort to optimize operating income. The smaller the BOPO ratio means the more efficient the operational costs incurred by the bank concerned, and any increase in BOPO will result in reduced profit before tax which can reduce profit or the level of profitability [10]. Research results by [7] show that OEI has a negative effect on ROA profitability. Then this conclusion was also concluded by [11] and [9] that BOPO has a negative and significant effect on ROA. Based on these references the fourth hypothesis is

H4: BOPO has a negative effect on profitability

3. METHODS

3.1 Research Subjects and Objects

The research subjects used in this research are banking companies which are Shari'a Commercial Banks (BUS) registered with the Financial Services Authority (OJK) with an annual period spanning 2015-2018. The research object used consists of one dependent variable and four independent variables. The dependent variable used in this study is profitability as measured by return on assets (ROA) and the independent variables in this study are third party funds (DPK), capital adequacy ratio (CAR), non-performing financing (NPF), and operating expenses and operating income (BOPO).

3.2 Research design

In this study, researchers used a quantitative approach that refers to the submission of hypotheses.

In a quantitative approach, researchers measure the existence of a variable using research instruments, and then do the analysis method. According to [12] the quantitative approach method is a research method based on the positivist philosophy, used to research on certain populations or samples, data collection using research instruments, quantitative or statistical data analysis with the aim of testing the established hypothesis.

3.3 Dependent Variable

Profitability is one of the right indicators to measure company performance [2]. In this study, Return On Assets (ROA) was chosen as an indicator for measuring banking financial performance. According to [3] ROA is a company's financial ratio related to potential profit measuring the company's strength to produce profits or profit at the level of income, assets and also specific share capital. ROA can be formulated as follows

$$ROA = \frac{Net\ income\ after\ tax}{Total\ Assets} \times 100\% \tag{1}$$

3.4 Independent Variable

Third Party Funds (DPK), namely funds in the form of deposits from the public [13]. These funds include demand deposits, time deposits, and savings using a contractual wadi'ah and al-mudaraba in Islamic banks. In this study, third party funds represent an increase or decrease in the value of TPF from the previous year to the observation year with the following formula :

$$DPK = \frac{TPF_t - TPF_{t-1}}{TPF_{t-1}} \times 100\%, \text{ TPF} = \text{Current Accounts} + \text{Time Deposit} + \text{Saving Accounts} \tag{2}$$

Capital Adequacy Ratio(CAR) is a ratio that shows how much all bank assets that carry the risk of being financed from the bank's own capital besides obtaining funds from outside the bank [4] CAR can be calculated with the following formula:

$$CAR = \frac{Bank\ Capital}{Total\ ATMR} \times 100\% \tag{3}$$

Non Performing Financing(NPF) is the ratio used to measure non-performing loans in Islamic banks. Non-performing loans are a situation in which the customer is unable to pay off part or all of his obligations to the bank according to the agreement [14]. NPF is calculated by the following formula:

$$NPF = \frac{Total\ loan\ with\ collectibility\ 3\ until\ 5}{Total\ loan} \times 100\% \tag{4}$$

Operational Expenses and Operational Income (BOPO) is a ratio that shows the ratio of the ratio between operating expenses or expenses to operating income [15]. This ratio is used to measure the level of efficiency and the ability of a bank to carry out its operational activities. BOPO can be calculated using the following formula:

$$BOPO = \frac{\text{Total Operating Expenses}}{\text{Total Operating Income}} \times 100\% \quad (5)$$

3.5 Sample Selection

The population used in this study are all Islamic banking companies registered with the Financial Services Authority (OJK). In this study the sample was taken by the method purposive sampling, namely sampling that aims to take a population sample based on certain criteria. The criteria used in this study are companies registered as Islamic commercial banks in the OJK, Islamic commercial banks operating in the 2015-2018 period, and Islamic commercial banks that publish annual reports consistently in the 2015-2018 period. There are 12 Islamic commercial banks selected to be sampled, namely: Bank BCA Syariah, Bank BJB Syariah, Bank BNI Syariah, Bank BRI Syariah, Bank BTPN Syariah, Bank Maybank Syariah Indonesia, Bank Mega Syariah, Bank Muamalat Indonesia Tbk, Bank Panin Syariah Tbk, Bank Syariah Bukopin, Bank Syariah Mandiri, and Bank Victoria Syariah. The research was conducted for 4 periods from 2015-2018, so the number of samples in this study was 48 samples.

3.6 Method of Analysis

The data analysis technique used in analyzing this research is linear regression analysis of panel data by combining the data cross-section with time series processed using the Eviews 9 program. This study examines the effect of the variable Third Party Funds, Capital Adequacy Ratio, Non Performing Financing, and Operating Expenses and Operating Income as independent variables on the profitability of Return On Assets as the dependent variable. The first step is to determine the panel data model between the Common Effect Model, Fixed Effect Model, or the Random Effect Model by using the Chow test, the Hausman test, and the LM test. After that the data is tested first before testing the hypothesis using the classical assumption test consisting of normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Furthermore, testing the hypothesis in this study using partial testing (t test), simultaneous testing (F test).

4. RESULT AND DISCUSSION

4.1 Panel Data Model Determination

In this study, 2 model tests were carried out, namely the Chow test and the Hausman test to determine which model was appropriate for use in this study with the following results:

- a. The chow test shows a P-value of 0.0000 where this value is less than 0.05. So it can be concluded that the Fixed Effect Model is better to use than the Common Effect Model.
- b. After that the Hausman test shows a P-value of 0.0282 where this value is less than 0.05. So it can be concluded that the Fixed Effect Model is still better to use than the Random Effect Model

Based on the tests that have been done, the Fixed Effect Model is a panel data model used in this study.

4.2 Classical Assumption Test Results

In this study, 4 classical assumption tests were carried out, namely normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test with the following results

- a. The normality test is used to determine whether the residuals of a model are normally distributed or not. This normality assumption test is carried out using the Jarque-Bera test. Prob results. Jarque-Bera shows the amount of 0.210157 where the value is above the alpha level of 0.05, which means that the residuals are normally distributed.
- b. The multicollinearity test aims to test whether in the regression model there is a correlation between independent (independent) variables where a good regression model should not have correlation. The results of this test show that there is no correlation coefficient that is more than 0.8, so it can be concluded that there is no multicollinearity in the data
- c. The heteroscedasticity test aims to test whether in the regression model there is an inequality of variants from the residuals of one observation to another where a good regression model should not have heteroscedasticity. The heteroscedasticity test used in this study was the ARCH test. This test is done by regressing the residual squared with the independent variables in the model. Heteroscedasticity test results show that the value of Pvalue Obs * R-squared is 0.3073 where this value is greater than the significance level of 0.05 so it can be concluded that there is no heteroscedasticity

d. The autocorrelation test is used to determine whether there is a correlation between confounding error in period t and confounding error in period t-1. The method used in this research is the Durbin-Watson test method. The Durbin-Watson regression results show that the DW value is 2.1596. This value is greater than the DU value (table) and less than

the value (4-du) so it can be concluded that there is no autocorrelation problem in the model

4.3 Hypothesis Test Results

The results of testing panel data linear regression analysis with the Fixed Effect model are presented in the table as follows

TABLE 1. Result of T Statistical Test

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	1,890916	0.268002	7,055607	0.0000
TPF	7.07E-05	0.000427	0.165736	0.8694
CAR	0.062415	0.019396	3.217846	0.0030
NPF	-0.213482	0.194578	-1.097151	0.2808
BOPO	-0.153284	0.018387	-8.336394	0.0000
R-squared	0.931534	Mean dependent var		2,599334
Adjusted R-squared	0.899441	SD dependent var		1.733247
SE of regression	0.004554	Sum squared resid		0.000664
F-statistic	29,02590	Durbin-Watson stat		2.159614
Prob (F-statistic)	0.000000			

Based on the results of panel data regression analysis, the regression equation can be formulated as follows:

$$ROA = 1.890916i + 7.07E - 05TPF_v + 0.062415CAR_v + -0.213482NPF + -0.153284BOPO\varepsilon$$

- The constant is 1.890916 which indicates that if the DPK, CAR, NPF, and BOPO variables are zero, the amount of the ROA variable is 1.890916%. The regression coefficient for the TPF variable is 7.07, which indicates that every 1% increase in TPF, the amount of the ROA variable will increase by 7.07%. This shows that the TPF variable has a positive relationship with the ROA variable. The regression coefficient for the CAR variable is 0.062415 which indicates that for every 1% increase in CAR, the amount of the ROA variable will increase by 0.062415%. This shows that the CAR variable has a positive relationship with the ROA variable. The regression coefficient for the NPF variable is -0.213482 which indicates that every 1% increase in the NPF, the amount of the ROA variable will decrease by 0.213482%. The regression coefficient for the OEOI variable is -0.153284 which indicates that every 1% increase in BOPO, the amount of the ROA variable will decrease by 0.153284%.

This shows that the BOPO variable has a negative relationship with the ROA variable.

- The t test is conducted to determine partially the independent variable has a significant or no effect on the dependent variable. The significance level used is 0.05 or 5% with a degree of freedom (df) = 43, then the t-table value is 1.681. In the regression results in Table 1, which examines the effect of TPF, CAR, NPF, and OEOI on ROA as the dependent variable, the TPF variable has a t-statistic value of 0.165736 where this value is smaller than the t-table value, which means that the TPF variable has no significant effect on ROA. The CAR variable has a t-statistic value of 3.217846 where this value is greater than the t-table value, which means that the CAR variable has a positive effect on ROA. The NPF variable has a t-statistic value of -1.097151 where the value is less than the t-table value, which means that the NPF variable has no effect on ROA. The BOPO variable has a statistic value of -8.336394 where this value is greater than the t-

table value, which means that the OEIOI variable has a negative effect on ROA

- The F test aims to show whether all independent or free variables included in the model have a joint influence on the dependent variable or dependent variable (Ghozali, 2013). In this study, the F-table value was 2.61 with a significance level of 0.05. Based on the results of Table 1, the F-statistic value with the independent variables of DPK, CAR, NPF, and BOPO is 29.02590 where this value is greater than the F-table value with a significance value of 0.0000 or less than the significance value of 0.05, which means that the independent variable simultaneously affect ROA as the dependent variable
- The coefficient of determination (R) aims to measure how far the model's ability to explain the dependent variables (Ghozali, 2016). The coefficient of determination is zero and one. The small value of R² means that the ability of the independent variables in explaining the variation of the dependent variable is very limited. The value of R has an interval between 0 to 1 (0 R 1). The greater the R (close to 1), the better the results for the regression model and the closer to 0, the independent variable as a whole cannot explain the dependent variable. The Adjusted R-squared value in this study was 0.899441. This shows that the ability of the independent variables, namely Third Party Funds, Capital Adequacy Ratio, Non Performing Financing, and Operational Costs and Operating Income can explain the changes in the dependent variable, namely Return On Assets of 89.94%. The remaining 10.06% is influenced by other variables not examined in this study.

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

Based on the results of the analysis that has been carried out on the formulated hypothesis, the following conclusions can be drawn:

- a. Based on the results of the t statistical test that has been carried out, it is known that the variable Third Party Funds (TPF) has no effect on Return On Assets (ROA) which is indicated by a t-statistic value of 0.165736 where this value is smaller than the t-table value. Thus, the first hypothesis proposed in this study is rejected. In terms of profitability growth, DPK is a banking company asset obtained from the

bank's customer funds. TPF growth is not a factor used as a measure of the efficiency of banking performance, so that the increase in deposits held by banks does not always reflect high levels of profitability

- b. Based on the results of the t statistical test that has been carried out, it is known that the Capital Adequacy Ratio (CAR) variable has a positive effect on Return on Assets (ROA) which is indicated by a t-statistic value of 3.217846 where this value is greater than the t-table value. Thus, the second hypothesis proposed in this study is accepted with the assumption that if a high CAR value in accordance with BI regulations means that the bank is able to finance bank operations, a favorable situation for the bank will contribute significantly to profitability. A high CAR indicates a more stable bank business due to stable public trust.
- c. Based on the results of the t statistical test that has been carried out, it is known that the Non Performing Financing (NPF) variable has no effect on Return On Assets (ROA) which is indicated by the t-statistic value of -1.097151 where this value is greater than the -t-table value. Thus, the third hypothesis proposed in this study is rejected. In this study, NPF has a negative effect on ROA but not significant so that NPF is considered not to have an effect on ROA profitability. This can be explained because an increase in the number of problem loans at Islamic banks is not always followed by an increase in profit before tax. So it can be concluded that NPF has no significant effect on ROA in Islamic banks.
- d. Based on the results of the t statistical test that has been carried out, it is known that the Operational Expense and Operating Income (BOPO) variable has a negative effect on Return On Assets (ROA) which is indicated by a t-statistic value of -8.336394 where this value is smaller than the t-table value. . Thus, the fourth hypothesis proposed in this study is accepted. This is because the level of efficiency of the bank in carrying out its operations has an effect on the income or earnings generated by the bank. If operational activities are carried out efficiently, the income generated by the bank will increase. In addition, the large BOPO ratio is also due to the high cost of funds collected and the low interest income from fund investment so that the greater the BOPO, the smaller the ROA

5.2 Suggestion

Based on the research results and the conclusions stated above, it is suggested as follows:

- Companies are advised to pay more attention to fluctuations in important financial ratios that affect bank financial performance such as the ratio of capital adequacy levels and the ratio of operating expenses and operating income which have a significant effect on the level of company profitability
- Investors are advised to be more careful in analyzing the company's financial performance if they want to invest in order to get better profits
- For further researchers, in this study there were still 10.06% variables that could potentially affect profitability. So it is expected to use other variables to expand research in the field of Islamic banking, such as using external macroeconomic factors such as inflation, interest rates, and exchange rates as independent variables on bank financial performance or bank profitability

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