The Effect Of NPF, FDR, And BOPO On ROA Of Islamic Commercial Banks For The Period 2017-2022

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Abstract

Introduction: *Return On Assets (ROA) is a ratio to measure bank management in managing assets in order to obtain overall profit (profit). The smaller the NPF value, the greater the ROA value. The greater the FDR value, the greater the ROA value. The smaller the BOPO value, the greater the ROA value. The purpose of this study was to determine the effect of NPF, FDR, and BOPO on ROA.* **Research Methods:** *This type of research is quantitative research using secondary data in the form of annual data published by each Islamic Commercial Bank in 2017-2022 with data analysis techniques is panel data regression with a significance level of 5%.* **Results:** *The results showed that NPF had an effect on ROA. FDR has no effect on ROA. BOPO has an effect on ROA. Simultaneously, NPF, FDR, and BOPO affect ROA.* **Conclusion:** *These results indicate that Islamic Commercial Banks must continue to pay attention to the level of financial ratios such as NPF, FDR, and BOPO to remain stable, so that it will have an impact on increasing the acquisition of ROA at Islamic Commercial Banks.*

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INTRODUCTION

Islamic banks are banks whose activities are related to Islamic law and do not charge interest to their customers (Ismail, 2018). Islamic banking is one of the most developed Islamic financial institutions in Indonesia. This development began in 1992 with the establishment of Bank Muamalat as the first commercial bank to operate based on sharia principles for the first time in Indonesia. Islamic banks began to receive attention from the public and the Indonesian government after the first Islamic bank, Bank Muamalat Indonesia, was able to survive without any assistance from the government in the face of the economic crisis that hit Indonesia in 1998. Since then Islamic banks can be considered stronger than conventional banks so that new Islamic banks both private and Islamic banks managed by the government appear. Until 2023 based on statistical data from the Financial Services Authority (OJK) institution, the number of Islamic Commercial Banks (BUS) in Indonesia reached 13 Islamic banks.

The role of Islamic banks as institutions that aim to support the implementation of national development, has the main activity of collecting funds from the public and channeling funds to the public. This fund distribution activity is realized in the form of financing. Profits from the utilization of customer funds channeled into various businesses will be distributed to customers. The amount of profit shared is fluctuating, namely based on the company's financial development, which means that the greater the profit achieved, the greater the profit sharing that will be obtained, both for customers and for Islamic banks (Rohansyah, 2021).

Profitability is one of the indicators to determine the performance of banks (Swandayani & Kusumaningtias, 2012). The bank's ability to increase profitability can show the bank's financial performance is getting better. Conversely, if the profitability achieved is low, then the bank's financial performance in generating profits is less than optimal. To measure profitability can use Return on Assets (ROA), which is a financial ratio that can show the return on the use of company assets.

Return On Assets (ROA) is a ratio to measure bank management in managing assets in order to obtain overall profit (profit) (Soemitra, 2017). Return on Assets (ROA) was chosen as an indicator to measure the financial performance of banks (Pandia, 2012). The greater the Return On Assets (ROA) of a bank, the greater the bank's profit level and the better the bank's position in terms of asset utilization (Arthesa & Handiman, 2006). Return On Assets (ROA) describes the turnover of assets as measured by the ratio between profit after tax and total assets. Retrun On Assets can be obtained by calculating the ratio between profit before tax and total assets (Net Income divided by Total Assets) (Pandia, 2012). Return on Asset is used to determine the bank's ability to generate profits relative to the value of its total assets. This ratio is used to measure how much net income will be obtained from each rupiah of funds embedded in total assets (Jamayanti, 2021).

Table 1. Average Return On Assets 2017-2022

NO	Bank Name	Average
1	Bank Muamalat indonesia	0.63
2	Bank Victoria Syariah	0.81
3	Bank Jabar Banten Syariah	-0.34
4	Bank Mega Syariah	1.96
5	Bank KB Bukopin Syariah	-1.1
6	Bank BCA Syariah	1.71

Source: Financial Statements of Islamic Commercial Banks

Based on Table 1. it can be seen that the ROA value at Bank Muamalat Indonesia is 0.63%. At Bank Victoria Syariah ROA has a value of 0.81%. The ROA value owned by Bank Jabar Banten Syariah is -0.34%. Bank Mega Syariah has an ROA value of 1.96%. At Bank Syariah Bukopin the ROA owned is -1.1%. While BCA Syariah Bank has an ROA value of 1.71%. In order to assess the health of banks, Bank Indonesia provides a maximum value of 100 (healthy) if the bank has an ROA value > 1.5% (Hasibuan, 2005). Based on Table 1. improvement and increase in ROA are needed.

The factors that affect Return On Assets according to Kasmir explain that Return On Assets is influenced by net profit margins and turnover of total assets because if ROA is low it is caused by low profit margins caused by low turnover of total assets. There are several factors that affect the Return On Assets ratio, among others: cash turnover ratio, accounts receivable turnover ratio and inventory turnover ratio (Munawir, 2007). Financial ratios that can affect profitability (ROA) are Non Performing Financing, Financing to Deposit Ratio, and Operating Expenses Operating Income.

Table 2. Average Financial Ratios of Islamic Commercial Banks 2017-2022

Indicator	2017	2018	2019	2020	2021	2022
ROA	-0.41	0.51	0.44	0.34	0.23	0.72
NPF	7.03	3.44	3.48	4.08	3.42	2.22
FDR	86.88	86.51	86.74	95.68	70.38	70.9
BOPO	100.64	95	95	96.08	101.5	90.1

Source: Financial Statements of Islamic Commercial Banks

Based on the data in Table 2. It is known that Islamic Commercial Banks have an NPF value in 2019-2020 increased from 3.48% to 4.08% and followed by a decrease in ROA from 0.44% to 0.34%. This shows that there is a discrepancy between the data and the existing theory. Where the existence of NPF is not reasonable, one of which is the loss of opportunity to earn income or income from the credit provided, thereby reducing profitability and adversely affecting profitability (Lukman, 2009).

Based on the data in Table 2. It is known that the value of FDR in Islamic Commercial Banks in 2017-2018 has decreased from 86.88% to 86.51%, but this decrease was not followed by a decrease in ROA, instead ROA experienced an increase from -0.41% to 0.51%. This shows a gap between the existing data and the theory where FDR has a positive effect on ROA. The greater the financing, the higher the income earned, because the income increases automatically ROA will also increase (Rivai et al., 2013).

Based on the data in Table 2. It is known that the value of BOPO at Islamic Commercial Banks in 2018-2019 has a relatively fixed value of 95%, but ROA has decreased from 0.51% to 0.44%. This shows a mismatch between theory and existing data where any increase in operating costs will result in reduced profit before tax which in turn will reduce profit or profitability (ROA) (Novita, 2022).

From the exposure of the data above, it is known that between the theory and the facts contained in the Financial Statements of Islamic Commercial Banks, there is a mismatch so it is interesting to investigate further. Based on this, researchers want to find out more about the effect of NPF, FDR, and BOPO on ROA using the Panel Data Regression method.

METHOD

This research is a quantitative study using Panel Data Regression analysis. Quantitative research is carried out by collecting data in the form of numbers, the data is then analyzed to obtain scientific information behind the numbers (Martono, 2010). Quantitative research aims to show relationships between variables, test theories and seek generalizations that have predictive value (P. Sugiyono, 2015). This research is associative, which is a scientific approach that views a reality that can be classified, concrete, observable and orderly, the variable relationship is causal where the research data is in the form of numbers and the analysis uses statistics that aim to determine the effect or relationship between two or more variables (D. Sugiyono, 2008).

The data used in this study are secondary data. The number of samples used in this study were 36 with a sample of 6 banks, each of which took annual data reported by each bank from 2017 to 2022. The sampling method was carried out using purposive sampling technique, namely samples selected based on certain criteria. The data collection technique was carried out by collecting the Financial Statements of Islamic Commercial Banks from 2027 to 2022.To analyze the data, this study used Eviews 9 and Microsoft Office Excel 2007 tools. This study uses the independent variables NPF, FDR, and BOPO and the dependent variable ROA.

RESULT AND DISCUSSION

Descriptive Statistics

It can be observed in Table 3. It is known that the Return On Assets value has an average of 0.30%, a median value of 0.43%, a maximum value of 4.08%, and a minimum value of -5.69%. Non Performing Financing has an average of 3.94%, a median value of 3.67%, a maximum value of 22.04%, and a minimum value of 0.32%. Financing to Deposit Ratio has an average of 82.85%, a median value of 82.61%, a maximum value of 196.73%, and a minimum value of 38.33%. Based on Operating Expenses Operating Income has an average of 96.52%, a median value of 95.03%, a maximum value of 180.25%, and a minimum value of 64.64%.

Table 3. Descriptive Statistics Test

Value	In (%)			
	ROA	NPF	FDR	BOPO
Mean	0.306	3.947	82.852	96.528
Median	0.43	3.675	82.61	95.035
Maximum	4.08	22.04	196.73	180.25
Minimum	-5.69	0.32	38.33	64.64
Std Dev.	1.732	3.832	24.023	18.638
Observations	36	36	36	36

Source: Secondary Data Processed 2024

Analysis of Panel Data Regression

There are three models of panel data regression, namely the Common Effect Model, Fixed Effect Model, and Random Effect Model, each of which must be carried out the LM Test, Chow Test, and Hausman Test.

Table 4. LM Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	5.485655	0.009241	5.494896
	(0.0192)	(0.9234)	(0.0191)

Source: Secondary Data Processed 2024

The Lagrange Multiplier Test is a test to choose whether the model used is Common Effect or Random Effect (Widarjono, 2013). Based on Table 4. Lagrange Multiplier test results, it is known that the Breusch-Pagan value for Cross-section has a probability value of 0.0192 or < 0.05 so that the Random Effect Model is better for modeling data.

Table 5. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.436442	(5.27)	0.0157
Cross-section Chi-square	17.729472	5	0.0033

Source: Secondary Data Processed 2024

Chow test to compare whether the model used is Common Effect Model or Fixed Effect Model. Based on Table 5. the Chow Test results show that the Cross-section Chi-Square value has a probability value of 0.0033 or < 0.05, so the Fixed Effect Model is better for modeling data.

Table 6. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.353416	3	0.9497

Source: Secondary Data Processed 2024

The Hausman test was conducted to determine the most appropriate model to use between the Random Effect Model and the Fixed Effect Model (Nachrowi, 2005). Based on Table 6. the Hausman Test results show that the Cross-section Chi-Square value has a probability value of 0.9497 or > 0.05 so that the Random Effect Model is better for modeling data.

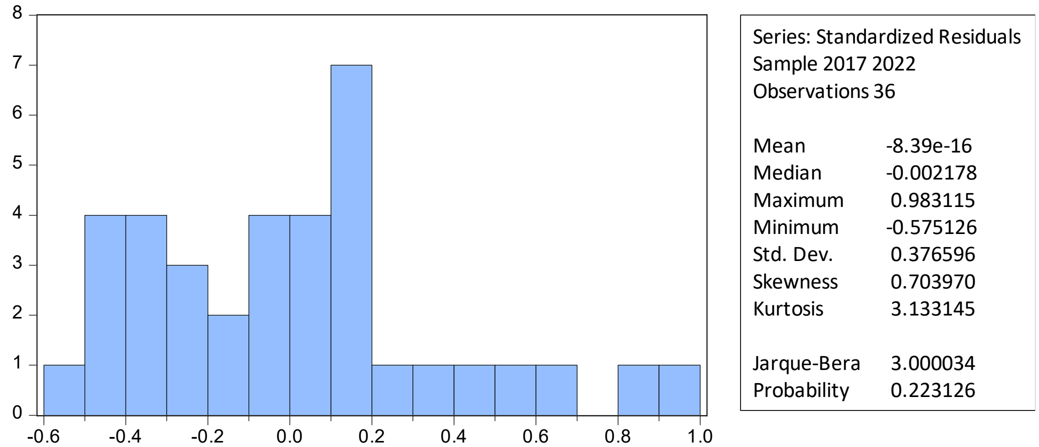
From the test results Table 5. shows that the Fixed Effect Model is selected while the test results in Table 4. and table 6. show that the Random Effect Model is selected. Then the best model for modeling panel data in this study is Random Effect. Model.

Classical Assumption Test

Classical assumption testing includes normality test, heteroscedasticity test, multicollinearity test, and autocorrelation test.

Based on Figure 1. the results of normality testing with the Jarque-Bera method show a probability value of 0.223126 or > 0.05, which means that the residuals are normally distributed.

Figure 1. Normality Test



Source: Secondary Data Processed 2024

Table 7. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.443641	0.213829	2.074750	0.0461
NPF	0.009676	0.010326	0.937048	0.3558
FDR	-0.002721	0.001471	-1.849475	0.0736
BOPO	0.000369	0.002094	0.176020	0.8614

Source: Secondary Data Processed 2024

Based on Table 7. the results of the Heteroscedasticity Test show that there is a probability value of the NPF variable of 0.3558 > 0.05, the FDR variable has a probability value of 0.0736> 0.05, the BOPO variable has a probability value of 0.8614> 0.05 So it can be concluded that the model formed does not occur heteroscedasticity cases or the assumption test is fulfilled.

Based on the data in Table 8. the results of the Multicollinearity Test can be seen that there is no case of multicollinearity in the regression model because the correlation coefficient value between the independent variables < 0.8.

Table 8. Autocorrelation Test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	21.29034	15	0.1278
Pesaran scaled LM	0.053008		0.9577
Pesaran CD	0.918993		0.3581

Source: Secondary Data Processed 2024

Based on Table 8. the results of the Autocorrelation Test show that the Breusch-Pagan value has a probability value of 0.1278 > 0.05, it can be concluded that one residual with other residuals is not correlated or there is no Autocorrelation.

Partial Test (t-Test)

Table 9. Partial Test (t-Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.083145	0.453426	17.82684	0.0000
NPF	-0.139776	0.018892	-7.398698	0.0000
FDR	0.001749	0.002838	0.616307	0.5421
BOPO	-0.076352	0.003830	-19.93434	0.0000

Source: Secondary Data Processed 2024

a. Non Performing Financing Against Return On Assets

   Based on the results of Table 9. it is known from the t-Statistic of -7.3986 that the probability value is 0.0000 < 0.05, it can be concluded that H_0 is rejected and H_a is accepted, which means that Non Performing Financing has an effect on Return On Assets of Islamic Commercial Banks.

b. Financing to Deposit Ratio on Return On Assets

   Based on the results of Table 9. it is known from the t-Statistic of 0.6163 that the probability value is 0.5421 > 0.05, it can be concluded that H_0 is accepted and H_a is rejected, which means that the Financing to Deposit Ratio has no effect on the Return on Assets of Islamic Commercial Banks.

c. Operating Cost of Operating Income Against Return On Assets

   Based on the results of Table 9. it is known from the t-Statistic of -0.076352 that the probability value is 0.0000 < 0.05, it can be concluded that H_0 is rejected and H_a is accepted, which means that Operating Costs of Operating Income have an effect on Return On Assets of Islamic Commercial Banks.

Simultaneous Test (F-test)

Table 10. Simultaneous Test (F-test)

F-Statistic	Prob. F-Statistic
231,6672	0,0000

Source: Secondary Data Processed 2024

Based on Table 10. the results of simultaneous testing can be seen that the F-Statistic value is 231.6672 with a probability value of 0.0000 < 0.05, it can be concluded that reject H_0 and accept Ha, which means that Non Performing Financing, Financing to Deposit Ratio, and Operating Expenses for Operating Income simultaneously affect the Return on Assets of Islamic Commercial Banks for the 2017-2022 Period.

Test Coefficient of Determination

Table 11. Test Coefficient of Determination

R-squared	0.955984	Mean dependent var	0.109966
Adjusted R-squared	0.951857	S.D. dependent var	1.449591
S.E. of regression	0.318062	Sum squared resid	3.237232
F-statistic	231.6672	Durbin-Watson stat	2.576516
Prob(F-statistic)	0.000000		

Source: Secondary Data Processed 2024

Based on Table 11. the results of testing the coefficient of determination can be seen that the R-squared value obtained is 0.955 which indicates that the ability of the independent variables Non Performing Financing, Financing to Deposit Ratio, and Operating Costs of Operating Income in explaining the dependent variable, namely Return On Assets of Islamic Commercial Banks for the 2017-2022 period is 95.5% while 4.5% is influenced by other variables outside the research variables.

The Effect of NPF on ROA

The results of panel data regression testing show that Non Performing Financing has an effect on Return On Assets. The coefficient value on the Non Performing Financing variable of -0.139776 means that the Non Performing Financing variable has a negative effect on Return On Assets. If Non Performing Financing increases by 1%, it will decrease the Return On Assets value by 0.139%. The results of research on Non Performing Financing affects Return On Assets support research conducted by Latifah Hardiana (Hardiana, 2021), Rizky Noviyanti (Noviyanti, 2021), and Evi Nurlaili (Evi Nurlaili, 2022) which concluded that NPF affects ROA.

Based on the results of panel data regression testing, it is known that Non Performing Financing has an effect on Return On Assets. This shows that Islamic Commercial Banks must continue to maintain the quality of NPF which will be an influence on the increase in Return On Assets of Islamic Commercial Banks, this greatly affects the continuity of bank financing activities where the smaller the NPF, the ROA will tend to increase. So, this condition needs to be maintained by Islamic Commercial Banks which can result in increased profitability (ROA).

The Effect of FDR on ROA

The results of panel data regression testing show that the Financing to Deposit Ratio has no effect on Return On Assets. The coefficient value on the Financing to Deposit Ratio variable of 0.0017 means that the Financing to Deposit Ratio variable has a positive effect on Return On Assets. If the Financing to Deposit Ratio increases by 1%, it will increase the Return On Assets value by 0.001%. The results of research on the Financing to Deposit Ratio has no effect on Return On Assets support research conducted by Latifah Hardiana (Hardiana, 2021), Risna Dwi Febriyanti (Febriyanti, 2021) and Dezara Yogi Winawati and Choiril Anam (Winata & Anam, 2020) which concluded that FDR has no effect on ROA.

Based on the results of panel data regression testing, it is known that the Financing to Deposit Ratio has no effect on Return on Assets at Islamic Commercial Banks for the 2017-2022 Period. This can be caused because the data obtained on the Financing to Deposit Ratio of Islamic

Commercial Banks for the 2017-2022 Period has an average of 82.852% where Islamic Commercial Banks can be said to be able to carry out their function properly, namely as intermediaries between parties with excess funds and parties who need funds. Although FDR in panel data testing has no effect on ROA, Islamic Commercial Banks must remain careful in collecting and channeling funds in order to keep FDR good so that it will also have a good impact on bank profitability (ROA).

The Effect of BOPO on ROA

The results of panel data regression testing show that Operating Costs of Operating Income have an effect on Return On Assets. The coefficient value on the Operating Cost of Operating Income variable of -0.076352 means that the Operating Cost of Operating Income variable has a negative effect on Return On Assets. If the Operating Cost of Operating Income increases by 1%, it will decrease the Return On Assets value by 0.076%. The results of research on Operating Costs of Operating Income affecting Return On Assets support research conducted by Alfi Munjiyaturrohmah (Munjiyaturrohmah, 2021), Diska Agustina (Agustina, 2021), Kris Diana Jamayanti (Jamayanti, 2021) and Evi Nurlaili (Evi Nurlaili, 2022) which concluded that BOPO has an effect on ROA.

Based on the results of panel data regression testing, it is known that Operating Costs of Operating Income affect Return On Assets, which shows that BOPO has a negative relationship with profitability (ROA). The smaller the BOPO, the more efficient the operating costs incurred by the bank, making profitability (ROA) even greater. So, by referring to this, Islamic Commercial Banks must always maintain the efficiency of operational costs so that the bank's operational activities can run well so that profitability (ROA) will also increase.

The Effect of NPF, FDR, and BOPO on ROA

Based on the results of the panel data regression test, Non Performing Financing, Financing to Deposit Ratio, and Operating Expenses for Operating Income simultaneously affect Return On Assets. Based on the results of the F-Statistic test of 231.6672 with a probability value of 0.0000 <0.05, it can be concluded that reject H0 and accept Ha, which means that Non Performing Financing, Financing to Deposit Ratio, and Operating Cost of Income simultaneously affect the Return On Assets of Islamic Commercial Banks for the 2017-2022 Period.

Based on the results of testing the coefficient of determination, it can be seen that the R-squared value obtained is 0.955 which indicates that the ability of the independent variables Non Performing Financing, Financing to Deposit Ratio, and Operating Cost of Operating Income in explaining the dependent variable, namely Return On Assets of Islamic Commercial Banks for the 2017-2022 period is 95.5% while 4.5% is influenced by other variables outside the research variables.

Based on the results of the F test (simultaneously) it is known that all independent variables, namely NPF, FDR, and BOPO simultaneously affect ROA. This indicates that the level of profitability (ROA) of Islamic Commercial Banks is influenced by these variables simultaneously. Thus, Islamic Commercial Banks must maintain and continue to improve good and healthy financial performance in order to obtain even better profitability (ROA).

CONCLUSION

Based on the research results that have been stated in the previous chapters, it can be concluded that Non Performing Financing has an effect on Return On Assets of Islamic Commercial Banks for the 2017-2022 Period. For the variable Financing to Deposit Ratio has no effect on Return On Assets of Islamic Commercial Banks for the 2017-2022 Period. While the Operating Cost of Operating Income variable affects Return On Assets at Islamic Commercial Banks for the 2017-2022 Period. Simultaneously, Non Performing Financing, Financing to Deposit Ratio, and Operating Cost of Operating Income simultaneously affect Return On Assets. Thus, Islamic Commercial Banks must maintain and continue to improve good and healthy financial performance in order to obtain even better profitability (ROA).

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