

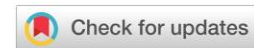
Optimization of Islamic Bank Profitability: Overview of Capital, Liquidity, Operational Efficiency and Problem Financing

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ABSTRACT

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This research aims to look at the influence of capital, liquidity, operational efficiency and problematic financing on profitability. The sample selection used a purposive sampling method where the sample size was obtained from 13 sharia banks in Indonesia during the 2018-2022 period, by analyzing quarterly sharia banking financial reports. The analysis used in this research is multiple linear regression analysis using SPSS 25. The result show that partially operating expenses operating income (BOPO) have a negative and significant effect on return on asset (ROA), where Islamic banking needs to increase efficiency or reduce operational costs to increase profitability. then Capital Adequacy Ratio (CAR), financing to deposit ratio (FDR), and non performing financing (NPF) do not have a significant effect on ROA. So it can be concluded that operational efficiency has an effect on profitability while capital, liquidity, and problematic financing have no effect on profitability.

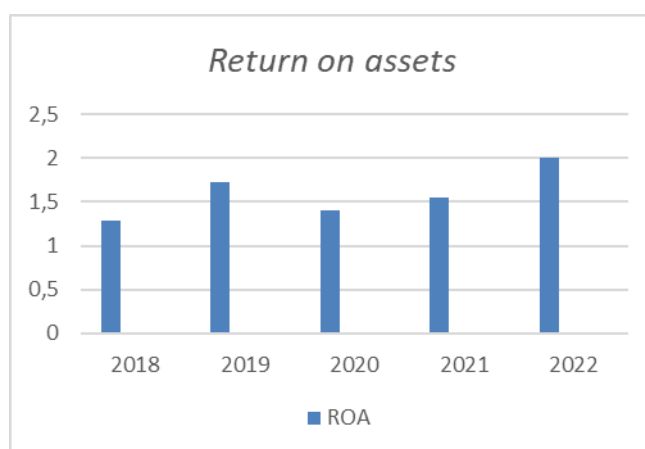
INTRODUCTION

The role of Islamic banking is very important because they function as financial intermediary institutions. It cannot be denied that Sharia banking continues to develop every year. It can be seen that based on Sharia bank statistical data from the financial services authority, in 2018 there were 13 Islamic banks in Indonesia operating with a total of 1,813 office units, then in 2022 there was an increase in the number of office units by 2,007. The development of Islamic banks is indirectly influenced by the level of performance of Islamic banks. Bank performance is very important because it depends on trust, so banks must be able to show good performance to grow the trust of people who transact at the bank (Tamin et al., 2022). Sharia banks themselves have become popular because many people use Sharia products. After all, these products provide competitive advantages compared to interest-bearing banks. The performance

of an Islamic bank is said to be good if its capital and profits increase from year to year (Fadlillah, Z., dan Baihaqi, 2021).

An important measurement to test bank performance is profitability, increasing ROA has a good chance of improving financial performance (Ariani, F. dan Prinoya, 2021). ROA is a very fundamental performance variable for banks. Profitability factors have a causal relationship with the bank itself. This relationship shows that when bank management performance is measured by ROA factors in good condition, this will have an impact on investors' decisions and will later have an impact on bank decisions and their role in channeling funds.

One of the important variable in measuring bank performance is profitability, this is because profitability is one of the ratios used to measure bank performance in getting profits from total assets. (Afya & Suazhari, 2019). To find out how effective a bank is in making profits, the ROA value is a very important measure. Therefore, the higher the ROA shows the banking performance because a high rate of return indicates that the bank's problematic condition will be lower.



Source: Islamic Bank Statistics (ojk.go.id)

Figure 1. Return on Assets of Islamic Banks for the 2018-2022 Period

Judging from the Islamic banking statistical data by the financial services authority, profitability has not been constant in the last 5 years. In Figure 1, it can be seen that profitability decreased from 2019 to 2020 with a ROA value of 1.73%, and in 2020 the ROA became 1.4%. The ROA value then rose in 2021 to reach 1.55% and in 2022 it rose again to reach 2%. This shows that several factors can influence ROA.

Several financial ratios can influence ROA as a measure of profitability, including the capital ratio which is usually proxied by CAR. CAR is the bank's capital adequacy ratio which is used to reduce the risk of loss. The higher the CAR, the greater the bank's ability to accommodate risks on each credit/productive asset which is

assessed based on risk. the bank's ability to cover the decline in assets due to losses is measured by CAR. If capital is able to cover these losses, then the bank can manage them well, which means profits will increase (Martono & Rahmawati, 2020). The next ratio is the liquidity ratio which is proxied by FDR. FDR is a ratio used to calculate the level of bank liquidity when compared to the total assets owned by the bank to meet credit demand. The higher the FDR, the more profits will increase. Therefore, the size of the FDR ratio will influence bank performance (Tamin et al., 2022). The next ratio is the operational efficiency ratio which is proxied by BOPO. BOPO is used to calculate the suitability between funds used for operations and funds spent. A lower BOPO percentage will make the bank more profitable because it can cover operational costs with operating income (Ariani, F. dan Prinoya, 2021). The next ratio is the financing problem which is proportioned to the NPF. NPF is an variable of financing risk. NPF shows the level of bank management's ability to manage problematic financing. The high and low NPF will affect bank performance.

Research conducted by (Devi, 2021) shows the results that CAR and BOPO do not have a significant impact on ROA, while NPF has a significant negative impact on ROA. (Moorcy et al., 2020) shows the results that FDR has a positive and significant impact on ROA, BOPO has a negative and significant impact on ROA, NPF has a negative and not significant impact on ROA and CAR has a positive and not significant impact on ROA. (Martono & Rahmawati, 2020) shows the results that CAR, NPF, and FDR do not affect ROA while BOPO has a negative and significant impact on ROA. Mohammad Yusuf & Reza Nurul Ichsan, (2021) stated the results that NPF, FDR, BOPO, and CAR have a significant impact on ROA. Because there are differences in the results of previous research, it is necessary to carry out research again. Therefore, this study aims to examine the influence of "CAR, FDR, BOPO, AND NPF ON ROA IN ISLAMIC BANK".

LITERATURE REVIEW

The act of management giving investors instructions about how management sees the company's future is known as "signalling theory." Signals are acts taken by a company's management to teach investors on how management evaluates the company's prospects, according to Brigham and Houston (2011: 186). It is intended for companies to increase company value through a report by sending signals through its annual report, as Scott (2012: 475) explains in relation to signal theory. Company managers who have better information about their company will be encouraged to convey this information to potential investors. Because it explains information about company profits that are calculated based on the asset return of the company and the existence of factors that affect profitability like Operational Efficiency using the ratio of Operating Costs to

Operating Income (BOPO), Capital Adequacy Ratio (CAR), Net Performing Financing (NPF), and Financing to Deposit Ratio (FDR), the use of signaling theory is related to profitability or Return on Total Assets (ROA). The following is the framework for this research:

H1 = capital Adequacy Ratio (CAR) have a significant positive effect on the return on assets (ROA)

H2 = Financing Deposit Ratio (FDR) have a significant positive effect on the return on assets (ROA)

H3 = Operational Income Operational Costs (BOPO) have a significant negative effect on the return on assets (ROA)

H4 = Non-Performing Financing (NPF) have a significant negative effect on the return on assets (ROA)

METHOD

This research uses quantitative research and secondary data obtained through quarterly reports of Islamic banking companies listed on the IDX for 2018-2022 published on the OJK website. The research population is all 14 Islamic banks in Indonesia registered with the OJK for the 2018-2022. This research uses a purposive sampling method, which means the sample must meet several criteria . The sampling criteria are 1) Islamic banks registered with the OJK, 2) Islamic banks that publish quarterly reports for quarters I-IV for 2018-2022, 3) and Sharia banks that have overall data on ROA, CAR, FDR, BOPO, NPF for the 2018-2022 period. Based on the sample selection criteria, the acquired data which totals 239 from 14 islamic banks is not normal after processing with SPSS, therefore the data needs to be treated by eliminating anomalous data in order to reduce the data to 195. The research uses multiple linear regression analysis. So the model of the equation is as follow:

$$ROA = \alpha + \beta_1CAR + \beta_2FDR + \beta_3BOPO + \beta_4NPF + e$$

Where: ROA = return on assets ; $\beta_1, \beta_2, \beta_3, \beta_4$ = coefficient of regression; CAR = Capital Adequasy ratio; FDR = Financing Deposit Ratio; BOPO = Operational Income Operational Costs; NPF = Non-Performing Financing; e = error term. Data processing in this analysis uses SPSS 25. A summary of the operational definitions of variables is in Table 1 as follows:

Table 1. Summary of Variable Operational Definitions

No	Variables	Definition				
		Data Source	Measureme nt scale	Data Type	Period	
1	ROA	Return On Assets (Profitability Ratio)	Ojk	Ratio	Time Series	2018-2022
2	CAR	Capital Adequacy Ratio (Capital Ratio)	Ojk	Ratio	Time Series	2018-2022

3	FDR	Financing Deposit Ratio (Liquidity Ratio)	Ojk	Ratio	Time Series	2018-2022
4	BOPO	Operational Income Operational Costs	Ojk	Ratio	Time Series	2018-2022
5	NPF	Non-Performing Financing (Bad Credit Financing)	Ojk	Ratio	Time Series	2018-2022

Source: Islamic Banking Financial Report (ojk.go.id)

RESULT AND DISCUSSION

Result

Descriptive Statistics

Based on data analyzed with SPSS, before carrying out the multiple linear regression test, this researcher will first discuss the research descriptive statistics of all variables:

Table 2. Statistics Descriptive

Variables	N	Min	Max	Mean	Std.Deviation
CAR	195	10.16	48.12	23.0346	7.67745
FDR	195	38.33	196.73	83.2341	18.52957
BOPO	195	66.76	115.76	90.1446	8.32584
NPF	195	.35	22.29	3.7692	3.07242
ROA	195	-1.27	2.70	.8755	.73436
Valid N (Listwise)	195				

Source: processed data (SPSS 25)

From Table 2 above, it is known that the sample size of Islamic banks was 195 in the research period from 2018 to 2022. According the descriptive statistics table, the variables CAR, FDR, BOPO, and NPF have an average value that is greater than their standard deviation, which indicates that the data is well distributed.

Standard CAR data is good if the CAR value is at least 8%. In the descriptive table, the average CAR value is 23.03%, which is greater than 8%. This means, that if the CAR value is greater than 8%, then the bank's health level is considered good.

Good FDR standard data if the FDR value is between 80% - 100%. In the descriptive table, the average FDR value is 83.23, which is still between 80% - 100%. This means, that if the FDR value is between 80%-100%, then it can be said that the bank's health is good.

BOPO standard data is good if the BOPO value is below 93%. In the descriptive table, the average BOPO value is 90.14% below 93%. This means if the BOPO value is below 93%, then the bank's Health Level is considered good.

Good standard NPF data is below 5%. In the descriptive table, the average NPF value is 3.77% which is below 5%. This means that if the NPF value is below 5%, it can be said that the bank's health level is good.

Good ROA standard data is 1.5%. In the descriptive table, the average ROA value is 0.87%, which is still below 1.5%, which means that the ROA ratio studied does not meet the criteria because it is less than the predetermined standard. This could happen because in the previous year, there was COVID-19 which caused many banks to drop their ROA even to minus.

The Classic Assumption

Normality Test

The data that has been obtained is 239 from 13 Islamic banks, after being processed with SPSS the data is not normal so treatment must be carried out by removing outlier data so that the data becomes 195. Results from SPSS 25 data processing:

Table 3. Normality Test

		Unstandardized Ed Residual
N		195
Normal Parameters ^b	Mean	.0000000
	Std. Deviation	.13528339
Most Extreme Differences	Absolute	.059
	Positive	.059
	Negative	-.042
Test Statistic		.059
Asymp. Sig. (2-Tailed)		.094 ^c

Source: processed data (SPSS 25)

The asymp numbers. Sig. (2-tailed) namely 0.094 in table 3, which means that the research is normally distributed because the significance level is > 0.05 .

Multicollinearity Test

The tolerance figure for the CAR variable 0.930, the FDR variable 0.913, the BOPO variable 0.760, and the NPF variable 0.745 > 0.10 or the same as the VIF value. Where all variables are $< 10,00$ which means there is no multicollinearity in the research data, is sourced from table 4.

Table 4. Multicollinearity Test

Collinearity Statistics		
model	tolerance	VIF
1 (constant)		
CAR	.930	1.076
FDR	.913	1.096
BOPO	.760	1.315
NPF	.745	1.343

Source: processed data (SPSS 25)

Heteroscedasticity Test

The aim is to find out whether, in the regression model, there is an inequality of variance between the remaining observation to another observation (Ghozali, 2021). Based on the results of the heteroscedasticity test that has been carried out heteroskedasticity has occurred, therefore it is necessary to recover the data using the first difference method. Results from SPSS 25 data processing:

Table 5. Heteroscedasticity Test

model	unstandardized coefficients		unstandardized coefficients beta		
	B	st. error		t	sig
1 (constant)	.057	.005		11.468	.000
CAR	-.001	.001	-.050	-.676	.500
FDR	.000	.001	.021	.279	.780
BOPO	-.001	.001	-.064	-.836	.404
NPF	.003	.002	.105	1.341	.181

a. Dependent Variable: AbsRes

Source: processed data (SPSS 25)

Table 5 shows that CAR, FDR, BOPO, and NPF have a significant value of more than 0.05, so it can be said that there are no symptoms of heteroscedasticity.

Autocorrelation Test

Conducted to find out whether, in the linear regression model, there is a correlation between confounding error in period t and confounding error in period t-1 (previously) (Ghozali, 2021). Results from SPSS 25 data processing:

Table 6. Autocorrelation Test

Model	DW
1	2.017

Source: processed data (SPSS 25)

The results of the autocorrelation test with Durbin-Watson of 2,017 in table 6 show that there is no autocorrelation, namely the value $Du < DW < 4-Du$. The Du value

is obtained from the Durbin-Watson table with $n = 195$ and $k = 4$, so the result is $1.8076 < 2.017 < 2.1924$. the results show that there is no autocorrelation.

Hypothesis Test

F Test

There is significant impact between the independent variable and the dependent variable. As shown by the calculated F value of 990.543 and a significance of $0.000 < \alpha 0.05$, as shown in table 7.

Table 7. F Test

Model	f	sig.
Regression	990.543	.000 ^b

Source: processed data (SPSS 25)

Coefficient Determination Test

Adjusted R square figure for Islamic banks is 0.954, which means that CAR, FDR, BOPO, and NPF have an impact of 95.4% on ROA and 4.6% is influenced by other variables not studied, as shown in table 8:

Table 8. Coefficient determination

Model	R Square	Adjusted R Square
1	.954	.954

Source: processed data (SPSS 25)

Multiple linear regression analysis

This research uses multiple linear analysis to determine and show how CAR, FDR, BOPO, and NPF impact ROA of Islamic banks.

Table 9. multiple regression test and partial test

model	unstandardized coefficients		unstandardized coefficients beta		
	B	st. error		t	sig
1 (constant)	-.004	.006		-.566	.572
CAR	.001	.002	.010	.602	.548
FDR	.000	.001	.005	.320	.749
BOPO	-.079	.001	-.979	-59.629	.000
NPF	.001	.003	.006	.350	.727

a. Dependent Variable: ROA

Source: processed data (SPSS 25)

Sourced from Table 10, a multiple linear regression equation is prepared:

$$Y = -0,004 + 0,001CAR + 0,000FDR - 0,079BOPO + 0,001NPF + e$$

Partial Test (Test t)

The calculated t value of the variable shown in Table 10 is as follows:

1. The results of testing the CAR variable on ROA obtained a t count of 0.602 with sig. 0.548 > alpha 0.05, which means CAR has no significant impact on ROA.
2. The results of testing the FDR variable on ROA obtained a t count of 0.320 with sig. 0.749 > alpha 0.05, which means FDR does not have a significant impact on ROA.
3. Test results for the BOPO variable on ROA, t calculated at -59.629 with sig. 0.000 < alpha 0.05, which means BOPO has a significant negative impact on ROA.
4. Test results of testing the NPF variable on ROA, t calculated at 0.350 with sig. 0.727 > alpha 0.05, which means that NPF has no significant impact on ROA

Discussion

Based on Table 10, the CAR value for ROA is sig. 0.548 > 0.05 and t count 0.602 < t table 1.972. From these results, it can be concluded that CAR does not have a significant impact on ROA. So H_a is rejected, and H_o is accepted. The results of this research show that whether a bank's CAR level is higher, lower, or remains the same, the CAR level of a bank is not used as a benchmark for the success of bank management in achieving high profits or whether it will not affect profitability. Banks that have large capital but cannot manage their capital well to generate profits will not be able to significantly influence the bank's profitability. Based on Bank Indonesia Regulation number 21/PJOK.03/2014, Sharia commercial banks are required to have a minimum capital of 8%. The emergence of these regulations has made Sharia commercial banks careful in maintaining their CARs so that their CARs comply with the provisions. This research is the same as previous research conducted (Syachreza & Mais, 2020), (Saputra, Febrian Eko & Lina, 2020), and (Devi, 2021). Different from research by (Ariani, F. dan Prinoya, 2021), (Sunaryo, 2020), and (Cuandra & Setiawan, 2020) which states that CAR has a positive impact on ROA.

The Impact of FDR on ROA

Based on Table 10, the FDR value of ROA is sig. 0.749 > 0.05 and t count 0.320 < t table 1.972. From these results, it can be concluded that FDR has no significant impact on ROA. So H_a is rejected, and H_o is accepted. The results of this research state that the high level of financing provided by banks does not guarantee high profits obtained by Islamic banks, this is because banks are less effective in distributing funds and financing is not managed well by banks. From the data obtained, the overall

average FDR value is quite good, namely 83.23%. However, several Islamic banks have an FDR value of more than 100%, such as Bank Jabar Banten Syariah, Bank Panin Dubai Syariah, and Bank KB Bukopin Syariah which can be said to have exceeded the predetermined limit, this shows that the distribution of banking financing is still not being implemented properly. by Islamic commercial banks that have been researched. So a large FDR is not necessarily accompanied by a large ROA. This research is the same as previous research conducted by (Yusuf, M., dan Ichsan, 2021), (Farizky, 2021), (Astuti, 2022), (Dina & Nana, 2022), and (Fachri & Mahfudz, 2021). Different from research conducted by (Ishak, K., Selamat, M. I., Khoirin, K. F., dan Kurniawan, 2023), and (Moorcy et al., 2020) which states that FDR has a significant positive impact on ROA

The Impact of BOPO on ROA

Based on Table 10, the BOPO value of ROA is sig. $0.000 > 0.05$ and t count $-59.629 > t$ table 1.972. From these results, it can be concluded that BOPO has a significant negative impact on ROA. So H_a is accepted, and H_o is rejected. This shows that if a bank has a high BOPO ratio, then they tend to have a low ROA. This means that the level of operational efficiency carried out by the bank influences the level of profits it produces. A low BOPO level indicates that the bank has good management capabilities in meeting its operational costs by generating maximum profits so that ROA will increase. This research is in line with research (Ariani, F. dan Prinoya, 2021), (Dina & Nana, 2022) and (Moorcy et al., 2020) different from research conducted by (Devi, 2021) and (Fachri & Mahfudz, 2021) which states that BOPO does not have a significant impact on ROA.

The Impact of NPF on ROA

Based on Table 10, the NPF value for ROA is sig. $0.727 > 0.05$ and t count $0.350 < t$ table 1.972. From these results, it can be concluded that NPF does not have a significant impact on ROA. So H_a is rejected, and H_o is accepted. This is because financing problems in Islamic banks in the research period were not too large in nominal terms. This is indicated by an average NPF of 3.8%. Good financing management will provide a low NPF value according to Bank Indonesia regulations, namely below 5% so that there will be less problematic financing which will affect profitability. The size of the NPF will not affect ROA because the financing carried out by Sharia banks has not been managed optimally and there are problems or obstacles in distributing financing to customers, so the risk of problematic financing at Sharia banks is not too high so it does not have an impact on the ROA of sharia commercial banks.

This could also be because Islamic banks can use productive asset reserves to accommodate losses that may arise due to the risk of failure to return investment funds, or the bank still has other sources of income apart from the financial portfolio which have a greater influence on ROA. This research is in line with research (Agustin & Citarayani, 2022), (Moorcy et al., 2020), (Sapa & Awaluddin, 2022) and (Yusuf, M., dan Ichsan, 2021). Different from research conducted by (Ishak et al., 2023), (Farizky, 2021), and (Syachreza & Mais, 2020) which states that NPF has a significant impact on ROA.

CONCLUSSION

This research aims to see the influence of capital, liquidity, operational efficiency, and problematic financing on profitability. This research uses unbalanced data with the help of the SPSS 25 data analysis tool, the test model used is multiple linear regression analysis. The population of this research was Islamic banks which were then carried out purposive sampling to obtain a sample size of 195 from 2018-2022. The F test results show that the four variables have an influence on profitability with a prob (F-statistic) value of 0.000. The t-test results state that only the BOPO variable has a negative and significant impact on ROA. Because, if banks become more efficient in controlling operational costs, their profits can increase. To increase ROA, what must be improved is the efficiency of the resources owned. That way, usage costs will be lower. Using low costs but fixed income will increase operational income so that it can increase ROA. while the variables CAR, FDR, and NPF do not have a significant impact on ROA. Apart from that, the limitation of this research is that not all banks publish financial reports. Apart from that, the variables tested are only CAR, FDR, BOPO, and NPF against ROA. Suggestions for further research are to add variables or periods studied.

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