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# DETERMINANTS OF SHARIA BANKING PROFITABILITY: EMPIRICAL STUDIES IN INDONESIA 2011-2020

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Abstract: This study aims to examine the effect of sharia banking characteristics such as Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Non Performing Financing (NPF), Operating Expenses to Operations Revenue (BOPO) on Return on Assets (ROA). The data used in this study are secondary data obtained from Sharia Banking Statistics published by the Financial Services Authority (OJK) with Purposive Sampling Techniques in 14 Sharia Banks in Indonesia for the period 2011-2020. The analysis technique used is multiple linear regression. The analysis shows that the CAR, NPF, BOPO variables significantly influence ROA, but FDR has no effect on ROA. The predictive ability of 4 independent variables (CAR, FDR, NPF and BOPO) to the dependent variable (ROA) is 86.5%, while 13.5% is influenced by other variables not mentioned in this study.

Keywords: CAR, FDR, NPF, BOPO, ROA, Sharia Banking

**Abstrak:** Penelitian ini bertujuan untuk menguji pengaruh karakteristik perbankan syariah seperti Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Non Performing Financing (NPF), Operating Expenses to Operations Revenue (BOPO) terhadap Return on Asset (ROA). Data yang digunakan dalam penelitian ini adalah data sekunder yang diperoleh dari Statistik Perbankan Syariah yang

dipublikasikan oleh Otoritas Jasa Keuangan (OJK) dengan Teknik Purposive Sampling di 14 Bank Syariah di Indonesia periode 2011-2020. Teknik analisis yang digunakan adalah regresi linier berganda. Hasil analisis menunjukkan bahwa variabel CAR, NPF, BOPO berpengaruh signifikan terhadap ROA, tetapi FDR tidak berpengaruh terhadap ROA. Kemampuan prediksi 4 variabel independen (CAR, FDR, NPF dan BOPO) terhadap variabel dependen (ROA) adalah 86,5%, sedangkan 13,5% dipengaruhi oleh variabel lain yang tidak disebutkan dalam penelitian ini.

Kata Kunci: CAR, FDR, NPF, BOPO, ROA, Bank Syariah

#### INTRODUCTION

In Indonesia, the banking system used is a dual banking system that operates two types of bank business, namely sharia banks and conventional banks. That way the policies taken by OJK are certainly different for the two types of banks. Sharia banks do not use the interest system, profits are derived from profit sharing from financing between customers and the bank (Antonio, 2001).

Banks are known as institutions that act as financial intermediaries, intermediaries between parties who have excess funds and those who need funds. As a financial institution mediating institution, banks have an important role in the economy (Rizal & Humaidi, 2019). Efficiency in the financial sector will affect economic growth. The better the performance of banks in collecting and distributing funds, the economy of a country will also develop faster (Levine, 1997).

Banking contributes to the economic sector (Ahmed, 2010). Banks that have good performance will be able to obtain capital easily. The role of banks is very important in ensuring the allocation of

Determinants of Sharia Banking Profitability: Empirical Studies in Indonesia 2011-2020 resources, economic growth and financial performance (Rashid & Jabeen, 2016).

Financial mediation in the banking sector is very important for every country including Indonesia. Banks must be able to maintain public confidence by increasing financial performance to achieve profits. Banks must maintain good financial performance because the majority of funds managed by banks are public funds.

Sharia banking performance began to improve. It was proven that in 2019 the sharia banking market share was 6.01% or reaching Rp 513 trillion. (Otoritas Jasa Keuangan Republik Indonesia, 2020). This is the highest market share in the history of sharia banking in Indonesia. The biggest supporting factor to achieve this market share is due to an increase in the growth of sharia banking assets in the BUS and UUS units by 10.15 percent compared to Rp.499.98 trillion previously (Nashrullah, 2020). This achievement must always be improved because it is actually far from the target set. The performance of Islamic banking must be improved so that the 20% financial market share in 2023 can be achieved (Sebayang, 2018). This phenomenon shows that the performance of sharia banking is interesting to study.

The way to assess banking performance is by knowing how much the institution's ability to generate profits. Profitability is an indicator to assess the performance of a bank and to assess the quality of its management. So that profits become an indicator to assess the performance of a bank in the past or future (Greuning & Iqbal, 2008).

The indicator used in research to measure the level of profitability is Return on Assets (ROA). ROA is used to measure the

ability of banks to generate profits in the past and be able to project profits in the future (Hanafi & Halim, 2014). ROA is used to assess the performance of Islamic banks in generating profits, based on assets derived from public savings funds. ROA reflects the level of public trust and the quality of management of sharia banks. The greater the ROA, the greater the level of profits achieved and the better the bank's position in the use of assets (Rizal, 2018).

ROA is strongly influenced by all or part of financial ratios (Greuning & Iqbal, 2008) (Rizal & Humaidi, 2019), including Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), Non Performing Financing (NPF), Operating Expenses to Operations Revenue (BOPO) (M, Tarawneh, 2006). This is in accordance with the Financial Services Authority Regulation Number 8 / POJK.03 / 2014 concerning the Rating of Sharia Commercial Banks and Sharia Business Units (Otoritas Jasa Keuangan Republik Indonesia, 2014a) and Financial Services Authority Circular Letter Number 10 / SEOJK.03 / 2014 Concerning the Soundness of Sharia Commercial Banks and Sharia Business Units (Otoritas Jasa Keuangan Republik Indonesia, 2014b). The selection of indicators is based on theory and previous research conducted by (Rizal, 2016) and (Rofiqo & Afrianti, 2019). Therefore this study aims to examine the effect of CAR, FDR, BOPO and NPF on ROA.

Capital Adequacy Ratio (CAR) is a ratio that shows the ability of banks to maintain capital adequacy and the ability of bank management to control banking operational risk. (Mundrajad Kuncoro & Suhardjono, 2002). CAR is important for banks because it is one of the factors to assess the performance of the bank (Greuning & Iqbal,

2008). If CAR rises, the capital used will be better, thereby increasing bank performance and making people more confident in sharia banks, and ultimately sharia banks' profits will increase. This shows that CAR has a positive effect on ROA, this is consistent with the results of research conducted by (Setyarini, 2020) and (Charistiano et al., 2014). But in research conducted by (Sabir et al., 2012), (Widyaningrum & Septiarini, 2015) and (Wibisono & Wahyuni, 2017) states that CAR has no effect on ROA.

Financing to Deposit Ratio (FDR) is the ratio used to measure the composition of the amount of financing provided by the amount of funds held. So FDR is a measure of liquidity that measures the size of a fund that is placed in the form of loans derived from public funds. The results of the measurement are far above the target, then it is not likely that the bank may be experiencing liquidity difficulties (Mundrajad Kuncoro & Suhardjono, 2002). The higher the FDR, the company profits will increase (assuming the bank is able to distribute loans effectively, so the amount of bad loans will be small). This shows that FDR has a positive effect on ROA, this is consistent with the results of research conducted by (Rofiqo & Afrianti, 2019) and (Wibisono & Wahyuni, 2017). But in research conducted by (Widyaningrum & Septiarini, 2015) and (Sabir et al., 2012) states that FDR has no effect on ROA.

Non Performing Finance (NPF) is a financing that is experiencing bottlenecks in repayment that occurs due to factors that are intentional or unintentional factors. NPF is one of the biggest problems for banks because NPF is the main cause of bank failures (Greuning & Iqbal, 2008). The higher the NPF of a bank, the risk of

problem financing for the bank will also increase. The risk of financing can increase if the bank lends funds to the wrong customer. If the problematic financing increases due to a bottleneck in repayment, the increase in the NPF will reduce the level of bank performance and operations so that the level of profitability obtained by the bank will also decline. This shows that NPF has a negative effect on ROA, this is consistent with the results of research conducted by (Rizal, 2016) and (Rofiqo & Afrianti, 2019). But in research conducted by (Sabir et al., 2012), (Widyaningrum & Septiarini, 2015) and (Wibisono & Wahyuni, 2017) states that NPF has no effect on ROA.

Operational Expenses to Operational Revenue (BOPO) is a ratio used to measure the ability of bank management in controlling operational costs incurred to obtain operating income (Charistiano et al., 2014). BOPO is used to measure the level of efficiency and the ability of banks to carry out operational activities in obtaining profits. Keep in mind that operational risk is the risk most often faced by sharia banking (Greuning & Iqbal, 2008). The greater the BOPO level of a bank, the bank's performance and operations will decrease due to the amount of burden received and in the end it will reduce the level of profitability. This shows that BOPO has a negative effect on ROA, this is consistent with the results of research conducted by (Rizal, 2018), (Widyaningrum & Septiarini, 2015), (Setyarini, 2020) and (Revida & Septiarini, 2017). But in research conducted by (Sabir et al., 2012) states that BOPO has no effect on ROA.

This research uses quantitative research methodology with multiple linear regression analysis techniques. This study aims to examine the effect of CAR, FDR, NPF and BOPO on ROA of sharia banks in Indonesia for the 2011-2020 period. Based on the explanation above, this research is entitled "Determinants of Sharia Banking Profitability: Empirical Studies in Indonesia 2011-2020".

#### LITERATURE REVIEW

#### Sharia Bank

Bank is a business entity that collects funds from the public in the form of deposits and distributes them to the community in the form of credit and or other forms in order to improve the lives of many people (Ismail, 2010). The term sharia bank is a bank that operates based on sharia principles and by type comprises Sharia Commercial Banks and Sharia People Financing (Presiden Republik Indonesia, 2008). Sharia banks operate according to Islamic sharia provisions, especially those concerning procedures for bermuamalat for example by avoiding practices that contain elements of usury and carrying out investment activities on the basis of profit sharing.

The number of sharia banks in Indonesia is growing year by year. Based on Sharia Banking Statistics data as of February 2020, currently there are 14 BUS, 1,925 offices. Whereas based on Sharia Banking Statistics data as of January 2011, there were 11 BUS, 1,309 offices. From these data shows that, in general from 2011 to 2020 BUS in Indonesia experienced growth. Even more interesting is the profitability obtained by Islamic Commercial Banks from year to year also fluctuates (Otoritas Jasa Keuangan Republik Indonesia, 2020)

## **Profitability of Sharia Bank**

Profitability measures the company's ability to generate profits at the level of sales, assets and share capital. Profitability measures the company's ability to generate net income based on certain asset levels. A high ratio shows the efficiency of good asset management (Hanafi & Halim, 2014). Profitability shows the effectiveness of a company in creating profits. Profit basically shows how good the company is in making investment and financing decisions. And the main purpose of the service company's business operations is to generate profits.

Profitability ratios are ratios to measure a company's ability to generate profits at the level of sales, assets and share capital. In the discussion of profitability, there are three ratios that are often discussed namely profit margin, return on asset, and return on equity. Profitability indicators that are often used in the banking world are Return on Asset (ROA) dan Return on Equity (ROE) (Otoritas Jasa Keuangan Republik Indonesia, 2014b). ROA measures the company's ability to generate profits in the past that can be used as projection of earnings for the coming year. ROA measures the company's ability to generate profits by using the total assets owned by the company after adjusting for costs to fund these assets (Otoritas Jasa Keuangan Republik Indonesia, 2014a).

ROA shows the ability of banks to generate profits from the management of assets owned. ROA is used to measure the profitability of banks with assets with the majority of funds from public deposits. The greater the ROA of a bank, the greater the level of profits achieved by the bank. In assessing the health of the Bank, OJK will give a

Determinants of Sharia Banking Profitability: Empirical Studies in Indonesia 2011-2020 maximum value of 100 (healthy) if ROA is more than 1.5 percent (Otoritas Jasa Keuangan Republik Indonesia, 2014b).

It can be understood that the greater the ROA of a bank, the greater the level of profit achieved and the better the bank's position in terms of asset management. And conversely if the smaller ROA, the profit will decrease because banks are not able to manage assets properly. Keep in mind that the greater the ROA obtained, the more efficient the bank in managing assets (assets), so that it will increase profits. And in the end the customer is interested in making transactions at the bank because the bank has a high rate of return (Umam, 2013).

## **Capital Adequacy Ratio**

Capital is used to maintain the risk of loss from bank activities. The amount of capital of a bank will affect the level of public confidence in bank performance (Sinungan, 2000). CAR is an indicator of the ability of banks to cover bank losses caused by risky assets (Dendawijaya, 2005). CAR is a ratio that shows the ability of banks to provide funds for business development needs and protect against the risk of loss from operational activities. The higher the CAR, the better the condition of the bank (Greuning & Iqbal, 2008) and (Hasan & Bashir, 2005).

CAR can generally be understood as the ratio of capital adequacy used to finance banking operations in obtaining profits and as a protector when there are losses and shocks from banking operations. The minimum standard in capital adequacy for sharia banks is 8 percent (Otoritas Jasa Keuangan Republik Indonesia,

2014b). If CAR rises, the capital adequacy ratio used will be better. So that it can improve bank performance and increase public confidence. CAR is measured from the ratio of bank capital to risk-weighted assets. (ATMR).

### **Financing to Deposit Ratio**

Financing to Deposit Ratio (FDR) is a ratio to measure the ability of banks to pay depositors whose funds have been directly distributed by banks to the public by way of financing. FDR shows the level of ability of banks in channeling third party funds collected by the Bank to the public (Otoritas Jasa Keuangan Republik Indonesia, 2014b). So FDR is a measure of liquidity that measures the amount of loan funds from funds collected by banks (especially the public). If the measurement results are far above the target and limit, it means that there is a possibility that the bank will experience liquidity problems so that the bank's income decreases (Mundrajad Kuncoro & Suhardjono, 2002). The higher the FDR, the company's profit increases (assuming the bank is able to channel financing effectively, so there is no problem financing) (Haron, 2004). FDR is used to measure the ability of banks to pay debts and repay to depositors, and can meet the loan request submitted. FDR is measured by the ratio between the amount of financing provided to the amount of third party funds (DPK).

## **Non Performing Finance**

Non Performing Finance (NPF) is a ratio used to measure the ability of bank management to manage problematic financing provided

by banks. NPF is financing that is experiencing bottlenecks in repayments that occur due to factors that are intentional or unintentional factors. NPF is one of the biggest problems for banks because it is the main cause of bank failures (Greuning & Iqbal, 2008).

NPF increases, the risk of problem financing for the bank will also increase. The risk of financing can increase if the bank provides financing to customers who are not right so that the funds provided are not returned. An increasing NPF will reduce the level of bank performance and operations, so that the level of profitability obtained by banks will also decline (Hasan & Bashir, 2005). NPF is measured by the ratio between problem financing to total financing.

## **Operational Expenses to Operational Revenue**

Operational Expenses to Operational Revenue (BOPO) is a ratio used to measure the ability of bank management in controlling operational costs incurred to obtain revenue (Charistiano et al., 2014). BOPO is used to measure the level of efficiency and the ability of banks to carry out operational activities in obtaining profits. BOPO is the risk most often faced by sharia banking (Greuning & Iqbal, 2008). The greater the BOPO, the operational expense also increases so that the banking performance decreases and ultimately bank profitability decreases. (Wasiuzzaman & Ayu, 2010). BOPO is measured by the comparison between operating costs and operating income.

Based on the explanation above, the conceptual framework for thinking in this study is:

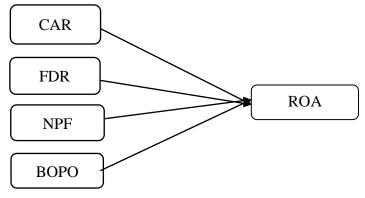


Figure 1: Research Framework

Based on the literature review above, the hypotheses that can be proposed as a temporary answer to the problem of this study are as follows:

- 1. Hypothesis 1: CAR has a significant positive effect on ROA
- 2. Hypothesis 2: FDR has a significant positive effect on ROA
- 3. Hypothesis 3: NPF has a significant negative effect on ROA
- 4. Hypothesis 4: BOPO has a significant negative effect on ROA

#### RESEARCH METHOD

This research is quantitative research. Quantitative research is a scientific approach to managerial and economic decision making (Mudrajat Kuncoro, 2011). This approach departs from the data, then is processed and presented into valuable information for policyholders. There are two variables in this study, namely the dependent and independent variables. The dependent variable is profitability of sharia banks which are proxied by ROA, while the independent variable is CAR, FDR, NPF and BOPO.

The population and sample of this study are 14 sharia banks in Indonesia. Types and sources of data used are secondary data, in the form of monthly reports from the Financial Services Authority from 2011 to 2020. The data collection method used is by indirect observation by visiting the website: ojk.go.id.

The analysis technique used in this research is quantitative descriptive, which is data in the form of numbers or units of measure. To analyze the data, the researchers used EVIEWS 9 software tools. The data analysis method used in this study was a deviation test of classical assumptions which consisted of tests of normality, autocorrelation, and heteroscedasticity. The test model in this study uses multiple regression analysis techniques. This analysis technique is used to determine the effect of the relationship between the dependent variable and the independent variable. The equation is:

$$ROA=a+\beta_1CAR_1+\beta_2FDR_2+\beta_3NPF_3+\beta_4BOPO_4+E$$
.

Analysis of this hypothesis test using partial testing that can be done through observation of significant value at level  $\alpha$ . This study uses an  $\alpha$  level of 5%. If significance t > 0.05 then H0 is accepted, which means that the independent variable has no significant effect on the dependent variable. Testing goodness of fit test, this test is done by looking at the value of the coefficient of determination (Adjusted R-Square). When Adjusted R-Square approaches number one, the level of closeness is higher.

### RESULT AND DISCUSSION

## The Results of The Classical Assumption Test (Normality)

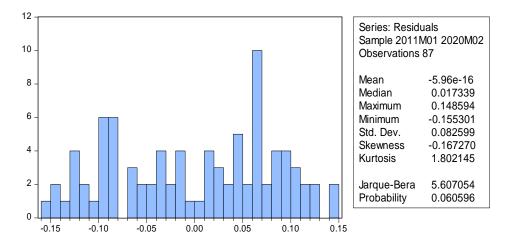


Figure 2: Classical Assumption Test (Normality Test)

Looking at the results of the data with tools Eviews 9 can be known probability value Jarque-Bera 0,060596> 0,05. It can be concluded that the residuals are normally distributed.

# **The Results of The Classical Assumption Test (Auto Correlation)**

To test whether or not auto correlation researchers used LM Test (Breusch-Godfrey) results:

**Table 1: Breusch-Godfrey Serial Correlation LM Test:** 

F-statistic	38.05692	Prob. F(2,80)	0.0000
Obs*R-squared	42.41715	Prob. Chi-Square(2)	0.0000
		_	_

Looking at prob. Chi-Square (2) got value 0.0000<0,05 hence can be concluded that this model happened auto correlation. To treat auto

Determinants of Sharia Banking Profitability: Empirical Studies in Indonesia 2011-2020 correlation, researchers used the first different by adding "d" to

equition eviews 9. The results of the auto-correlation test with the first different are as follows:

**Table 2: Breusch-Godfrey Serial Correlation LM Test:** 

F-statistic	1.130288	Prob. F(20,61)	0.3450
Obs*R-squared	23.25313	Prob. Chi-Square(20)	0.2765

By looking at Chi-Square (2) obtained the value of 0.2765> 0,05 it can be concluded that this model does not have autocorrelation.

# The Results of The Classical Assumption Test (Heteroskedasitas)

The result of heteroscedasticity test using Heteroskedasticity Test: White is as follows:

Table 3: Heteroskedasticity Test: White

F-statistic	2.278894	Prob. F(4,81)	0.0678
Obs*R-squared	8.699267	Prob. Chi-Square(4)	0.0691
Scaled explained SS	11.46574	Prob. Chi-Square(4)	0.0218

By looking at Obs\*R-squared 8.699267 with Prob. Chi-Square 0.0691> 0.05 then means a homoskedastic model with a 5% significance level, in other words, the estimated model does not contain heteroscedasticity.

# Interpretation of Coefficient of Determination, Regression Coefficient and F Test

The coefficient of determination is used to measure how far the ability of the model in explaining the variation of the dependent variable. The results of the data if using tools Eviews 9 as follows

**Table 4: Interpretation Data** 

Dependent Variable: D(ROA\_\_)

Method: Least Squares

Date: 06/11/20 Time: 21:08

Sample (adjusted): 2011M02 2020M02 Included observations: 86 after adjustments

Variable	Coefficient	Std. I	Error	t-Statistic	Prob.
D(CAR) D(FDR) D(NPF) D(BOPO)	0.024127 -0.003907 -0.060418 -0.067477	0.006 0.003 0.019 0.003	3441 9081	3.485547 -1.135496 -3.166486 -22.26883	0.0008 0.2595 0.0022 0.0000
C	7.22E-05	0.007	7009	0.010294	0.9918
R-squared Adjusted R-squa S.E. of regressio Sum squared res Log likelihood F-statistic Prob(F-statistic)	on 0.86 on 0.06 sid 0.33 115 137	71604 55263 54718 59267 59899 54651 50000	S.D. depe Akaike ir Schwarz Hannan-O	pendent var endent var afo criterion criterion Quinn criter. Vatson stat	-0.004767 0.176313 -2.581160 -2.438465 -2.523732 2.677593

Based on the results of this study shows that the value of Adjusted R squared coefficient of 0.865263 or 86.5%. This shows that 86.5% ROA is influenced by independent variables = CAR, FDR, NPF,

BOPO. While the rest of 13.5% is explained by other variables that are not in this study.

### **Regression Coefficient (t-Test)**

This study uses multiple regression analysis. This analysis is used to measure the strength of two or more variables and also shows the direction of the relationship between the dependent variable with the independent variable. Based on the t-test, the decision is as follows:

### Effect of CAR on ROA Sharia Banks in Indonesia 2011-2020

The first hypothesis states that the CAR has a positive effect on ROA. Based on the results of data calculations can be obtained results of significance value 0.0008<0.05. this means that H<sub>0</sub> is rejected and H<sub>1</sub> is accepted. This means CAR has a significant effect on ROA. CAR can generally be understood as the ratio of capital adequacy used to finance banking operations in obtaining profits and as a protector when there are losses from banking operations. The minimum standard in capital adequacy for sharia banks is 8 percent (Otoritas Jasa Keuangan Republik Indonesia, 2014b).

A lot of capital will affect the level of public confidence in bank performance (Sinungan, 2000). CAR is an indicator of a bank's ability to cover a decline in assets as a result of bank losses caused by risky assets with sufficient capital they have (Dendawijaya, 2005). CAR is a ratio that shows the ability of banks to provide funds for business development needs and protect against the risk of loss caused

by operational activities. The higher the CAR, the better the condition of the bank(Greuning & Iqbal, 2008) and (Hasan & Bashir, 2005).

The higher the CAR, the higher the capital adequacy to bear the risk of problem financing, so that the bank's performance is getting better, and can increase public confidence in the sharia bank concerned. So it can be concluded that CAR has a positive effect on ROA. This is consistent with the results of research conducted by (Setyarini, 2020) dan (Charistiano et al., 2014)

#### Effect of FDR on ROA Sharia Banks in Indonesia 2011-2020

The second hypothesis states that FDR has a positive effect on ROA. Based on the results of data calculations, the significance value of 0.2595> 0.05 can be obtained which means that H<sub>0</sub> is accepted and H<sub>2</sub> is rejected, meaning that FDR has no significant effect on ROA. Sharia banks function as intermediary institutions that channel financing to customers who need additional funds to expand their businesses. The higher the FDR, the profit of sharia banks is also increasing, with a note that the bank is able to channel financing properly and optimally. And vice versa if the bank is not able to provide financing properly then FDR has no effect on ROA.

FDR has no effect on ROA which can be caused by the financing channeled by sharia banks not yet running effectively and optimally, because there are many problematic and non-current financing. This is caused by the management of sharia banks that are not implementing the principle of prudence in assessing prospective

financing customers. This is consistent with the results of research conducted by (Widyaningrum & Septiarini, 2015), (Widyaningrum & Septiarini, 2015) and (Sabir et al., 2012)menyatakan yang menyatakan FDR tidak berpengaruh terhadap ROA.

### Effect of NPF on ROA Sharia Banks in Indonesia 2011-2020

The third hypothesis states that NPF has a negative effect on ROA. Based on the results of data calculations can be obtained results of significance value 0.0022 < 0.05 which means that  $H_0$  rejected and  $H_3$  is accepted, it means NPF has a significant influence on ROA.

NPF is a ratio of problematic financing, the more NPF shows that the quality of sharia bank financing is getting worse. NPF is one of the biggest problems for banks because it is able to cause banks to fail. (Greuning & Iqbal, 2008). Financing management is very much needed by banks, because the financing function is the biggest contributor to income for sharia banks. The increase in NPF will result in loss of opportunities for banks to obtain income from financing provided, so that it will affect profitability. This shows that NPF has a negative effect on ROA. This is consistent with the results of research conducted by (Rizal, 2016) and (Rofiqo & Afrianti, 2019) which states that NPF has a significant negative effect on ROA.

### Effect of BOPO on ROA Sharia Banks in Indonesia 2011-2020

The fourth hypothesis states that the BOPO has a negative effect on ROA. Based on the results of data calculations can be obtained results of significance value 0.0000<0.05 which means that

 $H_0$  is rejected and  $H_4$  is accepted, it means BOPO has a significant influence on ROA.

BOPO is able to reflect the efficiency of bank management in financing so operational costs are lower. Funding management is very much needed by banks, given the financing function as the biggest contributor to income for sharia banks. BOPO is a ratio used to measure the ability of bank management in controlling operational costs (Charistiano et al., 2014). BOPO is used to measure the level of efficiency and the ability of banks to carry out operational activities in obtaining profits. The operational risk is the risk most often faced by sharia banking (Greuning & Iqbal, 2008). The greater the bank's BOPO, the bank's performance and operations will decrease due to the amount of burden received and in the end it will reduce the level of profitability. This shows that BOPO has a negative effect on ROA, this is consistent with the results of research conducted by (Rizal, 2018), (Widyaningrum & Septiarini, 2015), (Setyarini, 2020) and (Revida & Septiarini, 2017).

## **Regression Coefficient (F-Test)**

Hypothesis testing of the F-test is used to see whether all the independent variables intended in the regression model have a simultaneous influence on the dependent variable. Or it functions to see if the variable matches the model. From the results of the regression analysis it can be seen that simultaneously the CAR, FDR, NPF and BOPO variables have a significant effect on the ROA variable. This can be proven with a significance value of 0,000.

Because the significance value is much smaller than 0.05, it can be concluded that CAR, FDR, NPF and BOPO simultaneously have a significant effect on ROA.

Because ROA is influenced by all or part of financial ratios (Greuning & Iqbal, 2008), including CAR, FDR, NPF and BOPO (M, Tarawneh, 2006). This is in accordance with the Financial Services Authority Regulation Number 8 / POJK.03 / 2014 concerning Assessment of the Health Level of Sharia Commercial Banks and Sharia Business Units (Otoritas Jasa Keuangan Republik Indonesia, 2014a) and Financial Services Authority Circular Letter Number 10 / SEOJK.03 / 2014 About Rating of Soundness of Sharia Commercial Banks and Sharia Business Units (Otoritas Jasa Keuangan Republik Indonesia, 2014b). and the results of previous studies conducted by (Rizal, 2016) Rizal and (Rofiqo & Afrianti, 2019).

#### CONCLUSION

The analysis shows that the CAR, NPF, BOPO variables significantly influence ROA of Sharia Banks in Indonesia for the period of 2011-2020, but FDR has no significant effect on ROA of Sharia Commercial Banks in Indonesia 2011-2020. The predictive ability of 4 independent variables (CAR, FDR, NPF and BOPO) to the dependent variable (ROA) is 86.5%, while 13.5% is influenced by other variables not mentioned in this study.

This shows that CAR is very important to finance banking operations in obtaining profits and as a protector when losses occur.

NPF and BOPO are the most dangerous risks and risks that are often faced by banks, so these risks must be anticipated well. if the NPF and BOPO of a bank increases, the performance and operational of the bank will decrease due to the amount of burden received.

So if an sharia bank wants to increase profitability then what needs to be done is to ensure adequate capital and provide appropriate financing, so that there is no problematic financing and reduce operating expenses. good financial ratio management will increase bank profitability. the hope is that Indonesian sharia banks can advance.

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