

# The Effect of CAR and FDR on ROA with NPF as Moderating Variables in Islamic Commercial Banks

Agus Ismaya Hasanudin<sup>1</sup>, Fuji Tarwiyah<sup>2</sup>, Iis Ismawati<sup>3</sup>

<sup>1,2,3</sup> (Department of Accounting, Sultan Ageng Tirtayasa University, Indonesia)

**ABSTRACT:** This study aims to determine the effect of CAR and FDR on ROA with NPF as a moderating variable in Islamic commercial banks. The dependent variable in this study is ROA. The population in this study is Islamic Commercial Banks in Indonesia registered with the Financial Services Authority (OJK) from 2016-to 2020. This study used the purposive sampling method for sampling. Based on certain criteria 14 Islamic Commercial Banks in Indonesia. The analysis technique used in this research is multiple linear regressions and moderated regression analysis. The analysis was used to test the research hypotheses using the SPSS 25 program. The results of this study indicate that CAR has a significant positive effect on ROA, FDR has no significant effect on ROA, NPF moderates a significantly positive relationship between CAR and ROA, and NPF moderates a significant negative on the relationship between CAR and ROA.

**Keywords** – ROA, CAR, FDR, NPF

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## 1. INTRODUCTION

The business efficiency of a company can be seen from the level of profitability as a reference to measure the amount of profit earned. Profitability is an important aspect because profitability can reflect the bank's achievements in carrying out its operations in one period (M. Yusuf and Salamah, 2017: 42). The higher the profitability value, the more optimal a bank is in carrying out its assets and an indicator of the bank's success in competing in the financial sector (Yusuf & Surjaatmaja, 2018: 127). In this study, the profitability measurement used is ROA (Return On Assets) because it can take into account the capacity of bank management in managing assets owned to generate profits. The higher the ROA of a bank, the higher the level of profit achieved by the bank and the better (Fauzul Iman, 2017: 6).

In 2020, a phenomenon occurred in the ROA of Islamic commercial banks in Indonesia, namely, based on the 2020 Islamic banking statistics accessed from [ojk.go.id](http://ojk.go.id). CAR recorded an increase to 21.64 compared to 2019 which was 20.59. FDR was recorded to have fallen to 76.36 compared to 2019 which was 77.91. ROA was recorded to have fallen to 1.40 compared to 2019 which was 1.73. Then the NPF was also recorded to fall to 3.13 compared to 2019, which was 3.23. This is not by the theory put forward by Ni Luh Ayu Lestari (2019: 153), which states that banks with high capital tend to show a high level of profitability.

In 2020 the capital adequacy ratio of Islamic banks has increased, this happens because more and more Indonesian people trust Islamic banks. The capital adequacy ratio in a bank that is maintained will gain public trust because the bank can manage its funds effectively so that people will feel safe depositing their funds in the bank (Indryawati and Handayani, 2017: 13). However, in 2020 ROA recorded a decline which was allegedly caused by a decrease in the financing to deposit ratio (FDR), so that profitability decreased.

Return on assets (ROA) can be influenced by several things, such as Capital Adequacy Ratio (CAR), Financing to Deposit Ratio (FDR), and Non-Performing Financing (NPF). CAR is a ratio to determine the number of risky assets of a bank. Risk-weighted assets (RWA) of 8% need to be maintained as a form of obligation to provide a minimum bank capital. The effort to provide capital is because in adding activities that require assets, additional capital is needed (Ike Dwi Astuti and Nur Kabib, 2021: 1054). The results of research conducted by Darmawati Muchtar et al. (2021), Ida Bagus Raka Suardan et al. (2018), and Novan Wahyu Hidayat et al. (2021), CAR has a positive effect on ROA. Research conducted by M. Yusuf and Surjaatmadja (2018), Fendy Cuandra, Iwan Setiawan (2017), and Fauzul Iman (2017), shows that CAR has a positive and significant effect on ROA. However, according to another study conducted by Taufikur Rahman & Aprih Santoso (2020), CAR has a negative and significant effect on ROA. Meanwhile, according to Rofiul Wahyudi (2020), it shows that CAR does not affect ROA.

Another ratio that affects ROA is the Financing to Deposit Ratio (FDR) according to Pravasanti (2018: 150), which is a ratio used as an indicator of a bank's ability to distribute its funds to parties who need capital. The high level of bank assets leads to higher FDR so banking vulnerabilities are higher. FDR as a reflection of the bank's ability to pay withdrawals from funds by depositors to creditors provided as a source of liquidity, or with the meaning of reflecting financing to customers can offset the bank's obligations by fulfilling depositors who want to take back their money where the bank uses it as a loan. The results of research conducted by Nur Fitriani (2018), and Novan Wahyu Hidayat et al. (2021), showed that FDR had a positive effect on ROA. Meanwhile, according to M. Yusuf and Surjaatmadja (2018), FDR has a positive and significant effect on ROA. According to research conducted by M. Yusuf Wibisono (2017), FDR has a negative and significant effect on ROA. However, the results of another study conducted by Fauzul Iman (2017), and Rofiul Wahyudi (2020), showed that FDR did not affect ROA.

The Non-Performing Financing (NPF) ratio is a reflection of non-performing banking financing. NPF has an impact on bank profitability. A high NPF level makes financing low. When the level of financing is low, it results in low profitability (Ike and Nur Kabib, 2021: 4). According to M. Yusuf and Surachman (2018: 128), NPF is a credit or non-performing financing where the debtor cannot fulfill the payment of arrears on the loan within the period agreed upon in the agreement. The results of the research of Ike and Nur Kabib (2021), and Novan Wahyu Hidayat et al. (2021), showed that NPF can moderate the positive relationship between CAR and ROA. However, according to Darmawati Muchtar et al. (2021), NPF has a negative moderating effect on the relationship between CAR and ROA. Meanwhile, according to M. Yusuf and Surjaatmadja (2018), and Nur Fitriani (2018), NPF cannot moderate the relationship between CAR and ROA.

The results of research conducted by Nur Fitriani (2018), and Novan Wahyu Hidayat et al. (2021), showed that NPF can moderate the positive relationship between FDR and ROA. According to Ike and Nur Kabib (2021), NPF has a significant negative effect (moderately negative) on the relationship between FDR and ROA. Meanwhile, according to M. Yusuf and Surjaatmadja (2018), and Fauzul Iman (2017), the NPF was unable to moderate the relationship between FDR and ROA.

Many studies on return on assets (ROA) have been carried out, but there are still inconsistencies in the results of previous studies regarding the factors that affect the return on assets (ROA).

## 2. LITERATURE REVIEW AND HYPOTHESIS

### 2.1 Commercial Loan Theory

Commercial Loan Theory emphasizes that bank liquidity will be guaranteed if earning assets are composed of short-term loans that are easy to disburse during normal business conditions. More specifically, this theory states that banks will only provide short-term loans that are very easy to disburse/liquid ("Short Term, Self Liquidating") through repayments/installments on these loans as a source of liquidity. Repayment for this credit is through cash turnover from working capital that has been used through this credit. (Kurotamunobaraomi et al; 2017: 35).

The substance of commercial loan theory in this study is that banks provide financing to the public with an agreed profit-sharing agreement. This is the function of Islamic banking as an intermediary institution that collects funds from the public and distributes them back in the form of financing facilities which are the main

activities of banks to earn profits. Commercial loan theory explains the relationship between liquidity risk and bank profitability.

If the bank can channel third-party funds in the form of short-term loans, the bank will remain liquid and the third-party funds that have been distributed can be disbursed under normal circumstances, assuming the debtor can fulfill his obligations on time, to increase company profits. Commercial loan theory also explains the relationship between credit risk and bank profitability. The greater the credit risk experienced by the company, the possibility of credit that has been disbursed to be returned will be small and can affect the opportunity to get maximum profit. So that the bank will remain liquid if the non-performing credit experienced by the bank is low, and the possibility of the bank getting the maximum profit will be large.

## **2.2 Impact of CAR on ROA**

Bank capital is the driving force for bank business activities, so the size of the capital greatly affects the bank's ability to carry out its operations. Commercial Loan Theory emphasizes that bank liquidity will be guaranteed if earning assets are composed of short-term loans that are easily disbursed during normal business conditions through repayment/installments on these loans as a source of liquidity. Repayment for this credit is through cash turnover from working capital that has been used through this credit. (Kurotamunobaraomi et al; 2017: 35). To carry out fund distribution activities, of course, Islamic banks need capital so that these activities can be carried out. CAR (Capital Adequacy Ratio) is a ratio used to assess the level of capital adequacy of a bank. Banks that have high capital tend to show a high level of profitability (ROA) (Ni Luh Ayu Lestari, 2019: 153). CAR reflects the company's capital, the higher the CAR, the greater the opportunity for the bank to generate profits because, with large capital, bank management is very flexible in placing their funds into profitable investment activities (Ni Luh Ayu Lestari, 2019: 153). This is reinforced by the results of research by Ida Bagus Raka Suardan et al. (2018), and Novan Wahyu Hidayat et al. (2021), the results of this study indicate that CAR has a significant positive effect on ROA.

H1: CAR has a significant positive effect on ROA

## **2.3 Impact of FDR on ROA**

Commercial loan theory in this study is that banks provide financing to the public with an agreed profit-sharing agreement. This is the function of Islamic banking as an intermediary institution that collects funds from the public and distributes them back in the form of financing facilities which are the main activities of banks to earn profits. The financing to Deposit Ratio is a ratio used as an indicator of a bank's ability to distribute its funds to parties who need capital. If the bank can channel third-party funds in the form of short-term loans, the bank will remain liquid and the third-party funds that have been distributed can be disbursed under normal circumstances, assuming the debtor can fulfill his obligations on time, to increase company profits. This is reinforced by the results of research by Nur Fitriani (2018), Novan Wahyu Hidayat et al. (2021), and Yusuf and Surjaatmadja (2018) which show that FDR has a significant positive effect on ROA.

H2: FDR has a significant positive effect on ROA

## **2.4 Impact of CAR on ROA with NPF as a Moderating Variable**

NPF is a ratio that reflects credit risk in Islamic banks. The higher the NPF, the higher the risk of non-performing financing borne by a bank. A high level of NPF will have an impact on the formation of large loss reserves (PPAP), operating profits will decrease, and the formation of additional capital will be low (Wulandari Kuswahariani et al; 2020: 27). Based on the theory, NPF reflects the risk of financing, the higher this ratio indicates the quality of sharia bank financing is getting worse. So with a lot of non-performing financing, of course, it can result in lost opportunities to get income from the financing provided affecting income and profits harm ROA. This is reinforced by the results of research by Darmawati Muchtar et al. (2021), namely NPF has a negative moderating effect on the relationship between CAR and ROA.

H3: NPF moderates the significant negative relationship between CAR and ROA

## **2.5 The Impact of FDR on ROA with NPF as a Moderating Variable**

The Non-Performing Financing Ratio (NPF) is a reflection of banking non-performing financing. A high NPF level makes financing low. When the level of financing is low, it results in low profitability (Ike and Nur Kabib, 2021:

4). Based on the theory, NPF reflects the risk of financing, the higher this ratio indicates the quality of Islamic bank financing is getting worse. So with a lot of non-performing financing, of course, it can cause a loss of opportunity to earn income from the financing provided to affect income and have a negative impact on ROA. (Kurotamunobaraomi et al; 2017: 35), Commercial loan theory explains the relationship between credit risk and bank profitability. The greater the credit risk experienced by the company, the possibility of credit that has been disbursed to be returned will be small, and can affect the opportunity to get maximum profit. This is reinforced by the results of research by Nur Fitriani (2018), and Ike and Nur Kabib (2021), which show that NPF can moderate the negative or weaken the relationship between FDR and ROA.

H4: NPF moderates the significant negative relationship between FDR and ROA

From all the descriptions above, the model in this study for the Impact of CAR, and FDR on ROA with NPF as moderating variables is as follows:

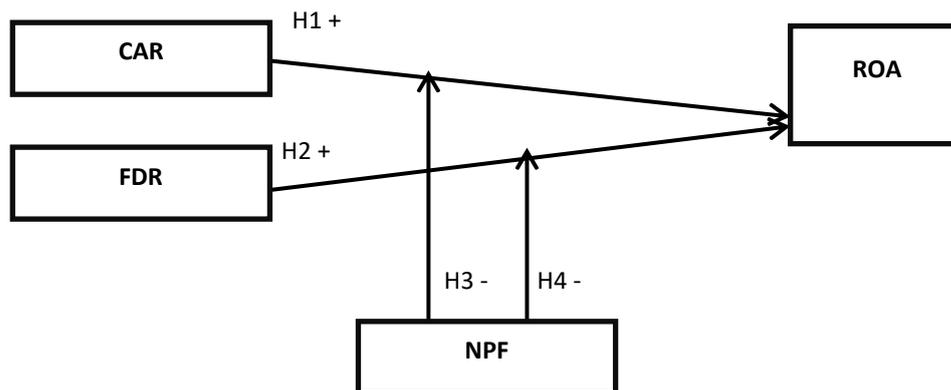


Fig 2.1 Conceptual framework

### 3. RESEARCH METHOD

#### 3.1 Method

This research is quantitative. The object of this research is CAR, FDR, NPF, and ROA at Islamic Commercial Banks registered with the Financial Services Authority (OJK) for the 2016 - 2020 period. The data used in this study is secondary data taken from annual financial reports obtained from the respective websites. – each related Islamic commercial bank. The populations in this study were all Islamic commercial banks registered with the Financial Services Authority (OJK) from 2016 to 2020. The method used to determine the sample was the purposive sampling method and obtained 14 Islamic commercial banks as samples in this study.

The research data that has been collected will be analyzed using several stages of testing, namely descriptive statistical analysis, and classical assumption test to test the feasibility of the regression model used. To test the hypothesis, this study uses multiple linear regression analysis and moderated regression analysis. Data processing in this study using SPSS (Statistical Product and Service Solutions) Version 25.

#### 3.2 Research Variable

Variables the dependent variable, Profitability in this study was measured using Return On Assets (ROA). The ROA formula is as follows:

$$ROA = \frac{\text{Earning Before Tax}}{\text{Total Assets}} \times 100\%$$

The independent variable in this study uses two variables, namely CAR and FDR.

The CAR formula is as follows:

$$CAR = \frac{\text{Bank Capital}}{\text{ATMR}} \times 100\%$$

The FDR formula is as follows:

$$FDR = \frac{\text{total funds given}}{\text{Total third party funds}} \times 100\%$$

The moderating variable in this study uses Non-Performing Financing (NPF). The NPF formula is as follows:

$$NPF = \frac{\text{problem financing}}{\text{total financing}} \times 100\%$$

## 4. RESEARCH RESULTS

### 4.1 Description of Variables

The population of this study is Islamic general banking companies that have been registered with the Financial Services Authority (OJK) from 2016 to 2020, totaling 14 banks. The number of companies that are sampled is obtained by 14 banks with an observation period of 5 years, so  $14 \times 5 = 70$  observational data. There are 11 outlier data, so  $70 - 11 = 59$  the number of sample data studied in this study. So the company data that is processed for research is a sample of 59.

### 4.2 Descriptive Statistical Analysis

According to Ghozali (2018: 19), descriptive statistical analysis is a statistic that provides an overview or description of data as seen from the average, standard deviation, maximum, and minimum. The variables used include ROA, CAR, FDR, and NPF. The following is a table of descriptive statistical test results:

**Table 1. Descriptive Statistical Analysis**

	N	Minimum	Maximum	Mean	Std. Deviation
<i>Return On Assets (Y)</i>	59	0,02	48,02	3,1095	7,26451
<i>Capital Adequacy Ratio (X1)</i>	59	12,34	49,44	23,2012	8,68797
<i>Financing to Deposit Ratio (X2)</i>	59	63,94	196,73	88,0547	21,44883
<i>Non Performing Financing (Z)</i>	59	0,04	7,49	2,5695	1,71941

Source: Data processed by researchers with SPSS 25 (2022)

### 4.3 Classical Assumption Test

**Table 2. Classical Assumption Test**

Variabel	Monte Carlo Sig. (2-tailed)	Tolerance	VIF	Sig	Durbin Watson
CAR (X1)	0,358	0,775	1,290	0,187	1,824
FDR (X2)		0,896	1,116	0,074	
NPF (Z)		0,855	1,169	0,717	
N = 59					

Source: Data processed by researchers with SPSS 25 (2022)

Based on table 2, the results of the residual normality test show the Monte Carlo Sig value of 0.358 which is greater than alpha ( $\alpha = 0.05$ ), which means that the residual data in this study is normally distributed. The results of the multicollinearity test in table 3 show that the CAR, FDR, and ROA variables have a tolerance value  $> 0.10$  and a variance inflation factor (VIF)  $< 10$ , this indicates that there is no multicollinearity in the regression model. The heteroscedasticity test shows that the variables CAR, FDR, and ROA have a significance value above 0.05, which means that there is no heteroscedasticity. Durbin Watson resulting from the autocorrelation test is

1.824. Durbin Watson's table obtained a lower limit value (dl) of 1.5099 and an upper limit value (du) of 1.6497 at a significance level of 0.05. Where  $du < dw < 4 - du$  is  $1.6497 < 1.824 < 4 - 1.6497$  (2.3503). So it can be concluded that there is no autocorrelation.

#### 4.4 Multiple Linear Regression Analysis

##### 4.4.1 Coefficient of Determination Test Results (R Square)

**Table 3. Coefficient of Determination Test Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,366 <sup>a</sup>	0,134	0,104	0,69878

Source: Data processed by researchers with SPSS 25 (2022)

The output in table 3 shows the *adjusted R Square* is 0.104, this means 10.4% of the ROA variable which can be explained by CAR and FDR. While the rest ( $100\% - 10.4\% = 89.6\%$ ) is explained by other reasons.

##### 4.4.2 F Test Results

**Table 4. F Test Results**

Model	F	Sig
1	4,422	0,016 <sup>b</sup>
Sig * 0,05		

Source: Data processed by researchers with SPSS 25 (2022)

From the output in table 4, the calculated F value is 4.422. It is known that F table is 3.15 ( $k=2, n=59, \alpha=0.05$ ). Because the calculated F value  $>$  F table and the significant value is  $0.016 < 0.05$ , it can be concluded that the independent variables CAR and FDR jointly have a significant effect on the dependent variable (ROA).

##### 4.4.3 T-Test Results

**Table 5. T-Test Results**

Variabel	B	T	Sig
(Constan)	0,409	0,188	0,851
<i>Capital Adequacy Ratio</i> (X1)	1,712	2,941	0,005
<i>Financing to Deposit Ratio</i> (X2)	-1,424	-1,225	0,225
Sig ** 0,05 (5%)			

Source: Data processed by researchers with SPSS 25 (2022)

Based on table 5 shows that the t-count for the CAR variable is 2.941 with a significance value of 0.004 less than  $= 0.05$ . The t-count value is  $2.941 > 1.672$  t table and the significance value is  $0.005 < 0.05$ , it can be concluded that CAR has a significant positive effect on ROA. So H1 says that the *capital adequacy ratio* has a positive effect on *returns on assets* accepted.

The FDR variable has a value of -1.225 with a significance level of 0.225 which is greater than  $= 0.05$ . From the results of the t-test presented in table 4.10, it can be seen that the t-count value is -1.225 and the t-table is 1.672, which means  $t\text{-count} < t\text{-table}$ . These results indicate that FDR has no significant effect on ROA. So H2 says that the *financing to deposit ratio* has a positive effect on *the return on assets* rejected.

#### 4.5 Moderated Regression Analysis (MRA)

##### 4.5.1 MRA Determination Coefficient Test Results (R Square)

**Table 6. MRA Determination Coefficient Test Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,627 <sup>a</sup>	0,393	0,336	0,60071

Source: Data processed by researchers with SPSS 25 (2022)

From table 6 it can be seen that the *adjusted R Square* is 0.336, which is greater than the *adjusted R Square* in table 4.8. This means that the moderating variable in the form of NPF can increase the value of the *adjusted R Square* in table 3 which shows the *adjusted R Square* of 0.104.

#### 4.5.2 F MRA Test Results

**Table 7. F MRA Test Results**

Model	F	Sig
1	6,877	0,000 <sup>b</sup>
Sig * 0,05		

Source: Data processed by researchers with SPSS 25 (2022)

From the output in table 7, the calculated F value is 6.877. It is known that F table is 3.15 (k=2, n=59, =0.05). Because the calculated F value > F table and the significant value is 0.000 < 0.05, it can be concluded that the independent variables CAR and FDR and the moderating variable (NPF) together affect the dependent variable (ROA).

#### 4.5.3 MRA T Test Results

**Table 8. MRA Statistical Test Results**

Variabel	B	T	Sig
(Constan)	-0,869	-0,319	0,715
CAR x NPF	4,653	2,770	0,008
FDR x NPF	-4,757	-2,534	0,014
Sig ** 0,05 (5%)			

The results of the MRA test as shown in table 8 show that the moderating variable CARxNPF has a t-count of 2.770 with a significance level of 0.008. Because the significance level is smaller than = 0.05 and the t-count value is 2.770 which is greater than the t-table, which is 1.672. This means that the NPF variable can moderate significantly positive CAR on ROA. So H3 says that non-performing financing moderates the effect of the capital adequacy ratio on returns on assets rejected.

The FDRxNPF variable has a t-count of -2.534 with a significance level of 0.014. Because the level of significance is smaller than = 0.05 and the value of t count -2.534 is smaller than the t table which is 1.672. This means that the NPF variable can moderate the negative FDR on ROA. So H4 which says non-performing financing moderates the effect of financing to deposit ratio on return on assets accepted.

## 4.6 Discussion

### 4.6.1 Effect of CAR on ROA

The results of testing the first hypothesis (H1) indicate that the capital adequacy ratio has a significant positive effect on return on assets, meaning that the first hypothesis is accepted. This can be interpreted that every time there is an increase in CAR or the greater the CAR ratio, the ROA of Islamic commercial banks in Indonesia will increase and vice versa. The results of this study are in line with research conducted by Ida Bagus Raka Suardan et al. (2018), and Novan Wahyu Hidayat et al. (2021), the results of this study indicate that CAR has a significant positive effect on ROA.

### 4.6.2 Effect of FDR on ROA

The results of the second hypothesis test (H2) show that FDR has no significant effect on ROA, meaning that

the second hypothesis is rejected. This shows that the higher the FDR will not increase the ROA of Islamic commercial banks. This is because the FDR in this study shows a value that is quite far below and above the FDR standard from Bank Indonesia. The FDR standard according to Bank Indonesia Regulations is 80%-100%.

While in the study the minimum value of FDR showed 63.94 and the maximum value of 196.73. The results of this study are not following the results of research by Nur Fitriani (2018), Novan Wahyu Hidayat et al. (2021), and Yusuf and Surjaatmadja (2018) which show that FDR has a significant positive effect on ROA. However, this study is in line with Fauzul Iman (2017), and Rofiul Wahyudi (2020), showing that FDR has no significant effect on ROA.

#### **4.6.3 Effect of CAR on ROA with NPF as a Moderating Variable**

The results of the third hypothesis test (H3) show that the NPF variable can moderate significantly positive CAR on ROA, meaning that the third hypothesis is rejected. This means that if the CAR value moderated by the NPF increases, it will increase profitability. This happens because there is an inconsistency in the relationship between capital adequacy and ROA and the average level of NPF of Islamic banks is also still relatively low, namely 2.5695% causing NPF to show a significant positive effect on the relationship between CAR and ROA. The results of this study contradict Darmawati Muchtar et al. (2021), namely NPF has a negative moderating effect on the relationship between CAR and ROA. However, the results of this study are in line with Ike Dwi Astuti and Nur Kabib (2021), who found evidence that NPF was able to moderate a significant positive relationship between CAR and ROA.

#### **4.6.4 Effect of FDR on ROA with NPF as a Moderating Variable**

The results of the fourth hypothesis test (H4) indicate that the NPF variable can moderate the negative FDR on ROA, meaning that the fourth hypothesis is accepted. This means that if the FDR value moderated by the NPF decreases, it will increase profitability. Commercial loan theory explains the relationship between credit risk and bank profitability. The greater the credit risk experienced by the company, the possibility of credit that has been disbursed to be returned will be small and can affect the opportunity to get maximum profit. The results of this study are in line with Nur Fitriani (2018), and Ike and Nur Kabib (2021), which show that NPF can moderate the negative or weaken the relationship between FDR and ROA.

## **5. CONCLUSION**

The purpose of this study is to determine the effect of CAR and FDR on ROA with NPF as a moderating variable in Islamic commercial banks. The dependent variable in this study is ROA. The population in this study is Islamic Commercial Banks in Indonesia registered with the Financial Services Authority (OJK) from 2016-to 2020. Based on the results of statistical tests using SPSS version 25 and from the previous discussion, it shows that CAR has a significant positive effect on ROA. This means that the higher the CAR, the higher the ROA. Second, FDR has no significant effect on ROA, indicating that higher FDR will not affect ROA. Third, NPF moderates significantly positive CAR on ROA. It means that if the CAR value moderated by the NPF increases, it will increase profitability. Fourth, NPF moderates the significant negative of FDR on ROA. That is, if the value of FDR moderated by NPF decreases, it will increase profitability.

The limitation of this research is that for the data to be normally distributed there are some data from the sample companies that are not used because the data is data that deviates too far from other data in a data set (outliers). In addition, this study only uses a sample of Islamic Commercial Banks registered with the Financial Services Authority (OJK) for the 2016 – 2020 periods, so the results are not optimal. So the suggestion for further research is to increase the period of observation and add other variables that have a relationship with ROA, to get better results.

## 6. REFERENCES

### Journal Paper:

- [1] Astuti, I. D., & Kabib, N. (2021). Faktor-faktor yang Mempengaruhi Profitabilitas Bank Syariah Indonesia dan Malaysia. *Jurnal Ilmiah Ekonomi Islam*, 7(2), 1053–1067.
- [2] Cuandra, F., & Setiawan, I. (2020). Factors That Affect the Profitability of Conventional Banks of Batam City. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, vol.4(4), Hal.1105-1110.
- [3] Hidayat, N. W., Wardini, A. K., & Wati, L. N. (2021). Determining the Performance of Sharia Commercial Banks With Moderation of Non Performing Financing Ratio in Indonesia. *Riset*, 3(2), 563–580.
- [4] Indyarwati, E. V., & Handayani, N. (2017). Pengaruh Rasio CAMEL terhadap Kinerja Keuangan Perbankan Syariah. *Jurnal Ilmu Dan Riset Akuntansi*, 6(8), 1–15.
- [5] Kurotamunobaraomi, T., Giami, I. B., & Obari, O. B. (2017). Liquidity and Performance of Nigerian Banks. *Journal of Accounting and Financial Management*, 3(1), 34–46.
- [6] Lestari, N. L. A. (2019). Analisis Dampak Tingkat Kecukupan Modal Dan Tingkat Penyaluran Kredit Terhadap Profitabilitas Dengan Risiko Kredit Sebagai Variabel Pemoderasi Pada Perusahaan Perbankan Yang Terdaftar Di Bursa Efek Indonesia Tahun 2012-2016. *Jurnal Sains, Akuntansi Dan Manajemen*, 1(3), 145–191.
- [7] Muchtar, D., Azhari, F., & Bensaadi, I. (2021). Determinant of sharia banks profitability in Indonesia: The moderating effect of non performing financing. *Jurnal Kajian Manajemen Bisnis*, 10(1), 70.
- [8] Pravasanti, Y. A. (2018). Pengaruh NPF dan FDR Terhadap CAR dan Dampaknya Terhadap ROA Pada Perbankan Syariah Di Indonesia. *Jurnal Ilmiah Ekonomi Islam*, 4(03), 148.
- [9] Rahman, T., & Santoso, A. (2019). Determinants of islamic banking performance: An empirical study in Malaysia (2007 to 2016). *Humanities and Social Sciences Reviews*, 7(6), 380–401.
- [10] Suardana, I. B. R. (2018). Influential Factors towards Return On Assets and Profit Change. *International Journal of Social Sciences and Humanities (IJSSH)*, 2(1), 105–116.
- [11] Wahyudi, R. (2020). Analisis Pengaruh CAR, NPF, FDR, BOPO dan Inflasi terhadap Profitabilitas Perbankan Syariah di Indonesia: Studi Masa Pandemi Covid-19. *At-Taqaddum*, 12(1), 13.
- [12] Wibisono, M. Y., & Wahyuni, S. (2017). Pengaruh CAR, NPF, BOPO, FDR, Terhadap Roa yang Dimediasi Oleh NOM. *Jurnal Bisnis & Manajemen*, 17(1), 41–62.
- [13] Yusuf, M., & Surjaatmadja, S. (2018). Analysis of Financial Performance on Profitability with Non Performace Financing As Variable Moderation. *International Journal of Economics and Financial Issues*, 8(4), 126–132.

### Books:

- [14] Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25*. Semarang: Undip.

### Theses:

- [15] Iman, F. *Pengaruh Capital Adequacy Ratio, Financing Deposit Ratio Dan Operational Efficiency Ratio Terhadap Return On Assets Dengan Non Performing Financing Sebagai Variabel Moderating Pada Bank Umum Syariah Di Indonesia*. UIN Alaudin Makassar, 2017.
- [16] Nur Firiyani, *Pengaruh Capital Adequacy Ratio (CAR), Financing To Deposit Ratio (FDR), Net Operating Margin (NOM) Dan BOPO Terhadap Return on Asset (ROA) Dengan Non Performing Financing (NPF) Sebagai Variabel Moderasi Pada Bank Umum Syariah Di Indonesia*. Institut Agama Islam Negeri Salatiga, 2018.

### INFO

**Corresponding Author:** Fuji Tarwiyah, Department of Accounting, Sultan Ageng Tirtayasa University, Indonesia.

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