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The Influence of FDR, CAR, and NPF on the Profitability of Islamic Commercial Banks for The 2018-2022 Period

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Abstract :

The research was conducted to analyze the effect of FDR, CAR, and NPF on Profitability by measuring Return On Assets (ROA) at Islamic Commercial Banks registered with the Financial Services Authority (OJK). They used quantitative research from the results of collecting quarterly financial report data for the 2018-2022 period at Bank Muamalat Indonesia (BMI), Bank Bukopin Syariah, Bank Mega Syariah, and BCA Syariah. The research data analysis technique used panel data regression analysis with the help of E-Views 10 software with the Chow and Hausman test methods, then the Fixed Effect Model (FEM) test was selected. The testing hypothesis used the partial-t test, simultaneous-F test, and the coefficient of determination test (R2). Hypothesis test results Partially, FDR has a positive and significant effect, while CAR and NPF have a negative and significant effect. The results of the simultaneous-F test explain that FDR, CAR, and NPF simultaneously influence ROA. The coefficient of determination test (R2) results clarify that 80% of FDR, CAR, and NPF variables affect profitability in Islamic commercial banks. The remaining 20% are influenced by variables not included in this study.

Keywords : FDR, CAR, NPF And ROA

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1. Introduction

In general, a bank is an institution that functions as a depositor of funds sourced from customers as a form of savings or savings and then distributed to other customers for use through credit or other transactions. Where the main task of the Bank is as an intermediary institution (intermediary) for debtors who have funds (surplus) to creditors who need funds (deficit) as additional capital to develop a business or make ends meet. Banks are also financial institutions that can help stabilize the country's economy, so the banking system must be managed according to good and measurable operations or regulations (Ilyas, 2019).

In Indonesia, banks are divided into two types: banks with Islamic principles and conventional banks. Islamic Bank is a type of Bank that adheres to an operational system based on Sharia principles.

Because its operational activities are based on Islamic law, which aims to benefit the people of the world and the hereafter by conducting transactions through margin instead of bank interest as is done in conventional (conventional) banks, which are considered burdensome to customers. Thus, the presence of Islamic banks is expected to be a solution in banking. Based on the Bank's function as an intermediary, the profit of the Bank is determined by the ability of the Bank's performance to manage customer deposits (deposits) which are then used as a form of productive asset financing.

Nowadays, the financial system in Islamic Commercial Banks (BUS) in Indonesia experiences escalation every year. This can be seen from the last five years that bank assets have increased. Previously, in 2017, it was valued at Rp. 424 trillion, while at the end of December 2022, it was worth Rp. 2.375 trillion. The increase in assets from Islamic Commercial Banks (BUS) is positive for Islamic financial institutions. Various factors certainly influenced the rise in bank assets in the banking sector and multiple sectors. They are starting to become familiar with the halal industry, which includes fashion, cosmetics, culinary, and halal tourism. Of course, this is inseparable from the Number of Indonesian people who are predominantly Muslim and the lifestyle of the people who are starting to change with the times, so it also influences the increase in Islamic bank assets.

This increase is the main factor accelerating the growth rate of Islamic banking in Indonesia. So Islamic banking begins to reveal its existence as a financial institution that should be reckoned with in economic management. Various financing risks will not be avoided by assessing the potential for the development of Islamic Commercial Banks (BUS) in Indonesia. So, Islamic Commercial Banks (BUS) must improve performance and manage funds even better to minimize bank health problems. The growth of Islamic banking can be seen:

Year	FDR	CAR	NPF	ROA
2018	78,53	20,39	3,25	1,28
2019	77,91	20,59	3,23	1,73
2020	76,36	21,64	3,13	1,40
2021	70,12	25,71	2,59	1,55
2022	75,19	26,28	2,35	2,00

Source : (OJK, 2023)

The table above shows that the growth of Islamic banking can be seen from the value of the Financing Deposit To Ratio (FDR), which fluctuates, as does the Net Performing Financing Ratio (NPF). Meanwhile, the Capital Adequacy Ratio (CAR)

value has increased significantly. As in the 2018 column, the CAR is 20.39%, then it will increase in 2019 to 20.59%, then in 2020 it will increase to 21.64, then in 2021 it will be 25.71%, and in 2022 it will be 26.28%. At the same time, the value of Return On Assets (ROA) fluctuates. The highest ROA figure is in 2022, worth 2.00%, and the lowest in 2018 is 1.28%. So it is necessary to conduct a more in-depth study of ROA because unstable ROA values will affect the bank's existence.

Return On Assets (ROA) is a profitability ratio that can be applied to measure and assess the strength of a bank to gain profit from asset management. ROA is also one of the ratios that can provide an overview of the Bank's total profits in the previous period, which can be a bank parameter in operations in the following period. This is because an increase in Profitability (ROA) shows that the performance of the Bank is very good and effective. Based on the regulations outlined in Bank Indonesia (B.I.) regulation No. 6/9PBI/2007 regarding the standardization of a good ROA ratio at 1.5%, the higher the ROA value, the better the soundness of the Bank because the Bank can increase (Irawan et al., 2019).

The research objective is to measure or see the profitability of Return On Assets (ROA); there are many factors, including liquidity, capital, investment, asset quality, and the Bank's operational system. The analytical tools that can be used to measure ROA are the Financing to Deposit Ratio (FDR), Capital Adequacy Ratio (CAR), and Net Performing Financing (NPF). FDR is one of the ratios that banks can use to measure the ratio of Bankability to pay their short-term obligations when they fall due (Suryanto & Susanti, 2020). Furthermore, CAR is a ratio that can be used as a tool to measure a bank's ability to finance bank activities through the Bank's capital. Meanwhile, NPF is a ratio or measuring instrument used to measure and manage bad (non-performing) loans(Rufaidah et al., 2021).

2. Literature Review

Based on research conducted (Aini Fadillah & Sista Paramita, 2021) with the research title "The Influence of CAR, NPF, FDR, Inflation and BI Rate on the Profitability of Islamic Banking Companies in Indonesia for the 2014-2018 Period. Using a research sample of 14 Islamic Commercial Banks, you are registered with the Financial Services Authority (OJK). The results of the study concluded that the Capital Adequacy Ratio (CAR) positively influences the Profitability (ROA) of Islamic Commercial Banks. Meanwhile, other variables such as NPF, FDR, inflation, and the BI Rate do not affect the Return on Assets (ROA).

Research (Puji Astuti, 2022) entitled "The Influence of CAR, FDR, NPF, and BOPO on Sharia Banking Profitability" to analyze the performance of Islamic Commercial Banks 2018-2021 with seven samples of Islamic banking data listed on the Indonesia Stock Exchange (IDX).). The results of his research explain that CAR has no significant effect on profitability (ROA). FDR has no significant effect on

profitability, and NPF has no significant effect on profitability, while BOPO has a significant effect on profitability (ROA).

Furthermore, the research conducted (Almunawwaroh & Marliana, 2018) entitled "The Influence of CAR, NPF, and FDR on the Profitability of Islamic Banks in Indonesia. The results of the study provide information that the Capital Adequacy Ratio (CAR) and Non-PerformingNon-Performing Financing (NPF) have a negative and significant influence on Profitability (ROA). At the same time, the Financing To Deposit Ratio (FDR) provides information that there is a positive and significant influence on Profitability (ROA).

Research conducted (Adzani et al., 2018) with the title "Factors Affecting Profitability (Empirical Studies on Commercial Banks listed on the IDX, Period 2010 - 2017) to analyze the effect of CAR, BOPO, NIM, and LDR on ROA commercial banks registered on the Indonesia Stock Exchange (IDX) for the 2010-2017 period. The study results illustrate that the CAR and BOPO variables negatively and significantly affect ROA. Meanwhile, the NIM and LDR variables positively and significantly affect ROA.

Meanwhile, the research conducted (Daffa Alaamsah et al., 2021) with the research title "The Influence of NPF, CAR, and FDR on the Profitability of Islamic Commercial Banks in Indonesia" used 12 research samples. Based on the results of the tests conducted, it was concluded that NPF harms profitability, CAR positively affects profitability, and FDR has no effect on profitability. Meanwhile, NPF, CAR, and FDR simultaneously influence Profitability in Islamic Commercial Banks (BUS).

A. Financing to Deposit Ratio (FDR)

The Financing to Deposit Ratio (FDR) is an instrument used to assess payments that are bank obligations that are due. This ratio is a measuring tool used to see a bank's ability to revoke funds carried out by Third Party Funds (DPK) of Islamic banks as a source of liquidity.(Ferawati et al., 2022). The more funds from bank financing, the higher the income that can be obtained by the Bank (Suryanto & Susanti, 2020). With increased revenue, the profit will also increase. In other words, the amount of bank financing provided to customers can offset the responsibility of the Bank in paying depositors who wish to withdraw their money back, which the Bank has used in the form of financing (Wibisono & Wahyuni, 2017). Based on regulations from Bank Indonesia (B.I.) No 13/24/DPNP in measuring FDR are:

$$FDR = \frac{Total\ Financing}{Third - Party\ Funds}\ x\ 100$$

B. Capital Adequacy Ratio (CAR)

The Capital Adequacy Ratio (CAR) is a performance measurement tool/ratio in banking used to estimate the initial amount of funds deposited by a bank to support assets in bank operations that generate risk(Wirnawati & Diyani, 2019). Initial funds are the most important factor in a bank to anticipate the risk of loss and business development as one of the Bank's first steps to build trust and attract

customer interest so that the Bank can obtain many customers in partnerships. According to Bank Indonesia (B.I.) regulations, a good CAR in a bank is at least 8%. The higher the CAR number, the better the strength of the Bank to bear any risks from productive assets(Hanafia & Karim, 2020). Meanwhile, a low CAR ratio can hinder funding and bank credit financing to investors and the public(Wulandari & Rofiuddin, 2022). The CAR measurement systematics are:

$$CAR = \frac{Own\ Capital}{Total\ Assets}\ x\ 100$$

C. Net Performing Financing (NPF)

Net Performing financing (NPF) is one of the measuring tools or instruments used in Islamic banking to analyze and measure the ratio of banking performance to customers as partners in financing problem financing. Where the customer is unable to pay the credit and margin returns that have been agreed between the two parties in the form of an agreement, NPF is another word for financing risk or credit risk, measuring not only the risk of default from customers but also investment risk because, in some Islamic banking financing product transactions, some use investment mechanisms such as *musyarakah* and *mudharabah* contracts(Djuwita & Muhammad, 2016).

The increase in NPF's high numbers will cause the health potential of troubled banks. Therefore, the banking sector must maintain NPF financing in a stable position. Based on Bank Indonesia (B.I.) regulations, the stability level of the NPF is less than 5% of the total funding. More than that, the financing in the Bank is unhealthy. The method for measuring NPF in a bank refers to B.I. rule no. 6/23/DPNP are:

$$NPF = \frac{Number\ of\ Troubled\ Financing}{Financing\ Amount}\ x\ 100$$

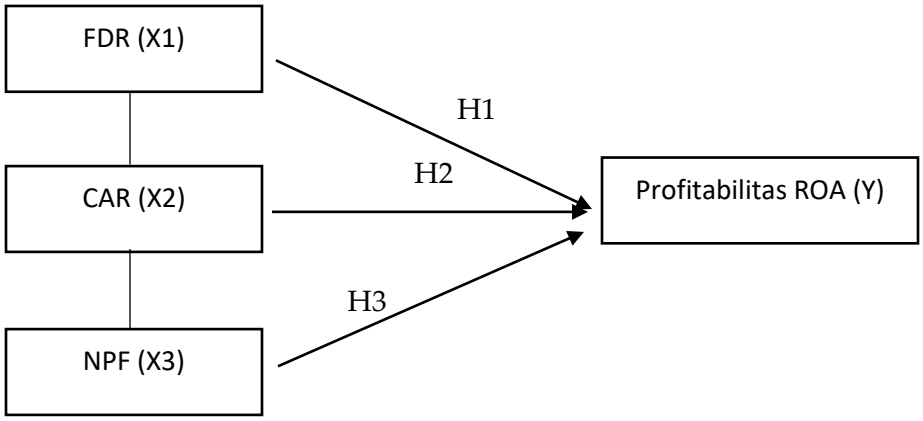
D. Profitability

According to Kasmir (in Atifah & Diana, 2022), profitability is used to measure a company's success while carrying out operations to gain profit. Profitability is one of the ratios used to assess the acquisition of company profits, as well as an instrument for measuring the effectiveness of a company. So the higher the acquisition in a bank, the better the management in the company.

In general, Return Of Assets (ROA) is an instrument for measuring performance ratios in a banking company because ROA is used to measure the success of banking achievements in obtaining profits from managing asset funds in a bank.(Syakhrun et al., 2019). The formula for estimating the Return Of Assets (ROA) is as follows:

$$ROA = \frac{Laba\ Before\ Tax}{Total\ Assets}\ x\ 100$$

Theoretical Framework



Information :

H1 = It is suspected that there is an effect of FDR (X1) on profitability ROA (Y)

H2 = It is supposed that there is an influence of CAR (X2) on Profitability ROA (Y)

H3 = It is suspected that there is an influence of NPF (X3) on Profitability ROA (Y)

3. Methods

A. Type of Research

The research method applied in this paper uses a quantitative research type. At the same time, quantitative research is research that can obtain new facts by utilizing numerical data from statistical and computational testing procedures(Mertha Jaya, 2020).

B. Population and Sampling

The research was conducted by taking the population and samples by utilizing the documentation data of four Islamic banks registered with the Financial Services Authority (OJK) regarding the model used, namely the quarterly financial reports for the period 2018-2022 from Bank Muamalat Indonesia (BMI), Bank Mega Syariah, Bank Bukopin Syariah, and BCA Syariah. Then, the report is processed with 80 sample observations (5 Years x 4 Quarterly x 4 Banks = 80).

C. Data Collection

Data is collected by the second data collection method (secondary data). Secondary data was obtained through the official website of Islamic banks, which were used as samples in the study. The technique used in collecting samples was using a purposive sampling technique, where purposive sampling is one of the non-random analysis techniques by considering certain things that are considered to have a relationship with the previous population.

1) Data Analysis Techniques

a. Panel Data Regression

The method of analysis is through the use of panel regression analysis techniques. Some of the advantages of using panel data are:

1) Panel data (longitudinal) is a combination of time series data and cross-section, which can provide data with various variants, and this can provide a degree of freedom.
2) Combining time series data with a cross-section can minimize the disturbance when missing variables exist.

Widarjono stated The use of longitudinal could obtain a variety of intercepts and slopes for various companies. For this reason, when estimating from the equation is highly related to the intercept assumptions, the back variables, and the coefficients. Several things can happen, including:

1) The assumptions are that the Slope and Intercept are constant over time, and the firm (individual) and the intercept and slope have different explanations for the interfering variables.

2) The assumption is that the intercept differs between individuals while the slope remains unchanged.

3) The assumption is that the intercept has a disparity between time and between individuals, but the slope remains the same.

4) The assumption is that slope and intercept have interindividual differences.

5) It is assumed that the intercept and slope have differences between time and between individuals.

However, several ways can be used to estimate data using a panel data regression model, namely the first approach, Common Effect Model (CEM). Second, the Fixed Effect Model (FEM), and third, Random Effect Model(Widarjono, 2016).

a) CEM assumes that the intercept and slope of cross-section and time series data are the same as using PLS in the brackets. The panel data regression through the PLS approach are:

$$Y_{it} = \beta_1 + \beta_2 + \beta_3 X_{3it} + \ldots. \beta_n X_{nit} + \mu_{it}$$

b) FEM assumes that if there is a problem, the slope coefficient is stable while the intercept is unstable in the unit cross-section and the time series. So that the method that can be used in estimating FEM is by adding a dummy variable to explain the different intercepts. The panel regression of the FEM model is:

$$Y_{it} = \alpha_1 + \alpha_2 + D_2 X_{3it} + \ldots \alpha_n + D_n + \beta_2 X_{2it} + \ldots . + \mu_{it}$$

c) According to Pangestika (in Asyiah, 2018), there are two Random Effect Model (REM) methods, namely LSDV and GLS. However, the GLS variable was used in this study because it did not add a dummy variable. After all, the estimation in this study was carried out directly to see the efficiency of the Least Square stage in entering error cross-section data and time series data. The description of REM is as follows:

$$Y_{it} = \beta_1 + \beta_2 + X_{2it} + \ldots . . \beta_n X_{nit} + \epsilon_{it} + \mu it$$

From the explanation of the three-panel model techniques above, which test best estimates longitudinal regression (panel data)? First, the F-statistic test can be carried out; this is done to decide between the OLS method and not using dummy variables or the Fixed Effect Model (FEM). Second, the Lagrangian Multiplier (L.M.) test is conducted to decide between OLS minus the dummy variable or with the Random Effect Model (REM). Third, to determine the difference between the Fixed Effect Model (FEM) and the Random Effect Model (REM), the Hausman test can be used (Widarjono, 2021). For that, based on the three models can be implemented:

1. Chow Test

Chow test is the first test method of the longitudinal regression analysis model (panel data) to determine the best test for managing regression data with panel data. The Chow test was carried out to determine one of the panel data regression test models through the addition of a dummy variable to find out the intercept has a difference, and the test is through F-Statistics taking into account the Residual Sum of Squares (RSS) value. The Chow test was also conducted to consider whether the Common Effect Model (CEM) method is better than the Fixed Effect Model (FEM) or Pooled Least Square (PLS) methods. This can be seen by looking at the significance of the FEM method with the F Statistical Test model. As for the test

$$F = \frac{\frac{(RSS1-RSS2)}{n} \_ 1}{(RSS2)/\ (nT - n - K)}$$

Information **:**

n = Number of Samples
T = Number of Time Period
K = Number of Parameters in the FEM Method
RSS_1 dan RSS_2 = Residual Sum of Square For CEM Method or PLS or FEM Method

If the value of Statistical Cross-section F < Prob. Standard, then H0 is rejected, and H1 is accepted, meaning a good reference to use is FEM. Meanwhile, if the cross-section statistic F > Prob, standard. So, H0 is accepted, and H1 is rejected. This

shows that the right reference to use is CEM. Based on these statistics, the hypothesis can be determined as follows:

H_0 = PLS
H_1 = FEM

If the results of the Chow test determine FEM, then the next step is to carry out the Hausman test to test the Fixed Effect Model (FEM) or the Random Effect Model (REM) as the best regression model to be used in research. But if the Chow test results determine the Common Effect Model (CEM), the next step must be carried out by testing the Lagrangian Multiplier Test (L.M.).

2. Hausman Test

The second method in model selection is the Hausman Test, which measures and decides on the Fixed Effect Model (FEM) or the Random Effect Model (REM). The Hausman test was carried out to determine the relationship between the errors of the model with one variable or more independent variables in the model. The Hausman test is performed if the Random Effect Model (REM) and Fixed Effect Model (FEM) methods are better than the Common Effect Model (CEM) method. The elaboration of the formula is as follows:

$$m = q \, Var \, (q) - q$$

The statistics from the Hausman test accompany the statistics from the Chi-Square through the degrees of the independent variables. The assessment criteria of the Hausman test are based on the results of the Chi-Square. The Hausman test hypothesis is:

H_0 = FEM

H_1 = REM

If the Prob. Cross-section Chi Square < Prob. Standard with other meanings of numbers from Prob. Chi Squarenya < 0.05 (α). Then the result of selecting the estimated model in the Hausman test is the Fixed Effect Model (FEM), namely accepting H0 and rejecting H1. However, on the contrary, if the Prob. Chi Squarenya > 0.05 (α). So, in choosing the estimation of the Hausman test model, the Random Effect Model (REM) means Rejecting H0 and accepting H1.
Suppose the results of the Hausman test choose the Random Effect Model (REM). In that case, the next step is to do the Lagrangian Multiplier (L.M.) test to choose the Random Effect Model (REM) or Common Effect Model (CEM) as the best reference (model) in panel regression. However, if the Hausman test turns out, the output data choose the Fixed Effect Model (FEM). So, the best thing to apply is the Fixed Effect Model (FEM).

3. Lagrangian Multiplier Test

The third is using the Lagrangian Multiplier Test (L.M.) method to test and compare the best model between the Common Effect Model (CEM) or Pooled Least

Square (PLS) and the Random Effect Model (REM) method. The L.M. test is based on the Chi-Squares distribution with degrees of freedom based on the number of independent variables. Bruesch-Pagan developed the L.M. test, and the Bruesh-Pagan method is the most widely used in calculating the L.M. test. The formula from L.M. is:

$$LM = \frac{\text{nT}}{2(T-1)} \left[\frac{\sum_{t-1}^{n} (\sum_{t=1 \leftarrow \epsilon t}^{T})^2}{\sum_{t-1}^{n} (\sum_{t=1}^{T} \varepsilon_t^2} - 1 \right]$$

Information :

n = Number of Tables
t = number of a time
ε = Residual of the Common Effect Model (CEM) method or Pooled Least Squared (PLS)

The assessment and criteria used in making decisions on the Lagrangian Multiplier (L.M.) test with the Breusch-pagan method can be considered based on the value of the cross-section-pagan. The conjectures (hypotheses) from the L.M. Test include the following:

H_0 = CEM
H_1 = REM

The L.M. Test hypothesis illustrates that if the results of the Breush-Pagan Cross-section value > Prob. Statistics) Then, H0 can accept, and H1 is rejected. So from these results, the Common Effect Model (CEM) is the best model used. Meanwhile, if the value of the Cross-section from Breusch-Pagan < Prob. Standard. So, the Random Effect Model (REM) method is the best testing method in this study(Rifkhan, 2023).

b. Hipotesis Test

1. Partial test t

Ghozali stated (in Romdhoni & Yozika, 2018) partial-t test (t-statistical test) is a statistical test that is used to measure the effect of independent variables (free variables) individually (partially) in research on variations in the dependent variable (dependent variable) partially. As for determining the partial-t test decision, that is, if the probability value is > 0.05. This means the hypothesis is rejected. The hypothesis is rejected because the independent variable does not impact the dependent variable. Meanwhile, if the value of the probability significance <0.05. Thus, the research hypothesis is accepted because the independent variable significantly affects the dependent variable.

2. Simultaneous Test-F

Simultaneous F-test (F-statistics) is a test that is used statistically to measure simultaneously (simultaneously) the independent variable to the dependent variable. The decision in the F-simultaneous test by looking at the value of Prob. (F. statistic) > 0.05 means that the independent variable simultaneously (simultaneously) has no impact on the dependent variable. Meanwhile, if the value

of Prob. (F.-statistic) <0.05 means that the independent variable simultaneously (simultaneously) influences the dependent variable(Atifah & Diana, 2022).

3. Test the Coefficient of Determination (R^2)

The coefficient of determination or R2 is one of several measurement instruments usually used in regression analysis, both simple multiple regression analysis and regression using panel data. The purpose of the regression coefficient test is to determine the regression line that is obtained, whether it has been explained or not. In other terms, it is called the goodness of fit. In general, the formula for the coefficient of determination symbolized by R2 is:

$$R^2 = 1 - \frac{SSR}{SST}$$

From this formula, it can be explained that the maximum number is one and the minimum Number is 0 (Ade Nursiyono & H. Nadeak, 2016). If the value of the coefficient of determination is 1, it means that the model is perfect and relevant or $\hat{Y}i = Yi$. Meanwhile, if the coefficient of determination is 0 (zero), this indicates that there is no relationship between the independent variables included in the regression. And if the dependent variable is close to 1, the independent variable can explain the information used by the dependent variable (Daffa Alaamsah et al., 2021).

4. Results

A. Panel Data Regression Analysis Results

1) Chow Test

The Chow test was conducted to compare and determine between the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

Table.1 ***Chow Test***

Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.448802	(3,33)	0.0000
Cross-section Chi-square	31.947438	3	0.0000

Source: Processed data E-Views 10

Table 1.1 above explains that the value of the Prob. Cross-Section-F worth 0.0000 <0.05. The results of the regression model concluded that H0 was rejected and H1 was acceptable. Meaning, the best model is applied to the chow test of research between the Common Effect Model (CEM) and Fixed Effect Model (FEM) selected Fixed Effect Model (FEM).

2) Hausman Test

The Hausman test is used to compare and choose between the Fixed Effect Model (FEM) and the Random Effect Model (REM).

Tabel 1.2 ***Hausman Test***

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	40.346406	3	0.0000

Source: Processed data E-Views 10

Table 1.2 above illustrates that the Prob. Cross-Section R. is 0.0000 <0.05. It can be concluded that H0 can be accepted, and H1 is rejected. This means the best model to be used in the Hausman test in research between the Fixed Effect Model (FEM) and Random Effect Model (REM) is the selected Fixed Effect Model (FEM).

Table 1.3 ***FEM***

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.199368	0.824908	3.878456	0.0005
X1	0.017728	0.005640	3.143307	0.0035
X2	-0.040860	0.009905	-4.125167	0.0002
X3	-0.281107	0.111570	-2.519552	0.0168

Source : Processed data E-Views 10

Table 1.3 above shows Profitability = 3.199368 + 0.017728 (X1) - 0.040860 (X2) - 0.281107 (X3) + μit. . Thus, conclusions can be drawn based on the results of the Chow test regression model and the Hausman regression test, the best-selected Fixed Effect Model (FEM). This means that the L.M. test is not needed in this study.

1) The results of the data output above obtained a constant value of 3.199368, meaning that if the FDR, CAR, and NPF values are assumed to be a constant value of 0, then the value of profitability is 3.199368.
2) FDR (X1) has a regression coefficient assuming a constant value of 0.017728 which means that if the FDR value is 1 (assuming different variable coefficient values are not problematic), the FDR number will increase by 0.017728. this can be seen from the value of the FDR coefficient, which has a positive coefficient so that the relationship between the FDR variable (X1) and the ROA variable (Y) is positive.

3) CAR (X2) has a regression coefficient assuming a constant value is (-0.040860), meaning that if the CAR value is 1 (assuming different variable coefficient values are not problematic), then the CAR number will decrease by 0.040860. This can be seen from the value of the CAR coefficient, which has a negative coefficient so that the relationship between the CAR variable (X2) and the ROA variable (Y) is negative.
4) NPF (X3) has a regression coefficient assuming a constant value is (- 0.281107), meaning that if the NPF value is 1 (assuming the coefficient values of different variables are not disturbed), then the number will decrease by 0.281107. This can be seen from the NPF coefficient, which has a negative coefficient so that the relationship between the NPF variable (X3) and the ROA variable (Y) is negative.

B. Hipotesis Test

1. Partial test t

The partial-t-test measures or tests the independent variable as an individual predictor variable for the dependent variable. The results of testing the t-statistic test as follows:

Table1.4 ***Parsial t-test***

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.199368	0.824908	3.878456	0.0005
X1	0.017728	0.005640	3.143307	0.0035
X2	-0.040860	0.009905	-4.125167	0.0002
X3	-0.281107	0.111570	-2.519552	0.0168

Source: Processed data E-Views 10

From Table 1.4 above, the results of the partial-t test output can be concluded that:

1. FDR (X1) has a Prob number. (F-statistic) 0.0035 < 0.05 (α). From these results, it can be concluded that the FDR variable (X1) positively and significantly impacts Profitability (Y). This means the higher the FDR value, the higher the ROA Proficiency value. Vice versa, the lower the value of the FDR variable, the lower the profitability of ROA.
2. CAR (X2) has a Prob value. (F-statistic) of 0.0002 <0.05 (α). Thus, it can be concluded that the CAR variable (X2) negatively and significantly impacts Profitability (Y). The higher the CAR value in a bank, the lower the ROA Proficiency Value. Conversely, the lower the CAR value, the ROA profitability value will increase.
3. NPF (X3) has a Prob number. (F-statistic) of 0.0168 <0.05 (α). So it can be concluded that the NPF variable (X3) negatively and significantly impacts profitability (Y). That is, the higher the value of the NPF in a bank, the Profitability Value will

decrease. Conversely, the lower the NPF value, the higher the Profitability (ROA) value of Islamic Commercial Banks (BUS).

2. Simultaneous Test-F

The Simultaneous-F test is used to measure and determine simultaneously (simultaneously) the effect of the independent variable on the dependent variable. The test results are as follows:

Table 1. 5 ***Simultaneous Test-F***

R-squared	0.807162	Mean dependent var	0.806750
Adjusted R-squared	0.772101	S.D. dependent var	1.594588
S.E. of regression	0.761237	Akaike info criterion	2.449884
Sum squared resid	19.12290	Schwarz criterion	2.745438
Log-likelihood	-41.99768	Hannan-Quinn critter.	2.556747
F-statistic	23.02137	Durbin-Watson stat	2.071047
Prob(F-statistic)	0.000000		

Source : Processed data E-Views 10

Table 1.5, the Simultaneous-F Test above, shows the value of the Prob. (F-statistic) is 0.000000 < 0.05 (α). The test results can be concluded that FDR (X1), CAR (X2), and NPF (X3) have a simultaneous influence on the Profitability (ROA) of Islamic Commercial Banks (BUS) for the 2018-2022 period.

3. Test the Coefficient of Determination (R^2)

The Coefficient of Determination (R2) test was carried out to analyze and estimate the total percentage of the various dependent variables explained by the independent variables in the regression line, with the value of R2 in the interval 0 to 1 ($0 < R2 < 1$). The test results for the coefficient of determination are explained in Table 1.5. From the testing results, the coefficient of determination (R2) explains that the value of R-squared is 0.807162 or equal to 80%. These results illustrate that the FDR (X1), CAR (X2), and NPF (X3) variables in the Islamic Commercial Bank (BUS) quarter data for the 2018-2022 period have an 80% influence on the Profitability Variable (Y). at the same time, the remaining 20% cannot be explained because other variables influence it.

5. Discussion

a) The Effect of FDR on the Profitability of Islamic Commercial Banks

The results of the partial test (individual) of the Financing Deposit To Ratio (FDR) have a positive and significant effect. That is, the higher the value of the FDR, the Profitability (ROA) of Islamic Commercial Banks (BUS) increases. Vice versa, the lower the FDR, the lower the ROA. The results of the research above on the FDR variable (X1) indicate that financing products distributed by Islamic commercial banks (BUS) can increase profits at the bank, and the ability of banks to pay third-party funds (DPK) does not experience problems. This means that Islamic commercial banks are good enough to carry out financial transactions, so Islamic commercial banks (BUS) must always maintain FDR stability so that it is balanced because good FDR is in the range of 80-100%, according to Bank Indonesia (BI) regulations. However, if the FDR is not at that number, the bank's financial ratios on the FDR variable will experience problems, causing losses for banking operations. But in the partial-t test of this study, it can be said that the credit distributed by Islamic banks to bank customers is quite effective, so the potential for problematic financing is still minimal. This result is in line with research that has been carried out by (Almunawwaroh & Marliana, 2018). The results of his research explain that FDR has a positive and significant impact on ROA. This explains that the increasing FDR number will positively affect profitability.

b) Effect of CAR on Profitability of Islamic Commercial Banks

The CAR variable (X2) explains the negative and significant results, meaning that the higher the CAR, the lower the Profitability. Vice versa, the lower the CAR, the higher the Bank's Profitability. Tests in this study align with research conducted by (Adzani et al., 2018). His research concluded that the CAR value negatively and significantly impacts the Return Of Assets (ROA). However, it deviates from the previous theoretical presentation regarding a positive relationship between CAR and ROA which was explained in research (Aini Fadillah & Sista Paramita, 2021). The high CAR will impact the Bank's ability to anticipate risks from productive assets. The high CAR is likely to cause Profitability in Islamic Commercial Banks (BUS) to decrease and hinder the expansion of bank business development due to the high capital reserves allocated to bear financing risks

c) The Effect of NPF on Profitability of Commercial Banks

Furthermore, the output of the partial-t test results for the NPF variable (X3) has a negative and significant effect, such as the CAR variable, meaning that a high NPF value affects decreasing profitability and vice versa. However, it is inversely proportional to CAR. The lower the NPF value, the better the soundness of bank financing so that it can increase profitability, and this illustrates that the bank's health is manageable due to the low bad loans made by customers to the bank. The test results of the NPF are inversely proportional to research conducted by (Puji Astuti, 2022). Which states that NPF has no effect. However, in line with the research conducted (Daffa Alaamsah et al., 2021). Explains that the NPF negatively and significantly influences the profitability variable..

This research partially shows the results that partially (t-statistic test), the FDR variable (X1) has a positive and significant effect on the ROA variable (Y) while the CAR variable (X2) and NPF (X3) have a negative and significant effect so that it gives an illustration that parties from Islamic Commercial Banks (BUS) in this study must further improve the performance of banks to avoid the risk of problem banks and maintain the stability of the value of FDR and also capital reserves from CAR. Meanwhile, the F-statistic test simultaneously explains that the variables FDR, CAR, and NPF influence the Profitability variable (ROA) with a coefficient of determination of 80%.

5. Conclusion

After conducting analysis and hypothesis testing in research with the theme of the Effect of FDR, CAR, and NPF on Profitability through the ROA measurement method, it can be concluded that this study uses panel data regression with two analytical tests, namely the Chow test and Hausman test. In contrast, the L.M. test was not carried out because the Chow and Hausman tests concluded the same result that in this study, the most appropriate and selected regression analysis was the FEM regression. The output from the results of hypothesis testing on individual t-statistic test data (partial) concludes that the FDR variable has a positive and significant effect on Profitability (ROA), and the CAR variable has a negative and significant impact on ROA. In contrast, the NPF has a negative and significant effect on ROA. The output from the results of the F-statistic test together (simultaneously) concludes that the variables FDR, CAR, and NPF influence Profitability (ROA).

For this reason, Islamic Commercial Banks (BUS) must maintain FDR stability so that the balance is maintained in order to maintain public trust because if a bank loses the trust of customers, the bank will suffer losses. Furthermore, from the CAR variable, Islamic Commercial Banks must increase capital and maintain the bank's initial funds as bank deposits to anticipate that in an urgent situation, the customer wants to withdraw his money. Meanwhile, the NPF at Islamic Commercial Banks (BUS) from the four Islamic banks in the study was maintained and even had to be further developed so that bad credit does not occur in the bank so that the bank's operations continue to exist and experience development.

References

Ade Nursiyono, J., & H. Nadeak, P. P. (2016). *Setetes Ilmu Regresi Linear Untuk Penelitian* (1st ed.).

Adzani, N., Effendi, M. S., & Rismita. (2018). Faktor-Faktor yang Mempengaruhi Profitabilitas (Studi Empiris pada Bank-Bank Umum yang Tercatat di BEI, Periode 2010 - 2017). *IKRAITH-Humanira*, *2*(3), 117–125.

Aini Fadillah, N. N., & Sista Paramita, R. . (2021). Pengaruh CAR, NPF, FDR, Inflasi dan BI Rate Terhadap Profitabilitas Perusahaan Perbankan Syariah di Indonesia Periode 2014-2018. *Jurnal Ilmu Managemen*, *9*(42), 191–204.

Almunawwaroh, M., & Marliana, R. (2018). Pengaruh Car,Npf Dan Fdr Terhadap Profitabilitas Bank Syariah Di Indonesia. *Amwaluna: Jurnal Ekonomi Dan Keuangan Syariah*, *2*(1), 1–17. https://doi.org/10.29313/amwaluna.v2i1.3156

Asyiah, N. (2018). *Analisis Regresi Data Panel dengan Pendekatan Common Efect Model (CEM) Fixed Effect Model (FEM) dan Random Effect Model (REM)* (Issue 21, pp. 1–9).

Atifah, Y., & Diana, N. (2022). Pengaruh NPF dan FDR terhadap Profitabilitas Bank Umum Syariah Periode. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah*, *7*(2), 589–604.

Daffa Alaamsah, R. H., Yetti, F., & Dwi Priyatno, P. (2021). Pengaruh NPF, CAR, dan FDR terhadap Profitabilitas Bank Umum Syariah di Indonesia. *El-Iqtishod*, *5*(2), 19–46. https://doi.org/10.35313/jaief.v2i1.2818

Djuwita, D., & Muhammad, A. F. (2016). Pengaruh Total DPK, FDR, NPF dan ROA terhadap Total Asset Bank Syariah di Indonesia. *Jurnal Kajian Ekonomi Dan Perbankan Syari'ah*, *8*(1), 281–297.

Ferawati, R., Khairiyani, & Nurmala. (2022). Pengaruh ROA, FDR dan CAR Terhadap Tingkat Bagi Hasil Deposito Mudharabah Pada Bank Umum Syari'ah Periode 2017-2020. *At-Tawassuth: Jurnal Ekonomi Islam*, *VII*(II), 169–184.

Hanafia, F., & Karim, A. (2020). Analisis CAR, BOPO, NPF, FDR, NOM, Dan DPK Terhadap Profitabilitas (ROA) Pada Bank Syari'ah Di Indonesia. *Target : Jurnal Manajemen Bisnis*, *2*(1), 36–46. https://doi.org/10.30812/target.v2i1.697

Ilyas, R. (2019). Analisis Kelayakan Pembiayaan Bank Syariah. *Society*, *2*(1), 1–19. http://www.scopus.com/inward/record.url?eid=2-s2.0-84865607390&partnerID=tZOtx3y1%0Ahttp://books.google.com/books?hl=en&lr=&id=2LIMMD9FVXkC&oi=fnd&pg=PR5&dq=Principles+of+Digital+Image+Processing+fundamental+techniques&ots=HjrHeuS_

Irawan, D., Haryadi, & Puspa Arum, E. D. (2019). Analisis Pengaruh NPF, BOPO, CAR, FDR dan NIM Terhadap Return on Asset (ROA) Pada Bank Umum Syariah di Indonesia Tahun 2013-2017. *Jurnal Akuntansi & Keuangan Unja*, *4*(1), 1–14. https://doi.org/10.22437/jaku.v4i1.7424

Mertha Jaya, I. M. L. (2020). *Metode Penelitian Kuantitatif dan Kualitatif Teori, Penerapan dan Riset Nyata* (F. Husaini (ed.)). Anak Hebat Ibdonesia.

OJK. (2023). *Statistik Perbankan Islam*. Https:Www.Ojk.go.id.

Puji Astuti, R. (2022). Pengaruh CAR , FDR , NPF , Dan BOPO Terhadap Profitabilitas Perbankan Syariah. *Jurnal Ilmiah Ekonomi Islam*, *8*(03), 3213–3223.

Rifkhan. (2023). *Pedoman Metodologi Penelitian Data Panel dan Kuesioner* (Abdul (ed.); 1st ed.). CV. Adanu Abimata.

Romdhoni, A. H., & Yozika, F. El. (2018). Pengaruh Pembiayaan Mudharabah, Musyarakah Dan Ijarah Terhadap Profitabilitas Bank Muamalat Indonesia. *Jurnal Ilmiah Ekonomi Islam*, *4*(03), 177. https://doi.org/10.29040/jiei.v4i03.314

Rufaidah, I. K., Djuwarsa, T., & Danisworo, D. S. (2021). Pengaruh DPK, CAR, BOPO, dan NPF terhadap Likuiditas pada Bank Umum Syariah. *Journal of Applied Islamic Economics and Finance*, *2*(1), 187–197. https://doi.org/10.35313/jaief.v2i1.2912

Suryanto, D. A., & Susanti, S. (2020). Analisis Net Operating Margin (NOM), Non Performing Financing (NPF), Financing to Debt Ratio (FDR) dan Pengaruhnya Pada Efisiensi Perbankan Syariah di Indonesia. *Jurnal Riset Akuntansi Dan Keuangan*, *8*(1), 29–40. https://doi.org/10.17509/jrak.v8i1.19331.Copyright

Syakhrun, M., Anwar, A., & Amin, A. (2019). Pengaruh Car, Bopo, Npf Dan Fdr Terhadap Profitabilitas Pada Bank Umum Syariah Di Indonesia. *Bongaya Journal for Research in Management (BJRM)*, *2*(1), 1–10. https://doi.org/10.37888/bjrm.v2i1.102

Wibisono, M. Y., & Wahyuni, S. (2017). Pengaruh CAR, NPF, BOPO, FDR, Terhadap Roa yang Dimediasi Oleh NOM. *Jurnal Bisnis & Manajemen*, *17*(1), 41–62.

Widarjono, A. (2016). *EKONOMETRIKA Pengantar dan Aplikasinya* (4th ed.). UPP STIM YKPN.

Widarjono, A. (2021). *ekonometrika* (edisi kelima). UPP STIM YKPN.

Wirnawati, M., & Diyani, L. A. (2019). Pengujian CAR, NPF, FDR, dan BOPO Terhadap Profitabilitas Pada Bank Umum Syariah. *Jurnal Mahasiswa Bina Insani*, *4*(1), 69–80.

Wulandari, R., & Rofiuddin, M. (2022). Pengaruh Rasio Keuangan Terhadap Pertumbuhan Laba dengan Ukuran Bank Sebagai Variabel Moderasi : Studi pada Bank Umum Syariah Indonesia Periode 2016-2020. *At-Taradhi :Jurnal Studi Ekonomi*, *XIII*(1), 1–18. https://core.ac.uk/download/pdf/327227667.pdf