DETERMINANT OF BANK MUAMALAT'S PROFITABILITY BASED ON FINANCIAL VARIABLES

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Abstract

Bank Mualamat is Indonesia's first Islamic Bank, founded in 1991. In its journey, Bank Muamalat experienced a crisis, including in 2015-2019, related to the Capital Adequacy Ratio (CAR), which was close to the minimum limit, Non-Performing Financing (NPF), which was high above the industry average Banking and ended with low profitability. This study focuses on determining the financial variables that affect the profitability of Bank Muamalat. The financial variables tested were CAR and Net Income Margin (NIM), Financing to Deposit Ratio (FDR), and NPF to Profitability (ROA) for the 2011-2022 period. The results of this study partially show that CAR and FDR do not affect ROA, but NIM and NPF significantly affect ROA. The research results that the Management of Bank Muamalat must consider are that simultaneously, CAR, NIM, FDR, and NPF affect ROA with a significance value of 0.012 <0.05. Based on the analysis, the coefficient of determination is 89.4%, which means that CAR, NIM, FDR, and NPF have an effect of 89.4% on ROA.

Keywords: *CAR, NIM, FDR, NPF, Bank of Muamalat*
JEL Classification: *E40, E50, E52*

1. INTRODUCTION

Islamic banking in Indonesia has a relatively recent but notable history, with the establishment of the first Islamic bank (Bank Muamalat). This is a significant step in addressing the financial needs of Muslims seeking Sharia-compliant banking services. Over the years, the sector has experienced substantial progress, supported by a regulatory framework established by the Financial Services Authority of Indonesia (OJK). Islamic banks have gained a considerable market share, offering financial Sharia products and services, consist of savings accounts product and services, financing products and services, and investment products and services (Rusydiana *et al*, 2019). Expanding their product and service offerings, covering retail and corporate banking, demonstrates the sector's growth. Efforts have been made to raise awareness and educate the public about the benefits of Islamic finance, and collaborations with international institutions have been explored to enhance capabilities and strengthen the position of Islamic banks in Indonesia's financial landscape.

Bank Muamalat is one of the leading Islamic banks, providing a range of financial services to its customers. The bank was established in 1991 and is headquartered in Jakarta, Indonesia. As an Islamic bank, it operates in accordance with the principles of Shariah law, which charge the additional money or interest (riba), Speculative transaction, Gharar transaction were not allowed. A bank's profitability is an important indicator of its financial health and sustainability. Determining the profitability of a bank involves analyzing its financial statements and assessing various

key indicator financial consist of Return on Assets (ROA), Return on Equity (ROE), and Net Income Margin (NIM). Bank Muamalat had some financial crises, which are the focus of many parties, including the government. Since 2015, Bank Muamalat has been plagued by a lack of capital, and old shareholders have been reluctant to inject fresh funds. CAR is 12%, which is still within safe limits but within the Basel III concession for CAR of at least 12% to absorb countercyclical risks. Bank Indonesia explained that a Countercyclical Buffer is additional capital. It functions as a buffer for Bank to anticipate default because of aggressive financing. Bank Muamalat's performance was eroded by a surge in non-performing financing or NPF where the level was above 5%, higher than the maximum limit set by the Regulator.

National authorities monitor banks' CAR to ascertain how well they can withstand a certain level of loss in order to prevent them from going bankrupt and losing depositor money. Regulatory compliance, risk management, and financial soundness are the three main reasons why banks need the CAR. A crucial indicator of a bank's financial stability is the CAR. A high CAR indicates that a bank is fit for operations and can me*et al*l financial needs or obligations. When a bank continuously takes on more risks than it can handle, potential shareholders experience a sense of increased vulnerability with their equity investments. As a result, a bank needs to continue using strong lending procedures and a competent level of risk management. Bank panics and contagion are avoided by regulators requiring banks to keep capital over a specific threshold. This corrects incentives to make loans that are unduly risky. Compared to other banks, banks with greater capital-asset ratios have more latitude in managing their portfolios.

In order to improve CAR, Bank Mumalat put its best effort into finding new investors or persuading the old investors to add new capital. And in 2021, Badan Pengelola Keuangan Haji (BPKH) became the majority shareholder of Bank Muamalat after receiving share grants from previous shareholders, which are the Islamic Development Bank and SEDCO Group, equivalent to 77.4% share. Thus, BPKH's total shareholding in Bank Muamalat rose to 78.5%. After Bank Muamalat conducted a rights issue where BPKH injected additional capital of IDR 1 trillion, BPKH's total shareholding in Bank Muamalat is currently 82.7%. In the middle of 2023, there was planning for Bank Tabungan Negara (BTN), which has a Syariah Unit to acquire Bank Muamalat. The impact of this planning will be the changing of the majority of stockholders. BTN will replace BPKH. The action will positively impact both sides since BTyariah will spin off from BTN Conservative and take the position of Bank Muamalat. The positive impact to Bank Muamalat, its portfolio will be handled more professionally by BTN Syariah.

Table 1. Data of Variable X and Y

Year	CAR- X1 (%)	NIM - X2 (%)	NPF - X3 (%)	FDR - X4 (%)	ROA - Y (%)
2011	11.78	6.55	2.99	76.67	1.13
2012	11.03	4.64	3.63	94.15	0.2
2013	14.43	4.66	3.46	99.99	0.27
2014	13.91	3.4	4.85	84.14	0.17
2015	12	4.09	4.2	90.3	0.2
2016	12.74	3.21	1.4	95.13	0.14
2017	13.62	2.48	2.75	84.41	0.04
2018	12.34	2.22	2.58	73.18	0.08
2019	12.42	0.83	4.3	73.51	0.05
2020	15.21	1.94	3.95	69.84	0.03
2021	23.76	1.59	0.08	38.33	0.02
2022	32.70	0.66	0.86	40.63	0.09

Source: Bank Muamalat's Financial Report (Processed by Author, 2023)

For banks, return on assets (ROA) is a crucial financial indicator that shows how well the company uses its resources to produce a profit. A bank's return on assets (ROA) is computed as a percentage by dividing its net income by the average total assets of the bank. The importance of ROA lies in its ability to gauge the effectiveness of a bank's operational management. A higher ROA indicates that a bank generates more profit relative to its asset base, showcasing resource allocation and risk management efficiency (Devi & Firmansyah, 2020). Investors and stakeholders often use ROA to measure a bank's profitability and operational effectiveness.

Moreover, ROA is a critical factor in comparing the performance of banks within the industry, helping investors and analysts assess which banks are utilizing their assets most efficiently. For banks, maintaining a healthy ROA is essential for profitability and demonstrating prudent financial management and competitiveness in the financial market. It is a crucial indicator contributing to a comprehensive evaluation of a bank's financial health and operational efficiency. The Non-Performing Loans (NPL) ratio, often referred to as NPF (Non-Performing Financing) in the context of Islamic banks, is a crucial indicator for financial institutions, particularly banks (Amirullah & Devi, 2020). NPF represents the proportion of loans in default or not being serviced according to the agreed-upon terms. The importance of monitoring the NPF for banks lies in its role as a critical indicator of asset quality and credit risk. A high NPF ratio can signal potential financial stress for a bank, indicating a higher likelihood of loan defaults and potential losses. It serves as a barometer for the effectiveness of a bank's risk management practices and the quality of its loan portfolio. Investors, regulators, and stakeholders closely scrutinize NPF as it provides insights into the bank's overall financial health and the effectiveness of its lending and risk mitigation strategies. Banks with a lower NPF ratio are generally viewed more favorably, as it suggests a healthier loan portfolio and a better ability to manage credit risks, contributing to overall financial stability and sustained profitability. Therefore, maintaining a prudent NPF ratio is

essential for banks to instill confidence among investors and ensure the resilience of their financial operation.

The ROA in the last nine years was below 1%, NPF in some years was almost 5%, and CAR almost reached the minimum threshold by Regulator (12%). Several studies have been conducted to assess the profitability of Islamic bank in Indonesia. For instance, a study by Pratiwi & Diana (2021) mentioned that CAR had no partial effect on ROA. In contrast, for variables NPF and BOP, they partially affect ROA. Meanwhile, simultaneously, it was shown that CAR, NPF, and BOPO variables have an effect. Research in Commercial Syariah Bank, according to Astuti (2022), CAR and BOPO have no significant effect on ROA, while FDR and NPF have no significant affection on ROA. In other research, multiple linear regression analysis was stated. Based on research done by Widyastuti & Aini (2021), CAR and Loan Deposit Ratio (LDR) have no effect on bank profitability. In contrast NPL has a significant negative effect on bank profitability. In addition, a study by Kuswara *et al*. (2019) had gave indication through his research that bank need to give aware regarding income on management, because It has emerged as the main source of income for Islamic banks to turn a profit. It is imperative to note that the efficient administration of funds is contingent upon the presence of Islamic banking channeling instruments.

Overall, based on previous research has been explained before, the literature suggests that Islamic bank has been able to maintain a relatively strong and stable level of profitability over the years, and that factors such as capital adequacy (CAR), loan quality (NPF), Corporate Governance, and NIM are important determinants of its profitability. Comparing the research regarding profitability of Islamic Bank Indonesia has been done on document criteria and statistic tools for internal financial variable with the latest update, but analyzing in profitability of Bank Muamalat has been done with the period data 2011 - 2016 (Nurfitriani, 2021) and 2000-2014 (Ummah & Suprapto, 2020). Since there was a lot of macro economic changing such as the pandemic Covid in 2019-2020, some strategies Bank Muamalat action in additional capital to improve CAR, it is important to study the impact of internal financial variables that affect the profitability of Bank Muamalat.

The main object of this study is to provide statistical analysis based on multiple regression analysis regarding the profitability by obtaining past performance of financial variables such as CAR, NIM, NPF and FDR. The insight for Bank Muamalat's management as the executor, they choose the best strategies by prioritizing which one of financial variables that will give significant impact to increase its profitability. As with any financial institution, the profitability of Bank Muamalat is an important indicator of its financial health and overall success. Understanding the determinants of Bank Muamalat's profitability can provide valuable insights into how the bank can improve its performance and increase its profitability.

2. LITERATURE REVIEW

Islamic banking is a financial system rooted in Sharia, the Islamic law, with a fundamental prohibition against the payment or receipt of interest (riba). Instead of traditional interest-based transactions, Islamic banks operate on the principle of profit and loss sharing. The explanation of profit and loss sharing is when a customer deposits funds, the bank employs them in ethical and Sharia-compliant investments. Profits generated are then shared between the bank and the customer based on predetermined ratios, fostering a partnership-oriented approach. Islamic banking also emphasizes asset-

backed financing, steering clear of speculative transactions and adhering to ethical guidelines by avoiding investments in activities deemed haram (forbidden) in Islam. Additionally, Islamic banks may allocate a portion of their profits to charitable causes, promoting social responsibility.

Financial ratios are quantitative tools that provide a systematic way to assess and interpret a company's financial health and performance. These ratios are derived from various financial statements and are used to analyze different aspects of a company's operations and financial structure. They offer valuable insights into liquidity, profitability, solvency, efficiency, and market valuation. For instance, liquidity ratios indicate a company's ability to meet short-term obligations, while profitability ratios assess its capacity to generate profits in relation to revenue and investment. Solvency ratios evaluate the long-term financial viability and ability to meet debt obligations, and efficiency ratios measure how effectively a company uses its resources to generate sales and profits. Market ratios, on the other hand, shed light on the company's valuation in the eyes of investors. Financial ratios play a crucial role for investors, analysts, and management in making informed decisions, benchmarking against industry standards, and identifying areas for improvement in financial management and performance. Interpreting these ratios requires a comprehensive understanding of the industry, economic conditions, and the company's unique circumstances to derive meaningful conclusions. Profitability can be said to be one of the most appropriate indicators for measuring company performance. The ratios commonly used to measure and compare banking profitability performance are Return On Equity (ROE) and Return On Assets (ROA). The reason ROA was chosen as a performance measure is because ROA is used to measure the ability of bank management to obtain overall profits. Apart from this, ROA is used by investors to find out how much net profit the company will get and how much return it will receive. The higher a bank's Return On Assets (ROA), the higher the profit margin it has attained and the stronger its asset utilization position.

Return on Assets is referred to as ROA. A financial ratio known is used in the banking industry to assess a bank's profitability by comparing its income of bank to its all assets. It shows how well a bank uses its resources to turn a profit. This explanation makes it clear that the purpose of ROA is to assess management's capacity for achieving profitability and general managerial effectiveness in its operations (Joy *et al*, 2019).

A healthy bank has a good level of capital adequacy (Yuliana & Listari, 2021). CAR is a ratio which shows how far all assets are risky banks such as financing, equity, securities, claims on other banks. The Capital Adequacy Ratio (CAR) is a critical measure for banks, signifying their financial robustness and capacity to absorb potential losses. The percentage of a bank's capital compared to its risk-weighted assets is known as its CAR. This ratio is paramount for several reasons. Firstly, it safeguards financial stability by ensuring that a bank possesses an ample capital cushion to absorb unforeseen losses, thereby upholding solvency and the ability to fulfill financial commitments. Secondly, CAR aids in effective risk management by accounting for the varying risk levels associated with different assets, compelling banks to allocate capital prudently based on asset risk profiles. Thirdly, it is a regulatory compliance tool, as financial supervisory bodies set minimum capital requirements to maintain a stable financial system. Meeting or exceeding these standards is essential for a bank's legal operation and investor confidence. Furthermore, a strong CAR enhances creditworthiness, inspires shareholders' confidence, and supports a bank's expansion and growth endeavors. In economic downturns, a robust CAR acts as a buffer against losses, enabling the bank to

navigate challenges without compromising its viability, thus contributing to overall financial resilience.

Regulation of banks makes an effort to offset these benefits. Ensuring that banks run "safe and sound" is its main goal. This implies that banks are not allowed to take on unwarranted risks. There are various types of regulation. Riskier banks pay a greater premium, as set by the Regulator. Additionally, banks' access to certain business lines, lending amounts, and other parameters are restricted by bank authorities. But the capital-asset ratio is the main target of all of these initiatives. In general, banks with greater capital-to-asset ratios than other banks are allowed more latitude in managing their portfolios. Bank closures could result from having low capital-asset ratios.

All of them are financed from the same sources which is own capital funds, moreover, capital funds can be obtained from sources other than banks. With maintaining CAR means guaranteeing customer protection and overall maintain financial stability banks (Fachri & Mahfudz, 2021). The higher the value CAR, the higher the ability of the bank to face the risk of loss. Previous research that was examined by Hediati &Hasanuh (2021) shows that CAR has a positive effect on ROA. The results are in line with the results of study done by previous researchers who stated that CAR has a significant positive effect on ROA.

Non-Performing Financing (NPF) is almost the same as Non-Performing Loans (NPL) found in conventional banks, it's just that NPF is used in banks sharia. The difference is where in Islamic banks there is no recognition loan (loan) and in return is financing (financing). Non-Performing Financing (NPF) is a ratio in finance that describes the level of financing that is experiencing problems to the total financing. With so much financing issued by banks, then of course there will be problematic financing risks. Of course, this is a must considered by the bank carefully because the value of the NPL ratio can be used to determine whether or not the bank fails in managing its business. The assessment criteria are based on BI SE No.13/24/DPNP 2011 is ranked 1, which is below 2%, rank two, which is between 2% to less than 5%, third rank is 5% to less than 8%, fourth rank is 8% to less than 12% and rank five is 12% more. NPF fair figure seems to be 5%, this is evidenced by the existence of news that says the Agency Financial Services Supervisor will summon Islamic banks so that NPF does not touch 5%. There seems to be concern here if the NPF reaches 5%. Based on this it can also be said that the smaller the NPF value, the better for Islamic banks where the smaller the risks arising from troubled financing and will certainly expedite the activities of the bank which will also increase bank profitability. Previous research researched by Hediati& Hasanuh (2021) and Nurfitriani (2021) which shows that NPL has a positive effect on ROA. Previous research conducted by Anindiansyah (2020) concludes that NPL has no significant effect on ROA.

The Financing to Deposit Ratio (FDR), namely the amount of funding issued by Islamic banks to support investments that have been planned for a certain time from the results of raising third party funds (Mahmudah & Harjanti, 2016). FDR can affect the level of profitability Islamic Banks (Sumarlin, 2016). In SE BI No. 26/5/BPPP 1993, the maximum of FDR was determined by Regulator was maximum 110%. The amount of money diverted to third party funds increases with increasing FDR. When cash from other sources are used, revenue or profitability rises (Sumarlin, 2016).

3. METHODOLOGY

The present study employed the Descriptive method as its methodology. This

approach involves analyzing data by characterizing the acquired information in its original form, with no intention of drawing broad inferences or generalizations. Multiple Regression Analysis is a statistical method used in SPSS ver. 21 to assess the association between endogen variables (ROA) and exogen variables (CAR, NIM, FDR, and NPF). With multiple regression analysis, a statistical method, researchers can assess the degree of connection between an outcome (the dependent variable) and numerous predictor factors. It is frequently used for analyzing data with multiple independent variables.

Multiple regression analysis can be used to assess the relationship between multiple independent variables (Uyanık & Güler, 2013). Multiple regression analysis is useful in building econometric models. The combined action of several factors influences a socioeconomic phenomenon. Finding a model that more closely resembles the real behavior will result from taking into account a number of explanatory variables for this phenomenon. Based on known or fixed values of the object variables, the goal of the econometric analysis is to create the prediction model of variable y or dependent variables. Study with multiple regression analysis, one has option to evaluate the relevance of the explanatory factors, assess correlations between variables, and estimate the parameters of the econometric model(Fechete & Nedelcu, 2014). In randomized controlled trials, randomization minimizes confounding, but possibility of weakness confounding because the small imbalances of predictors' s outcome (Pandis, 2016). The equation of Multiple regression analysis was formulated as follow:

$$\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_n + \cdots + \beta_n X_n + \varepsilon \ldots\ldots\ldots\ldots\ldots (1)$$

The meaning of symbol $\hat{Y}$ is dependent variable, X_n is independent variables, β is coefficient and ε is error (Uyanık & Güler, 2013). Integrated the formula to the research framework is in this study based on variable X as independent and variable Y as dependent variables shown in the following figure (1) and equation (2). The below figure was a research framework in this study:
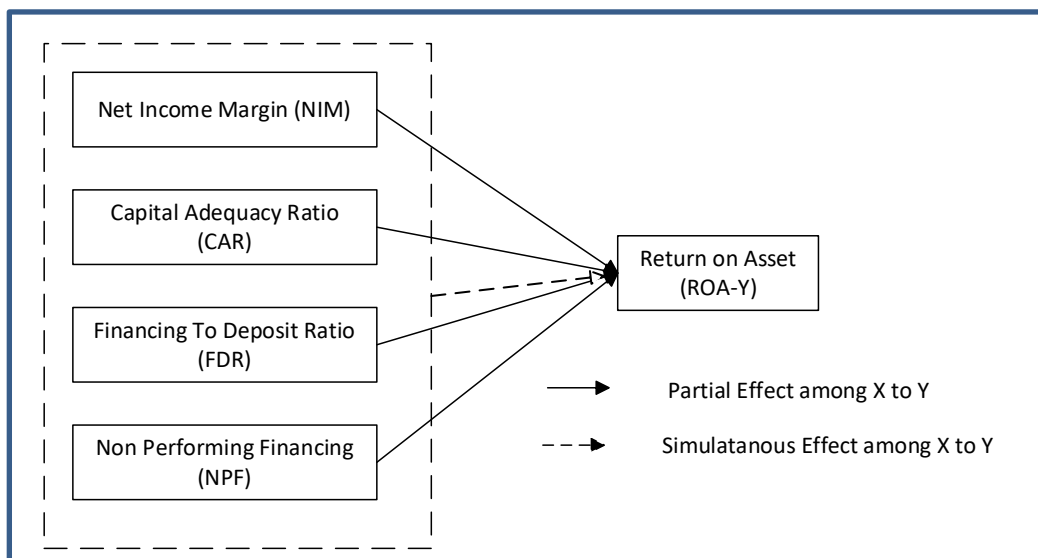
Figure 1. Research Framework

$$ROA = \beta_0 + \beta_1 NIM + \beta_2 CAR + \beta_3 FDR + \beta_4 NPF + \varepsilon \ldots\ldots\ldots (2)$$

ROA as $\hat{Y}$ is a dependent variable, NIM, CAR, FDR and NPF as X_n is an independent variable, β is parameter and ε is error.

According to Bazdaric *et al*, (2021), typically, the scatter plot and Pearson product moment correlation coefficient are used to examine the linearity of the relationship between the variables. However, examining the residuals graph would allow for an even more accurate estimation of the linearity. The assumptions of homoscedasticity and normality are that the residuals have a constant variance and an identical, independent distribution with a zero mean. All values of the independent variable should have a reasonably constant residual variability, and the residual plotted against the independent variable should display a random pattern (equally scattered and without creating a U-shaped curve).

Regression analysis should verify the following assumption: For linear regression to work, there must be a linear relationship between independent (variable X) and dependent variables (variable Y). Due to the sensitivity of linear regression to outlier effects, it is also crucial to look for outliers. Four tests make up the exam (Sureiman & Mangera, 2020). First, scatter plots are the most effective tool for testing the linearity assumption. The second test is the normality test. A histogram or a Q-Q-Plot are the most effective tools for verifying the assumption that all variables in a linear regression analysis are multivariate normal. Numerous statistical tests are available to assess normality, such as the Shapiro-Wilk, Jarque-Bera, Anderson-Darling, and Kolmogorov-Smirnov tests. In the third step, the multicollinearity test, linear regression is assumed to be minimal or nonexistent.

The t-test, F test, and determination are the statistical tests used in multiple regression analysis. As stated by "the t-test or partial regression coefficient test is used to find out whether partially the independent variable has a significant effect or not on the dependent variable". A significance threshold of 0.05 is used in the test. It is possible to determine the t table with degrees of freedom df = n-k-1 and a significance of 0.05/2 = 0.025. In addition, the goal of the coefficient of determination test (R^2) is to assess how well the model can account for variations in the dependent variable that range in value from zero to one. When the dependent variable's variance cannot be explained by the independent variable, the R2 value of 0 is obtained. The independent variable can explain the fluctuation of when R2 = 1.

The F-test of overall significance is a tool used in regression analysis to determine whether a linear regression model fits the data more accurately than a model without any predictor variables. Each predictor variable's joint significance is investigated. But whether a predictor variable is significant on its own is determined by the t-test of significance for each one. Therefore, each predictor variable's significance is determined by the t-test, while the joint significance of all the predictor variables is determined by the F-test. (Sureiman & Mangera, 2020).

4.   RESULT AND DISCUSSION
In this section, the explanation of Descriptive and analysis test using Multiple Linear Regression has been processed by SPPS ver.21, the result was show in some tables.

4.1. Result

The first result is descriptive statistics of the sample in this research which is shown in Table 2.

Table 2. Descriptive Statistics

	CAR- X1 (%)	NIM - X2 (%)	NPF - X3 (%)	FDR - X4 (%)	ROA - Y (%)
Min	11.03	0.66	0.08	38.33	0.02
Max	32.70	6.55	4.85	99.99	1.13
Average	15.50	3.02	2.92	76.69	0.20
Median	13.18	2.85	3.23	80.41	0.12
Std	6.36	1.75	1.47	19.84	0.30

Some critical points of descriptive statistics are first the CAR has a minimum value of 11.03% and a maximum of 32.70%, which happened in 2023 due to The additional of capital Tier 2 by Shareholder. Second, a maximum of 4.85% happened in 2014 before Management took hard action in restructuring the program for bad debts. The maximum FDR was almost 100% (99.99%) in 2013, and the average is 76.69%, which is not risky. ROA shows the profitability, and the minimum is 0.02%, which happened in 2022, while the minimum NIM is 0.66%, the indicators below the Banking Industry's standard.
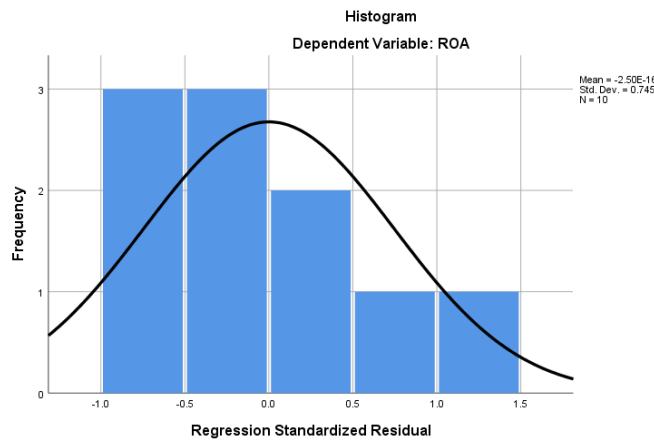
Figure 2. Normality Test

Table 3. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		10
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.10597584
Most Extreme Differences	Absolute	.123
	Positive	.123
	Negative	-.117

	Unstandardized Residual
Test Statistic	.123
Asymp. Sig. (2-tailed)	.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Based on the shape of the curve image, the histogram display normal curve shows the normalcy of the data. If the curve has an almost perfect bell shape and a slope that tends to be equal on the left and right sides, the data is considered normal (Figure 2). The normality test using Kolmogorov-Smirnov, data is declared normal if the significance value is > 0.05. From the output above, it can be seen that the significant value (Sig) for Kolmogorov Smirnov is 0.200, which is greater than 0.05, so it can be concluded that the residual value is normally distributed.

Table 4. Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	CAR	.860	1.163
	NIM	.705	1.418
	FDR	.937	1.068
	NPF	.762	1.312

a. Dependent Variable: ROA

If VIF is less than 10.00 and tolerance is less than 0.10, according to the Multicollinearity Test, there is no multicollinearity. The output above demonstrates that the tolerance value is greater than 0.10 and the VIF value is less than 10.00. It was concluded that the regression model is well-suited for application and does not exhibit multicollinearity issues.
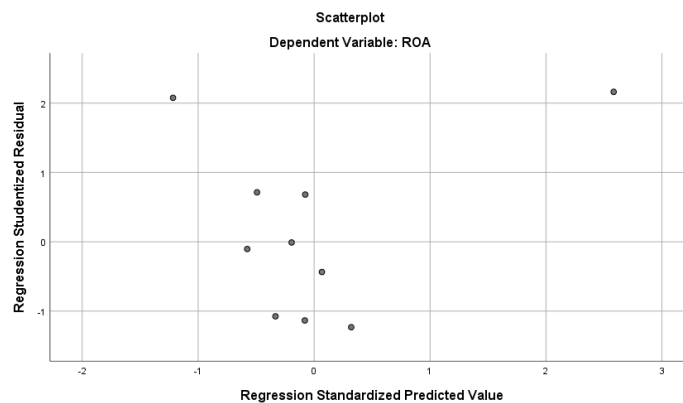
Figure 3. Heteroscedasticity Test

It is obvious from the output data above that there is no heteroscedasticity issue

with the regression model because the points are dispersed and do not clearly create a pattern above and below the number 0 on the Y axis.

Table 5. Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.946[a]	.894	.810	.14218	3.132

a. Predictors: (Constant), NPF, CAR, FDR, NIM
b. Dependent Variable: ROA

The results of the Durbin Watson autocorrelation test show a number of 3.312 which can be compared with the number of samples (n) = 10 and independent variables (k) = 4 at a significance level of 0.05, so a lower limit (dL) of 0.3760 can be obtained. So, the results cannot be concluded. Then to overcome the problem above, a run test was carried out with Durbin Watson, as follows.

Table 6. Autocorrelation Test

Runs Test	
	Unstandardized Residual
Test Value[a]	-.00719
Cases < Test Value	5
Cases >= Test Value	5
Total Cases	10
Number of Runs	8
Z	1.006
Asymp. Sig. (2-tailed)	.314

Table 6 displays the Asymp value based on the Runs Test findings. In the Runs Test with circumstances having a genuine level (α) = 5% = 0.05, the initial Asymp value is 0.737 for Sig. (2-tailed). When the two-tailed significance value (Asymp value) is less than 0.05, autocorrelation symptoms manifest. If Sig. (2-tailed) > 0.05, autocorrelation symptoms are absent. Thus, it can be said that there are no signs of autocorrelation in the regression model because the value of Asymp. Sig. (2-tailed) is 0.314, greater than 0.05. The result of t Test, partially affection test and F Test, the simultaneously affect test was shown in Table 7 and Table 8.

Table 7. Table of Multiple Linear Regression and t – Test

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.188	.670		1.772	.137
	CAR	-.010	.039	-.041	-.261	.805
	NIM	.205	.034	1.039	5.997	.002
	FDR	-.034	.049	-.106	-.708	.511
	NPF	-.017	.005	-.541	-3.248	.023

a. Dependent Variable: ROA

Refers to Table 7. It was shown that the equation of variables at equation (1)

$$ROA = 1.188 - 0.010\ CAR + 0.205\ NIM - 0.034\ FDR - 0.017 NPF + e \dots\dots\dots\dots(3)$$

Based on the equation (1) above, it can be interpreted as follows:
a. The constant value (α) has a positive value of 1,188. This means that if the CAR, and NIM are 0, ROA is 1.188.
b. The variable CAR has a negative regression coefficient of 0.010. this shows that for every addition of 1 unit of CAR, ROA will decrease by 0.010.
c. The variable NIM has a positive regression coefficient of 0.205. this shows that for every addition of 1 unit of NIM, ROA will increase by 0.205.
d. The variable FDR has a negative regression coefficient of 0.034. this shows that for every additional 1 unit of FDR, ROA will decrease by 0.034.
e. The variable NPF has a negative regression coefficient of 0.017. this shows that for every additional 1 unit of Financing to Debt Ratio, ROA will decrease by 0.017.

The t test (partial regression test) is used to determine whether partially the influence of the variable CAR, NIM, FDR and NPF have a significant effect on return on assets. The test uses a significance level of 0.05. The basis for returning the decision to the t test is, first if t count ≥ t table means Ho is rejected, Ha is accepted and second, if t count ≤ t table means Ho is accepted, Ha is rejected.

Using the same Table 7, t-Test can explain the influence between variables as follows:
a. The significant affection of CAR to ROA
   CAR has a t count of -0.261 with an absolute price of 0.261 while t table with a significant level of 0.05 and degrees of freedom (df) = n-k = 10-4= 6 is 2.447, so t count 0.261 < 2.447 t table with significant probability for CAR variable is 0.805 > 0.05. It was concluded that the hypothesis is H01 is accepted, and Ha1 is rejected, which means that partially CAR does not affect ROA.
b. The significant affection of NIM for ROA
   NIM has a t count of 5.997 while the t table with a significant level of 0.05 and degrees of freedom (df) = n-k = 10-4 = 6 is 2.447, so the t count is 5.997 > 2.447 t table with a significant probability for NIM variable is 0.002 <0.05, so Ha2 is accepted, and H02 is rejected, which means that partially the NIM has an effect ROA.
c. The significant affection of FDR to ROA
   FDR has a t count of 0.708 while the t table with a significant level of 0.05 and the degrees of freedom (df) = n-k- =10-4 = 6 is 2.447, so the t count is 0.708 <2.447 t table with a significant probability for FDR variable is 0.511 > 0.05 so that H03 is accepted and Ha3 is rejected, which means that partially FDR has no effect on ROA.
d. The significant affection of NPF to ROA
   NPF has a tcount of 3.248 while ttable with a significant level of 0.05 and degrees of freedom (df) = n-k =10-4 = 6 is 2.447, so that tcount is 3.248 > 2.447 ttable with a significant probability for NPF variable of 0.023 <0.05 so that Ha4 is accepted

and H04 is rejected, which means that partially NPF influences ROA.

The F test aims to test the effect of the independent variables, namely CAR, NIM, FDR, and NPF, simultaneously on the dependent variable ROA, namely by comparing the values of F count and F table and the level of significance. The calculation results from the F test in this study can be seen in the following table below.

Table 8. Table F – Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.855	4	.214	10.574	.012[b]
	Residual	.101	5	.020		
	Total	.956	9			

a. Dependent Variable: ROA
b. Predictors: (Constant), NPF, CAR, FDR, NIM

Based on the table above, the F count value is 10.574 > F_table 4.46 with a significance of 0.012 <0.05, thus H0 is rejected, and Ha is accepted, meaning that simultaneously, there is a significant influence between CAR, NIM, FDR, and NPF on ROA. The coefficient of determination (R square), often symbolized in R^2 can be interpreted as the contribution of influence given by the independent variables (CAR, NIM, FDR and NPF to the dependent variable (ROA). The results of the coefficient of determination in this study are as follows:

Table 9. Coefficient Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.946[a]	.894	.810	.14218

a. Predictors: (Constant), NPF, CAR, FDR, NIM

From the calculation results in Table 9, the coefficient of termination (KD) = (R2) x 100% is obtained from R, namely KD = $(0.946)^2$ x 100% = 89.4%. It means the contribution is 89.4%, while the rest (100% -89.4% = 10.6%) is the influence of other factors not investigated in this study by the author.

4.2. Discussion

The effect of simultaneous among CAR, NIM, NPF, and FDR based on Table 8, with a significance of 0.012 <0.05, there is a significant influence between CAR, NIM, FDR, and NPF on ROA with the contribution 89.4%, higher contribution compare to the result of research done by Nurfitriani, 2021 (contribution percentage of 58%) with the period of data 2011 - 2016 in Bank Muamalat. The difference variable is in this study, the author added NIM as the new variable. The result of the partial effect of ROA, Research done by (Nurfitriani, 2021) is CAR and NPF had a positive effect on ROA, while FDR had no effect on ROA while in this study are CAR and FDR have no effect

on ROA, but NIM and NPF had a significant effect on ROA. The result is different in CAR because the number of CAR in 2011 – 2016 is less than that in CAR after 2016, significantly after Shareholder increased Capital Tier 2 in 2022 and 2023. The company's capital adequacy ratio (CAR) increased by 8.94% (YoY) from 23.76% as of 31 December 2021 to 32.70% as of December 2022. This increase was due to the realization of additional tier 2 capital of IDR 2 trillion (Bank Muamalat Financial Report, 2023).

Research done by Widyastuti & Aini, (2021) on 128 Banks (Islamic & Conservative Bank) in the period 2017 – 2019 shows that CAR and LDR do not affect bank profitability (ROA), while NPL has a significant negative effect on ROA. Meanwhile, the contribution of CAR, LDR, and NPL to ROA was 45.6%. Since a Conservative Bank Loan is equivalent to Financing in an Islamic Bank, LDR consists of Loan Deposit Ratio or equivalent with FDR in Islamic Bank, and NPL consists of Non-Performing Loan or equivalent with NPF in Islamic Bank.

The results done by (Ummah & Suprapto, 2020) using Vector Error Correction Model (VECM) with data period 2000 – 2014 in Bank Muamalat, showed the results of short-term CAR and NPF had an insignificant effect on ROA, while FDR had a significant negative effect on ROA. However, the long-term results showed that the CAR is an insignificant effect on ROA. BOPO has a significant negative effect ROA. NPF on ROA, if there is an increase of one percent NPF profitability BMI will decrease by 4.1%. FDR significant negative effect on ROA.

Different results with research done by Hanafia & Karim, (2020) for 10 Business Unit Syariah (BUS), Bank of People Lending (BPRS), and 10 Islamic Bank data period 2013 – 2018, Multiple regression analysis reveals that NPF has a positive impact on ROA at BUS, BOPO has a negative effect on ROA at BUS and BPRS, CAR has no effect on ROA at BUS, and CAR has a positive influence on ROA at BPRS. NPF has a negative effect on ROA at BPRS, FDR has no effect on ROA at BUS, FDR has a negative effect on ROA at BPRS, NOM has a positive effect on ROA at BUS, NOM has no effect on ROA, DPK has no effect on ROA at BUS.

Based on news published by Bank Muamalat, there was some Management action to increase ROA, such as strengthening strategic business in optimization of business focus in financing and funding, especially in the Retail segment, distribution channel strategy, broadening the digital network, and developing the organization and human resources. The Ministry of Finance has officially appointed Bank Muamalat as a Salary Distribution Bank for State Civil Apparatus. This appointment is the entry point for exploring consumer financing offers such as Multipurpose Financing or Mortgage Financing for State Civil Apparatus. As for strengthening the consumer business, Bank Muamalat initiated the Muamalat Associate Program (MAP), which is specifically for this segmentation. Improving CAR, there is a plan that BTN Syariah will acquire Bank Muamalat. To reduce NPF, Bank Muamalat improved financing quality by restructuring strategies.

5. CONCLUSION AND RECOMMENDATION

The affection of partial relationship between variable independent and dependent based on t Test was that CAR and FDR have no affection to ROA. At the same time, NIM and NPF significantly affect ROA. The simulant relationship of all independent and dependent variables based on the F Test, CAR, NIM, FDR, and NPF significantly affect ROA. Furthermore, it can be seen from the coefficient of determination of 89.4%,

which means CAR, NIM, FDR, and NPF influence ROA, while the remaining 10.6% is influenced by other variables not examined in this study.

Based on the results of the discussion analysis, the recommendations we suggest in this study are, (1) Bank Muamalat should always pay attention to managing large debts with the amount of equity or capital of Bank Muamalat. The lower the level of debt, the better, while the greater the amount of debt owed, the higher the risk for the company. Excessive debt can cause a high debt repayment burden and if Bank Muamalat cannot keep up with its ability to pay its obligations, it is feared that it will experience the worst risk, namely bankruptcy or being unable to pay the burden of obligations; (2) Bank Muamalat is advised to increase profits, so investors can be more interested in investing in Bank Muamalat; and (3) Future researchers are expected to add the independent variables, company data, and company year because many independent variables have not been included in this study, which can affect the company's financial performance.

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