# Maximizing Returns: The Impact of Key Ratios on Bank Mega Syariah's ROA

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ABSTRACT

*This study investigates the factors influencing Return on Assets (ROA) at PT. Bank Mega Syariah, focusing on Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Operating Costs to Operating Income (BOPO). The research utilizes quarterly financial reports from PT. Bank Mega Syariah for the 2016–2023 period and applies a quantitative research approach. Data analysis includes classical assumption testing, multiple linear regression analysis, and hypothesis testing. The classical assumption test confirms that the data meets the requirements for multiple linear regression modeling. The hypothesis testing reveals that NPF has a significant positive effect on ROA, with a p-value of 0.007 (< 0.05) and a t-value of 2.894. Conversely, FDR, with a p-value of 0.308 (> 0.05) and a t-value of 1.038, shows no significant effect on ROA despite its positive direction. BOPO demonstrates a significant negative effect on ROA, with a p-value of 0.000 (< 0.05) and a t-value of -5.374. Additionally, the F-test results indicate a significant simultaneous effect of NPF, FDR, and BOPO on ROA, with a p-value of 0.000 (< 0.05). These findings highlight the importance of efficient cost management and asset quality in enhancing profitability, while FDR requires further exploration for its potential role in financial performance.*

**Keywords :** Bank Mega Syariah, profitability, financial performance.

## A. INTRODUCTION

Sharia banking, as stipulated in Law No. 21 of 2008 on Sharia Banking, encompasses all activities related to Islamic banking institutions, business operations, and the mechanisms of their implementation. These institutions play a pivotal role in the financial sector by acting as intermediaries, primarily focusing on fund collection (funding), fund distribution (financing), and offering financial services. The intermediary role underscores the importance of trust, as banks must gain public confidence to sustain their operations (Mahardian, 2008).

The trust of depositors is closely tied to a bank's financial health, which is assessed through performance indicators derived from financial reports. Profitability is one of the key measures used to evaluate performance, as it reflects the efficiency of a bank's resource management in generating profits. Return on Assets (ROA), in particular, is a widely used metric in banking to assess how well a bank utilizes its assets to generate earnings (Suryani, 2011).

Internal factors significantly influence a bank's profitability, including financial ratios like Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Operating Costs to Operating Income (BOPO). NPF measures the quality of financing portfolios and indicates credit risk, while FDR reflects the bank's ability to manage its funds for financing activities. BOPO, on the other hand, measures operational efficiency, showing the proportion of operating expenses to operating income (Muhammad, 2019).

Trends in these financial ratios at PT. Bank Mega Syariah from 2016 to 2023 reveal significant fluctuations, particularly in ROA and BOPO, which reflect changes in profitability and operational efficiency. For instance, ROA experienced a decline in 2019, coinciding with higher BOPO ratios, but showed improvement in subsequent years as operational efficiency increased (PT Bank Mega Syariah Financial Reports, 2016-2023). These trends highlight the importance of financial management strategies in maintaining bank profitability.

Previous studies on the relationship between financial ratios and ROA in Islamic banking have shown mixed results. For example, Widyaningrum (2015) found no significant relationship between NPF and ROA, while Kolade (2012) identified a negative impact. Similarly, studies on FDR have yielded conflicting outcomes; Widowati (2015) found a positive effect, while Werdaningtyas (2002) reported a negative influence. Regarding BOPO, Muliawati (2015) observed a positive impact on ROA, whereas Makmun (2008) highlighted its negative effect. These inconsistencies underscore the need for further empirical investigation.

This study aims to analyze the impact of NPF, FDR, and BOPO on ROA at PT. Bank Mega Syariah over the 2016–2023 period. By examining these internal factors, the research seeks to provide insights into the dynamics of financial performance in Islamic banking. Understanding these relationships is crucial for formulating strategies to enhance profitability and strengthen the bank's operational efficiency, ensuring sustainable growth in a competitive financial environment.

## B.  THEORITICAL

The profitability of Islamic banks is a key measure of their financial health and operational efficiency. Return on Assets (ROA) is one of the primary indicators used to assess profitability, reflecting the ability of a bank to generate earnings from its total assets (Suryani, 2011). ROA serves as a crucial benchmark for stakeholders to evaluate how effectively an Islamic bank utilizes its resources to achieve its financial objectives. This section explores the relationships between Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Operating Costs to Operating Income (BOPO) with ROA based on previous studies.

### Non-Performing Financing (NPF) and ROA

NPF is an indicator of credit risk that reflects the proportion of non-performing loans to total financing provided by a bank. High NPF levels indicate poor loan quality and increased risk of default, which can negatively affect profitability (Kolade, 2012). Research by Widyaningrum (2015) found no significant relationship between NPF and ROA, suggesting that Islamic banks may have mechanisms to mitigate the impact of credit risk. Conversely, Kolade (2012) reported a significant negative impact of NPF on ROA, emphasizing the importance of prudent financing practices. These mixed findings highlight the need for contextual analysis, as variations in risk management strategies and economic conditions may influence the relationship.

### Financing to Deposit Ratio (FDR) and ROA

The Financing to Deposit Ratio (FDR) measures a bank's efficiency in utilizing customer deposits to provide financing. An optimal FDR indicates effective fund management, which can enhance profitability. Widowati (2015) found that FDR positively influences ROA, indicating that efficient financing allocation can drive earnings growth. However, Werdaningtyas (2002) argued that a high FDR might lead to liquidity risks, potentially undermining profitability. These differing perspectives underscore the complexity of balancing fund utilization and risk management in Islamic banking.

### BOPO and ROA

BOPO, the ratio of operating costs to operating income, is a critical measure of a bank's operational efficiency. A high BOPO ratio suggests excessive operational expenses, which can erode profitability (Makmun, 2008). Muliawati (2015) observed that BOPO negatively affects ROA, highlighting the detrimental

impact of inefficiency on financial performance. Conversely, some studies suggest that operational efficiency improvements can significantly enhance profitability (Muhammad, 2019). This relationship underscores the importance of cost control and revenue optimization in maintaining a healthy BOPO ratio.

## Integrated Impact of NPF, FDR, and BOPO on ROA

Studies examining the combined effects of NPF, FDR, and BOPO on ROA often highlight their interconnected influence on profitability. Research by Sari et al. (2018) demonstrated that these financial ratios collectively have a significant impact on ROA, suggesting that a comprehensive approach to financial management is essential for optimizing profitability. Furthermore, differences in the regulatory environment and market conditions may affect the relative importance of each factor.

## C. METHODOLOGY

This study employs a quantitative research design using secondary time-series data from the quarterly financial reports of PT. Bank Mega Syariah for the 2016–2023 period, sourced from the bank's official website. Secondary data provides reliable historical records essential for identifying trends and patterns in financial research (Sekaran & Bougie, 2016). The analysis applies a multiple linear regression model to examine the relationships between multiple independent variables and a dependent variable. Classical assumption tests normality, multicollinearity, heteroscedasticity, and autocorrelation are conducted to ensure the validity and robustness of the regression model (Gujarati & Porter, 2009).

Data analysis is conducted using SPSS software, which offers robust tools for statistical computations and graphical analysis. SPSS ensures accuracy and efficiency in identifying relationships among the variables, supporting empirical conclusions with reliable evidence (Field, 2017).

## D. RESULTS AND DISCUSSION
## Classical Assumption Test

Since the data used in this study is secondary data, it is essential to test the model's accuracy by applying several classical assumption tests. These include the Normality Test, Multicollinearity Test, Heteroscedasticity Test, and Autocorrelation Test.

## Normality Test

The normality test is conducted to determine whether the data used in the study follows a normal distribution. Ideally, good data should exhibit a normal distribution. In this study, the normality test employs the Kolmogorov-Smirnov test with a significance level of 5% ($\alpha$ = 0.05). Data is considered normally distributed if the test coefficient is greater than 0.05.

Table 2. Normality test

|  |  | Unstandardizes Residual |
| --- | --- | --- |
| N |  | 32 |
| Normal Parameters | Mean | .0000000 |
|  | Std. Deviation | .65478039 |
| Most Estreme Differences | Absolute | .150 |
|  | Positive | .150 |
|  | Negative | -.113 |
| Kolmogorov-Smirnov z |  | .846 |
| Asymp. Sig. (2-tailed |  | .471 |

Source : Data processing with SPSS 16

Based on table 2, the significance value obtained using the Kolmogorov-Smirnov test is 0.471, which is greater than the $\alpha$ value of 0.05. This indicates that the data is normally distributed, fulfilling the normality test requirement.

## Heteroscedasticity test

The heteroscedasticity test aims to determine whether the variance of the errors differs across observations. One method to detect heteroscedasticity is by examining a scatter plot of the predicted values of the dependent variable against the residuals. The presence or absence of heteroscedasticity in this study can be assessed by observing the distribution pattern in the scatter plot shown in figure 1 below.
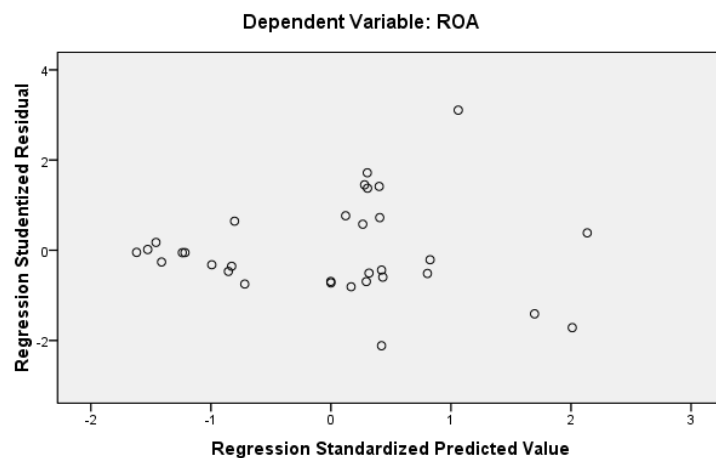


Figure 1. Scatter plot graph

From figure 1, the heteroscedasticity test results, as observed in the scatter plot, indicate that the points are dispersed both above and below or around the zero value on the X and Y axes, without forming a clear pattern. Therefore, it can be concluded that there are no symptoms of heteroscedasticity.

## Multicollinearity Test

The multicollinearity test is used to determine whether the regression model has issues related to correlations between independent variables. A good regression model should be free from multicollinearity. This condition is met when the Variance Inflation Factor (VIF) value is less than 10 and the tolerance value is greater than 0.1. If these criteria are satisfied, the regression model can be considered free of multicollinearity.

Table 3. Multicollinearity test

| Model | Unstandardized Coefficiebts | | Standardized Coeffic ients | T | Sig | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Toler ance | VIF |
| 1 (Constant) | 10.880 | 1.313 | | 8.287 | .000 | | |
| NPF | .552 | .191 | .465 | 2.894 | .007 | .513 | 1.948 |
| FDR | .015 | .014 | .237 | 1.038 | .308 | .254 | 3.931 |
| BOPO | -132 | .025 | -1.184 | -5.374 | .000 | .273 | 3.666 |

Based on the output in table 3, the VIF values for the variables are as follows: NPF at 1.948, FDR at 3.931, and BOPO at 3.666, all of which are below the threshold of 10. This indicates that there is no multicollinearity among the variables, and thus, the multicollinearity test is satisfied.

## Autocorrelation Test

The autocorrelation test is used to determine whether there is a correlation between the errors in period t and those in the previous period t-1. The autocorrelation is tested using the run test. The results of the run test can be found in table 4 below.

Table 4. Autocorrelation test

| | Unstandardized Residual |
|---|---|
| Test Value | -.15230 |
| Cases < Test Value | 16 |
| Cases > Test Value | 16 |
| Total Cases | 32 |
| Number of Runs | 12 |
| Z | -1.617 |
| Asymp. Sig. (2-tailed) | .106 |

Based on the analysis results using the run test, the asymp. sig. (2-tailed) value is 0.106. If the asymp. sig. (2-tailed) value is less than 0.05, it indicates the presence of autocorrelation; if it is greater than 0.05, it suggests no autocorrelation. Since the asymp. sig. (2-tailed) value is 0.106, which is greater than 0.05, it can be concluded that there are no signs of autocorrelation.

## Multiple Linear Regression

Multiple linear regression analysis is used to examine the relationship between two or more independent variables and a dependent variable. The results of the analysis are presented as follows:

Table 5. Multiple linear regression test

| Model | Unstandardized Coefficiebts | | Standardized Coefficiens | T | Sig |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| I (Constant) | 10.880 | 1.313 | | 8.287 | .000 |
| NPF | .552 | .191 | .465 | 2.894 | .007 |
| FDR | .015 | .014 | .237 | 1.038 | .308 |
| BOPO | -132 | .025 | -1.184 | -5.374 | .000 |

The multiple regression analysis reveals that the constant value of 10.880% indicates the baseline performance level of ROA when Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Operating Costs to Operating Income (BOPO) are all zero. Among the independent variables, NPF has a positive coefficient of 0.552%, signifying that a 1% increase in NPF will lead to a 0.552% increase in ROA, assuming other factors remain unchanged. Similarly, the FDR coefficient of 0.015% implies a marginal positive impact, where a 1% rise in FDR increases ROA by 0.015%, reflecting a minimal but favorable contribution to profitability.

In contrast, BOPO shows a negative coefficient of -0.132%, indicating that operational inefficiencies have a detrimental impact on ROA. For every 1% increase in BOPO, ROA decreases by 0.132%, highlighting the importance of cost management in maintaining profitability. These findings emphasize the nuanced effects of credit risk, liquidity management, and operational efficiency on the financial performance of Bank Mega Syariah.

## Hypothesis Testing

The t-test is used to assess the individual or partial effect of each independent variable on the dependent variable. In this study, the decision rule for the t-test is based on the significance values: Ho is accepted if the significance value is greater than 0.05, and Ho is rejected (i.e., Ha is accepted) if the significance value is less than 0.05.

**Tabel 6.** Partial test (t test)

| Model | Unstandardized Coefficiebts | | Standardized Coefficients | T | Sig |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| I (Constant) | 10.880 | 1.313 | | 8.287 | .000 |
| NPF | .552 | .191 | .465 | 2.894 | .007 |
| FDR | .015 | .014 | .237 | 1.038 | .308 |
| BOPO | -132 | .025 | -1.184 | -5.374 | .000 |

The partial t-test results reveal significant insights into the influence of key variables on Bank Mega Syariah's ROA. The Non-Performing Financing (NPF) variable has a t-value of 2.894 and a significance value of 0.007, which is below the 0.05 threshold. This leads to the rejection of H0 and acceptance of H1, confirming that NPF significantly and positively affects ROA. This finding suggests that although an increase in NPF reflects higher credit risk, effective loan management strategies can help mitigate losses and maintain profitability.

In contrast, the Financing to Deposit Ratio (FDR) variable, with a t-value of 1.038 and a significance value of 0.308, does not significantly affect ROA, as H0 is accepted. This indicates that changes in FDR are not directly linked to profitability. Meanwhile, the Operating Costs to Operating Income (BOPO) variable, with a t-value of -5.374 and a significance value of 0.000, has a significant negative impact on ROA. The acceptance of H3 highlights the critical role of operational efficiency, as higher BOPO ratios indicate inefficiency, leading to reduced profitability. These results emphasize the need for effective cost management and risk mitigation strategies to sustain financial performance.

## Simultaneous test (Uji F)

The F-test is used to determine whether the independent variables collectively influence the dependent variable. In this study, the independent variables are Non-Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Operating Cost to Operating Income (BOPO), while the dependent variable is Return on Assets (ROA). The results of the F-test are presented in the table below.

**Tabel 7.** Simultaneous test (Uji F)

| Model | Sum of Square | Df | Mean Square | F | Sig |
|---|---|---|---|---|---|
| I Regression | 22.588 | 3 | 7.529 | 15.862 | .000 |
| Residual | 13.291 | 28 | .475 | | |
| Total | 36.879 | 31 | | | |

Based on Table 7, the calculated F-value is 15.862. The analysis also shows that the significance value is 0.000. According to the decision rule, if the significance is less than or equal to 0.05, the hypothesis is accepted. Since the significance value is 0.000, which is less than 0.05, H0 is rejected and H4 is accepted. Therefore, it can be concluded that NPF, FDR, and BOPO have a significant simultaneous ROA at Bank Mega Syariah.

## Discussion

### The Influence of NPF on ROA

The regression analysis revealed a significant positive relationship between NPF and ROA, supported by the partial t-test results. This indicates that as NPF increases, ROA also increases, although this may seem counterintuitive. Bank Mega Syariah manages problem loans effectively, mitigating potential losses and maintaining profitability. However, higher NPF still signals higher credit risk, which could strain resources if not properly managed. This finding aligns with Dendawijaya (2005), who highlights the negative implications of high NPF on profitability when not addressed efficiently.

### The Effect of FDR on ROA

While the regression analysis showed a positive relationship between FDR and ROA, the partial t-test results indicated that FDR does not have a statistically significant impact on ROA. This suggests that the bank's profitability is not directly tied to its financing levels but rather to its overall risk management and profit-sharing practices. This supports Umam's (2013) theory, which suggests that a high FDR might reflect lower liquidity but does not necessarily translate into profitability changes.

### The Effect of BOPO on ROA

The analysis showed a significant negative relationship between BOPO and ROA, indicating that higher BOPO values, reflecting operational inefficiency, lead to reduced profitability. This finding supports Frianto (2012), who argues that high BOPO reduces a bank's ability to generate profits. Efficient operational cost management is thus critical for improving ROA, consistent with Rivai & Arifin's (2010) view on operational efficiency.

### Combined Influence of NPF, FDR, and BOPO on ROA

The simultaneous F-test results demonstrated that NPF, FDR, and BOPO together significantly influence ROA, with a combined model predicting an ROA baseline of 10.880% when all predictors are zero. The overall significance (p <

0.05) confirms that these variables collectively play a critical role in determining profitability at Bank Mega Syariah. This emphasizes the importance of a balanced approach in managing credit risk, operational efficiency, and liquidity.

## E. CONCLUSION

The results of this study indicate that the variables NPF, FDR, and BOPO have varying effects on the ROA of Bank Mega Syariah. Based on multiple regression analysis and partial t-tests, NPF was found to have a significant positive effect on ROA. This suggests that an increase in NPF can be effectively managed by the bank to maintain profitability, even though a rise in NPF also reflects higher credit risk.

On the other hand, FDR does not have a significant effect on ROA. This finding indicates that the level of financing to deposits does not directly influence the profitability of Bank Mega Syariah, possibly due to the bank's strong risk management practices and diversified income sources that do not rely solely on financing. Conversely, BOPO has a significant negative effect on ROA, indicating that an increase in operational costs relative to operational income reduces the bank's efficiency and profitability.

Overall, this study highlights the importance of effective credit risk management, operational efficiency, and balanced financing strategies in supporting the financial performance of Bank Mega Syariah. The bank should continue improving operational efficiency to reduce the BOPO ratio while maintaining financing quality to minimize NPF risk. Moreover, these findings can serve as guidance for other Islamic banks in managing the factors that influence their profitability sustainably.

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