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THE EFFECT OF FINANCIAL PERFORMANCE ON THE PROFITABILITY OF BANK SYARIAH IN INDONESIA THROUGH NET INCOME WITH PATH ANALYSIS

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Abstrak :
This study aims to determine the effect of CAR, NPF, and FDR financial ratios on the profitability of Islamic banking in Indonesia with the Net Income ratio as an intervening variable. Using secondary data from the Indonesian Islamic Banking Quarterly Financial Reports for the years 2020–2024, this study employs a descriptive quantitative research methodology. Purposive sampling was utilized in the sample selection process, yielding a sample size of 140 data points that satisfied the study's requirements. CAR and FDR have a substantial impact on Net Income, according to the route analysis test findings utilizing the Eviews analysis tool in the first model. In contrast, Net Income is not much impacted by the NPF variable. The findings of the path analysis test in the second model indicate that ROA is significantly impacted by the CAR and NI variables. In the meanwhile, ROA is unaffected by the NPF and FDR factors. The Sobel test revealed that Net Income could indirectly moderate the impact of CAR on ROA. The indirect impact of NPF and FDR on ROA could not be mediated by net income. Therefore, it may be said that NI, as an intervening variable, mediates the association between CAR and ROA more effectively than it does the relationship between NPF and FDR and ROA.
Keywords : *Islamic Banking, CAR, FDR, NPF, NI, Profitability, and Path Analysis*

INTRODUCTION

The banking sector, particularly Islamic banking, has been greatly impacted by the shifting dynamics of the world economy. In recent years, Islamic banking in Indonesia has grown significantly, as well as a rise in public knowledge of Islamic finance as evidenced by financial inclusion and literacy (see figure 1).

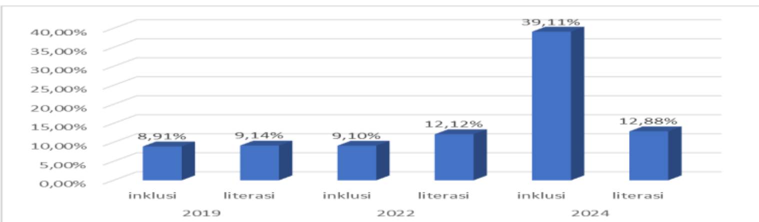

Figure 1. Development Chart of Sharia Financial Literacy and Inclusion in Indonesia from 2020 to 2024

According to Figure 1, Islamic financial inclusion and literacy have been steadily increasing, according to statistics gathered by the Financial Services Authority (OJK). Positive growth is reflected in this increase, which solidifies Syariah banking's standing as one of the primary contributors to Indonesia's financial system. In this situation, one of the primary factors used in the rivalry between syariah and conventional banks is profitability.

According to Figure 1, Islamic financial inclusion and literacy have been steadily increasing, according to statistics gathered by the Financial Services Authority (OJK). Positive growth is reflected in this increase, which solidifies Islamic banking's standing as one of the primary contributors to Indonesia's financial system. In this situation, one of the primary factors used in the rivalry between Islamic and conventional banks is profitability Capital Adequacy Ratio (CAR), financing risk indicated by the Non-Performing Financing (NPF) ratio, and liquidity risk reflected in the Financing to Deposit Ratio (FDR).

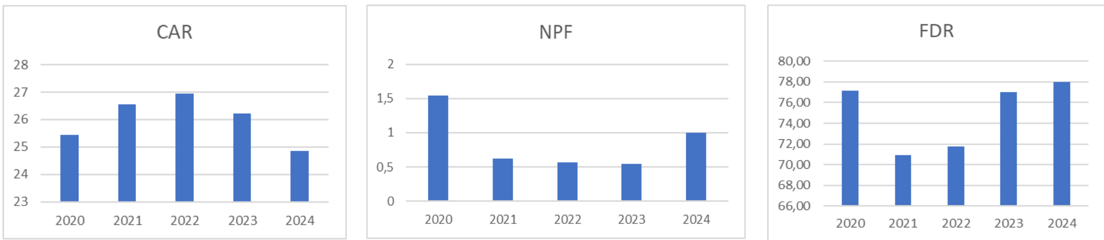

Figure 2. Development Chart of CAR, NPF, and FDR of Bank Sayriah in Indonesia 2020-2024

The primary financial ratios of Islamic banks, as depicted in Figure 2, exhibit a dynamic that indicates steady performance and strong risk management skills. Despite an increase in 2021–2022, the CAR ratio exhibits a declining tendency from roughly 25.5% to roughly 24%. In the meantime, the NPF shows a notable drop from roughly 1.5% to roughly 0.5% between 2020 and 2023 before rising once up to 1% in 2024. From roughly 76% to 78%, the FDR exhibits an upward tendency. Overall, Indonesian Islamic banking is able to sustain balanced stability in capital, credit quality, and intermediation activities, according to the financial ratio performance from 2020 to 2024.

Based on Figure 2, is the financial performance of Islamic Banks in Indonesia influenced by CAR, NPF, and FDR?.Arif et al., (2024); Charisma et al., (2022); Juniarmita et al., (2022); Sunaryo, (2020); Yuliana & Listari, (2021) mentions that CAR has a significant positive effect on profitability. Meanwhile ALNAJJAR & Othman, (2021); Ariyanti et al., (2022); Baihaqi & Asih, (2025); Hermawati & Purbayati, (2022); Kusuma & Dharma, (2025); Wiranthie, (2020) mentions that CAR has a significant negative effect on profitability.

Next, some previous studies conducted by Anugra et al., (2025); Fathihani et al., (2025); Hodi & Wardana, (2023); Kharazi, (2021); Masalingi et al., (2025); Setiadi et al., (2024) mentions that NPF has a significant negative effect on profitability. Meanwhile, the research conducted by Purwanti, (2022) and Qodari, (2022) which shows the opposite result that NPF has a positive effect on profitability.

Anugra et al., (2025); Baihaqi & Asih, (2025); Irnawati et al., (2020); Nuriatullah, (2022); Yuliana & Listari, (2021); Zikri et al., (2023) mentions that FDR has a significant positive influence on profitability. Meanwhile Atthaariq & Adityawarman, (2022); Hasibuan et al., (2022); Rahmansyah et al., (2022); Salsabila et al., (2023); Wijaya et al., (2023) mentions that FDR has a significant negative effect on profitability.

Previous research indicates that most studies look at the direct relationship, without the use of intermediary factors, between profitability and CAR, NPF, and FDR. Therefore, this study aims to investigate the effects of the CAR, NPF, and FDR on the ROA of Islamic banks in Indonesia between 2020 and 2024 using Net Income (NI) as an intervening variable. Net income was chosen because it may show the Syariah Bank's ability to generate revenue from all of its activities. It is anticipated to offer a thorough picture of the direct and indirect effects of financial performance on profitability by utilizing quarterly data from Indonesian Islamic banks and incorporating Net Income as an intervening variable.

RESEARCH METHOD

This study is quantitative in character, addressing research issues or hypotheses with numerical data (Waruwu et al., 2025). Secondary data was used in this investigation. The method used to choose the sample for this investigation was called purposeful sampling. The following are the study's criteria: (1) Islamic banks that publish financial reports on ROA, CAR, NPF, FDR, and NI on a regular basis between 2020 and 2024; (2) Islamic banks that provide financial reports between the first and fourth quarters; and (3) Islamic banks whose financial ratios do not exceed the unhealthy limits.

Table 1. Population and Sample Data for Islamic Banking

NO	Name: Population of Syariah Banking	Selected Syariah Banking Sample Names
1	PT. Bank Syariah Indonesia	PT. Bank Syariah Indonesia
2	Bank Muamalat	Bank Muamalat
3	Bank Jabar Banten Syariah	Bank Jabar Banten Syariah
4	Bank Mega Syariah	Bank Mega Syariah
5	BCA Syariah	BCA Syariah
6	Bank BTPN Syariah	PT. BPD NTB Syariah
7	PT. BPD NTB Syariah	Bank Aceh Syariah
8	Bank Aceh Syariah	
9	PT. BPD Riau Kepri Syariah	
10	BRI Syariah	
11	Bank BNI Syariah	
12	Bank Syariah Mandiri	
13	Maybank Syariah Indonesia	

14	Bank Nano Syariah

Source: The researcher processed the data (2025)

Seven banks satisfy the requirements based on the criteria and list of bank names that comprise the study population, yielding a final sample of 140 research data points. The study employed CAR, NPF, and FDR as independent variables. In the meantime, net income is the intervening variable and profitability, as determined by ROA, is the dependent variable. Consequently, the following two equations are included in this study:

Equation 1:

$$\boldsymbol{Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_1}$$

Equation 2:

$$\boldsymbol{Y = \beta_0 + \beta_4 X_1 + \beta_5 X_2 + \beta_6 X_3 + \beta_7 Z + e_2}$$

Description:

X_1 : Capital Adequacy Ratio (CAR)
X_2 : Non Performing Ratio (NPF)
X_3 : Financing to Deposit Ratio (FDR)
Y : Return on Asset (ROA)
Z : Net Income
β_0 : Constanta
β_1 : Coefficient of the effect of CAR (X1) on NI (Z)
β_2 : Coefficient of the effect of NPF (X2) on NI (Z)
β_3 : Coefficient of the influence of FDR (X3) on NI (Z)
β_4 : Coefficient of the effect of CAR (X1) on ROA (Y)
β_5 : Coefficient of the effect of NPF (X2) on ROA (Y)
β_6 : Coefficient of the effect of FDR (X3) on ROA (Y)
β_7 : Coefficient of the influence of NI (Z) on ROA (Y)

The Sobel test and path analysis are the analytical methods employed in this investigation. A modeling technique called path analysis is predicated on the idea that a condition is influenced by numerous variables (multiple regression) as well as a single variable (linear regression). In addition to direct effects, indirect effects are also possible (Duryadi, 2024). Additionally, the Sobel test is a statistical model used to assess the consequence of intervening factors in a study. This technique measures the indirect impact of the dependent variable on the variable that is not dependent.

RESULTS AND DISCUSSION

Results

The objective of this inquiry is to look into how CAR, NPF, and FDR affect the profitability of Indonesian Islamic banks between 2020 and 2024, with Net Income serving as the mediating variable via route analysis. Model selection tests, including the Chow and Hausman tests, are used in the study together with panel data. The Chow exam helps choose the optimal model between the fixed effect and common effect models, whereas the Hausman exam determines if the fixed affect or random effect formulation is more suitable.

The following are the results of various tests in this study:

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.433995	(6,129)	0.0000
Cross-section Chi-square	55.386546	6	0.0000

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	23.651178	4	0.0001

Figure 4. Chow Exam and Hausman Exam

According to Figure 4, the Chow test results demonstrate that the probability value 0,0000. Because the probability values less than 0,05 this suggests that the fixed effect model is the best fit for panel data regression. According to Figure 4, the Hausman test results indicate that the probability value is 0,0001. The probability value is less than 0,05, indicating that the fixed effect model is the best fit for panel data regression. Based on the testing steps performed, the best regression model selected is the fixed effect model; because this model was picked consecutively, there is no need to go to the Lagrange multiplier test.

Path Analysis

Dependent Variable: NI
Method: Panel Least Squares
Date: 09/25/25 Time: 06:17
Sample: 2020Q1 2024Q4
Periods included: 20
Cross-sections included: 7
Total panel (balanced) observations: 140

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.612474	0.479166	9.626038	0.0000
CAR	-0.022691	0.006826	-3.324446	0.0012
FDR	0.011290	0.005832	1.935872	0.0551
NPF	-0.095457	0.058442	-1.633346	0.1048

Dependent Variable: ROA
Method: Panel Least Squares
Date: 09/25/25 Time: 06:32
Sample: 2020Q1 2024Q4
Periods included: 20
Cross-sections included: 7
Total panel (balanced) observations: 140

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.56517	1.850537	5.709245	0.0000
CAR	-0.049173	0.020981	-2.343724	0.0206
FDR	-0.025567	0.017457	-1.464584	0.1455
NI	-1.211477	0.258815	-4.680857	0.0000
NPF	0.045352	0.174221	0.260311	0.7950

Figure 5. Results of the First and Second Path Analysis Model Tests

In Figure 5, the path analysis tests of the first and second models show that in the first model test with Net Income as the dependent variable, the results are: (1) CAR has a significant negative contribution to Net Income, as proven by a t-statistic of -3,324446 and a probability score of 0,0012 < 0,05 and (2) FDR has a significants positive contribution to Net Income, as indicated by a probability score of 0,0551 < 0,05 and a t-statistic of 1,935872.

The following outcomes are displayed by the second path analysis model test using ROA as the dependent variable: (1) CAR has a significant negative contribution to ROA, as proven by a t-statistic score -2,343724 and probability score 0,0206; (2) With a t-statistic of -1,464584 and a probability value of 0,1455, FDR is negatively but not significantly related to ROA; (3)With a probability value of 0,0000 and a t-statistic of -4,680857, NI significantly and negatively affects ROA; (4) with a probability value of 0,7950 and a t-statistic of 0,260311, NPF significantly and favorably affects ROA.

Sobel Test

Table 2. Sobel Test Results

Variable	*Test Statistic*	*Std. Error*	*P-Value*
CAR	2.71028136	0.01014272	0.00672262
NPF	1.54216993	0.07498782	0.12303231
FDR	-1.78891741	0.00764573	0.07362812

Source: Data processed using calculation for Sobel test (2025)

Table 2 shows that (1) CAR has a test statistic value of 2,71 with a p-value of 0,006 < 0,05, indicating that the net income variable can indirectly influence the effect of CAR on ROA; (2) NPF has a test statistic value of 1,54 with a p-value of 0,12 > 0.05, indicating that the net income variable cannot indirectly influence the effect of CAR on ROA; and (3) FDR has a test statistic value of -1,78 with a p-value of 0,07.

Discussion

The Impact of the CAR on Net Income (NI).

The research findings indicate that the Capital Adequacy Ratio (CAR) has a considerable impact on Net Income (NI). This conclusion suggests that a bank's capital adequacy level increases its ability to handle financing risks and channel funds productively. Analytically, this demonstrates that sharia banks with a high CAR level have better financial flexibility when facing loss risks and can extend financing distribution without jeopardizing financial stability. As a result, having enough capital is essential for generating long-term net income**.** However, the influence of CAR on NI can be bidirectional—a high CAR may signal that the bank is overly cautious in routing funds, limiting income efficiency. This finding is consistent with previous research Amendy, (2020) The study found that CAR has a significant effect on profitability.

The Impact of NPF on Net Income.

According to the study's findings, non-performing financing (NPF) has no substantial impact on net income. Conceptually, NPF indicates problematic financing that should reduce earnings; however, in practice, sharia banks can limit this impact by loss reserve policies and stringent risk management in financing. This analysis indicates that the negative impact of NPF on earnings is frequently mitigated by substantial reserves or effective finance restructuring. Furthermore, the proportion of NPF relative to total assets in Indonesian sharia banks is modest, hence its impact on NI is not statistically significant. In the face of financing risks, macroeconomic variables like monetary policy and government stimulus also contribute to the stability of bank income. These results are compatible with studies but not with the findings of Effendi et al., (2024) which states that the NPF has a weak influence on the profitability of Islamic banks.

The impact of the FDR on net income (NI)

The hypothesis test results show that the financing to deposit ratio (FDR) has a considerable impact on net income (NI). This demonstrates that the bigger the share of third-party funds routed into productive lending, the greater the bank's ability to generate revenue from profit-sharing operations. Analytically, FDR demonstrates the bank's ability to turn collected funds into productive assets that create revenue. An ideal FDR illustrates the bank's management's ability to balance liquidity with profitability. However, if FDR is too high, it can pose liquidity and excessive financing issues, thereby reducing long-term profit.

This research supports the findings conducted by Effendi et al., (2024) which emphasizes that FDR has a positive influence on the profitability of Islamic banks through increased net profit.

The CAR Variable's Impact on ROA

The results of the study demonstrate that the Capital Adequacy Ratio (CAR) has a substantial impact on Return on Assets (ROA). The ability of the bank to absorb potential loss risks from its profitable assets is analytically described by this ratio. Banks with a high CAR demonstrate sound capital conditions, which enable them to expand their business, provide loans, and increase investor and client confidence. Strong capital also allows banks to withstand potential losses without significantly affecting profits, which increases asset efficiency in profit-generating. But according to some research, if capital is extremely high, the relationship between CAR and ROA may reverse, reducing asset efficiency and leverage. This research supports the findings ALNAJJAR & Othman, (2021); Arif et al., (2024); Ariyanti et al., (2022); Baihaqi & Asih, (2025); Charisma et al., (2022); Hermawati & Purbayati, (2022); Jha & Agrawal, (2022); Juniarmita et al., (2022); Kusuma & Dharma, (2025); Sunaryo, (2020); Wicaksono & Suselo, (2022); Wiranthie, (2020) which emphasizes that CAR has a significant effect on the bank's profitability.

The NPF variable's impact on ROA

The study's findings show that Return on Assets (ROA) is not significantly impacted by Non-Performing Financing (NPF). This finding implies that the effectiveness of assets in making a profit is not immediately reduced by an increase in problematic financing. The impact of NPF on profit can be reduced because Islamic banking has a stringent provisioning and risk management framework for funding. Furthermore, NPF's share of total assets is often low, and higher revenue from other productive assets can counteract its impact on ROA.

This result is consistent with the research. Zikri et al., (2023) the researcher found that NPF has no significant effect on the profitability of Islamic banks in Indonesia.

The FDR variable's impact on ROA

According to the study's findings, Return on Assets (ROA) is not significantly impacted by the Financing to Deposit Ratio (FDR). This demonstrates that higher bank asset efficiency in producing profit is not necessarily directly correlated with the amount of funds disbursed. This condition can be analytically explained by variations in the quality of funding distributed; even with a large FDR, the impact on ROA is minimal if the financing is of poor quality or yields low margins. The correlation between FDR and ROA may also be weakened by other elements like cost effectiveness, liquidity, and macroeconomic circumstances. The research findings with the research conducted (Masalingi et al., 2025; Wahyudi & Sari Pohan, 2024) the findings indicate that FDR has no significant effect on profitability.

The Net Income (NI) Variable variable's impact on ROA

The hypothesis's findings demonstrate that Return on Assets (ROA) is significantly impacted by Net Income (NI). This makes sense because ROA is calculated as the ratio of net profit to total assets, so a rise in net profit will immediately raise ROA. Conceptually speaking, nevertheless, this relationship also shows how well the bank may maximize its assets to produce net profit. Banks that manage their assets well will be able to increase earnings without having to drastically increase the quantity of their assets. The profit-sharing mechanism's efficacy and operational cost efficiency are reflected in the impact of NI on ROA in the context of Islamic banking. These research findings are in line with the findings of Syafril., dan Purwanti (2022) This demonstrates the strong correlation between profitability and net income. The impact of CAR on Return on Assets (ROA) is mediated by the Net Income variable. The results of the mediation test indicate that the impact of the Capital Adequacy Ratio (CAR) on Return on Assets (ROA) is considerably mediated by Net Income. Analytically, this suggests that strong capital boosts profitability via first raising net income rather than immediately. High capital strengthens the bank's ability to take risks and grow financing activities, resulting in increased net income and a beneficial influence on asset efficiency. Thus, NI functions as a transmission channel between capital strength and asset performance. This result is consistent with research. Noor & Suhendra, (2024); Purbadasuha & Prasetiono, (2024) which shows that NI can be an effective mediator between CAR and ROA in the context of Islamic banking.

The Net Income variable serves as an intervening variable in mediating the effect of FDR on Return on Assets (ROA).

According to the study's findings, Net Income cannot mediate the effect of FDR on Return on Assets (ROA). This implies that the effect of FDR on ROA occurs directly without intervention from net income, possibly due to the influence of various other factors on net income that are not directly related to FDR, or because the way FDR affects profitability is more complex and not fully reflected solely through net income. The research results are in line with the study conducted by Zikri et al., (2023) that the intervening variable is unable to indirectly mediate the effect of CAR on NIM.

The Net Income variable as an intervening variable mediates the effect of NPF on Return on Assets (ROA)

The study's findings indicate that Net Income cannot mitigate the effect of NPF on ROA. Analytically, this suggests that NPF has a direct impact on profitability rather than indirectly through net profit. This finding shows that the potential impact of NPF on ROA is more likely to be seen in loss reserves or decreased asset efficiency than in aggregate net profit. Meanwhile, FDR's impact on ROA is more complicated because financing distribution does not always result in returns commensurate to the quantity of financing provided. This circumstance suggests the availability of additional variables that could act as stronger mediators, such as operational efficiency (BOPO) or the quality of productive assets. The research results are in line with the study conducted by (Amendy, 2020) which shows that the influence of NPF on profitability is not mediated by Net Income.

CONCLUSION

The data reveal that while NPF has no obvious influence on NI, CAR and FDR do. In the second model, ROA is considerably impacted by CAR and NI, but not by NPF or FDR. Furthermore, NI can mediate the relationship between CAR and ROA, but it cannot mediate the impacts of NPF and FDR on ROA, according to the results of the Sobel mediation exam. In order to preserve the stability and profitability of Indonesia's Islamic banks, this study highlights the significance of bolstering capital structure and profit-enhancing tactics.

Due to its narrow emphasis on Islamic banking in Indonesia between 2020 and 2024 and its exclusive use of financial parameters like CAR, NPF, FDR, NI, and ROA, this study has several limitations. It is advised that future research examine other factors such customer satisfaction levels, operational effectiveness, risk management quality, and product and digital technology advances in Islamic banking services. Further studies can broaden the scope by employing a longitudinal method over a longer time period and contrasting Islamic banks with conventional banks or foreign banks. As a result, knowledge of the critical elements influencing Islamic banks' profitability can grow more thorough and useful.

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