JIEFeS

Journal of Islamic Economics and Finance Studies

Volume 6, No. 2 (December, 2025), pp. 432-449
DOI. http://dx.doi.org/10.47700/jiefes.v6i2.11323

ISSN 2723 – 6730 (Print)
ISSN 2723 - 6749 (Online)

DOES THE RISK AND FINANCING STRUCTURE AFFECT ISLAMIC BANK PERFORMANCE IN INDONESIA?

Ichsan Hamidi*
Department of Development Economics, Faculty of Economics, Universitas Sriwijaya, Palembang, Indonesia
Department of Islamic Economics, Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia
hamidi@fe.unsri.ac.id

Sulistya Rusgianto
Department of Islamic Economics, Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia
sulistya@feb.unair.ac.id

Kamalia Sani
Department of Development Economics, Faculty of Economics Universitas Sriwijaya, Palembang, Indonesia
kamaliasani@unsri.ac.id

Robi'atul Adawiyah
Department of Development Economics, Faculty of Economics Universitas Sriwijaya, Palembang, Indonesia
robiatul.adawiyah@unsri.ac.id

**Corresponding author*

Received: 10 June 2025 | Revised: 22 December 2025 | Published: 31 December 2025

Abstract

This study examines the effects of Profit and Loss Sharing (PLS) financing, Financing to Deposit Ratio (FDR), and Non-Performing Financing (NPF) on the profitability of Islamic commercial banks in Indonesia. Using a quantitative approach, the study employs a fixed-effect panel data regression model based on quarterly data from five Islamic commercial banks over the 2019–2023 period. The empirical results indicate that PLS financing has a positive and statistically significant effect on profitability, while NPF exerts a negative and significant effect. In contrast, FDR shows a negative but statistically insignificant relationship with profitability. These findings suggest that Islamic bank profitability is not primarily driven by liquidity expansion or financing intensity, but rather by the quality of financing and the effectiveness of risk management. The results further highlight that profit and loss-sharing financing can function as a strategic instrument to enhance profitability when supported by strong governance and credit risk control. By integrating financing structure, liquidity behavior, and credit risk within a unified analytical framework, this study contributes to the literature by providing empirical evidence on the conditional effectiveness of Islamic risk-sharing mechanisms in an emerging Islamic banking system.

Keywords: Islamic Banking; Profit-and-Loss-Sharing; Bank Profitability; Non-Performing-Financing; Panel Data

Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh pembiayaan bagi hasil, Financing to Deposit Ratio, dan Non-Performing Financing terhadap profitabilitas bank umum syariah di Indonesia. Penelitian ini menggunakan pendekatan kuantitatif dengan model regresi data panel fixed effect berdasarkan data triwulanan dari lima bank umum syariah selama periode 2019–2023. Hasil penelitian menunjukkan bahwa pembiayaan PLS berpengaruh positif dan signifikan terhadap profitabilitas, sedangkan NPF berpengaruh negatif dan signifikan. Sementara itu, FDR memiliki pengaruh negatif namun tidak signifikan terhadap profitabilitas. Temuan ini mengindikasikan bahwa profitabilitas bank syariah tidak ditentukan oleh ekspansi likuiditas atau intensitas penyaluran pembiayaan, melainkan oleh kualitas pembiayaan dan efektivitas pengelolaan risiko. Hasil penelitian juga menegaskan bahwa pembiayaan bagi hasil dapat berfungsi sebagai instrumen strategis untuk meningkatkan profitabilitas apabila didukung oleh tata kelola yang kuat dan pengendalian risiko kredit yang memadai. Dengan mengintegrasikan struktur pembiayaan, perilaku likuiditas, dan risiko kredit dalam satu kerangka analisis, penelitian ini memberikan kontribusi empiris mengenai efektivitas bersyarat mekanisme bagi hasil dalam sistem perbankan syariah di negara berkembang.

Kata kunci: *Perbankan Syariah; Bagi Hasil; Profitabilitas Bank; Non-Performing Financing; Data Panel*

INTRODUCTION

Islamic banking has emerged as a distinctive system of financial intermediation that emphasizes risk-sharing arrangements, ethical investment principles, and asset-backed financing, thereby offering a viable alternative to interest-based conventional banking. Over the past two decades, the global Islamic banking industry has experienced substantial growth, accompanied by increasing scholarly interest in the determinants of Islamic banks' performance and long-term sustainability. Notwithstanding this expansion, empirical findings on the drivers of Islamic bank profitability remain mixed, particularly in emerging Islamic banking markets where institutional capacity, governance frameworks, and risk management practices are still in the process of maturation.

Recent developments in Indonesia's Islamic commercial banking sector underscore the persistence of this challenge. Despite sustained asset growth, profitability has exhibited notable fluctuations, suggesting the presence of underlying inefficiencies in financing allocation and weaknesses in risk management practices. (Financial Services Authority, 2023; and Gazi et al., 2024). The limited utilization of profit and loss sharing (PLS) financing, relative to the widespread reliance on sale-based contracts, raises important practical concerns regarding the effectiveness of risk-sharing mechanisms in enhancing bank profitability (Sutrisno & Widarjono, 2022). Fluctuations in the Financing-to-Deposit Ratio (FDR), together with persistently elevated levels of Non Performing Financing (NPF), further indicate that bank performance is contingent upon the effective integration of financing structure, liquidity management, and credit risk control, rather than merely on balance sheet expansion (Retnowati & Jayanto, 2020; and Wulandari et al., 2019).

A central issue in Islamic banking research is whether profit and loss sharing (PLS) financing enhances profitability by fostering incentive alignment, mitigating moral hazard, and promoting productive investment (Khan et al., 2020; and Widarjono & Mardhiyah, 2022). Proponents contend that profit and loss-sharing

(PLS) financing advances both financial performance and Sharia compliance objectives; however, critics emphasize operational challenges such as high monitoring costs and complex governance structures that may constrain its positive impact on profitability (Sutrisno & Widarjono, 2022). This ongoing theoretical debate underscores that the impact of profit-and-loss-sharing (PLS) financing on profitability is highly contingent upon context-specific institutional and managerial factors.

Turning to liquidity management an area closely linked to financing structure the Financing to Deposit Ratio (FDR) represents another focal point of debate in the banking literature. Conventional banking theory generally associates higher financing ratios with more aggressive fund utilization and potentially greater profitability, as banks are able to expand income-generating assets. However, within the context of Islamic banking, excessively high FDR levels may intensify liquidity pressures due to the limited availability of Sharia-compliant liquidity instruments and structural constraints in Islamic interbank markets (Alam, 2025; and Čihák & Hesse, 2010). Empirical studies on Islamic banks report mixed evidence regarding the relationship between the Financing to Deposit Ratio (FDR) and profitability. While some studies document a positive association, others find insignificant or even negative effects, indicating that liquidity expansion alone is insufficient to explain performance differentials across Islamic banks and that effective liquidity risk management plays a critical moderating role (Sutrisno & Widarjono, 2022).

Similarly, Non-Performing Financing (NPF) is widely recognized as a critical indicator of credit risk and asset quality in Islamic banks. Consistent with the literature on liquidity and financing structure, the dominant strand of research posits that rising NPF levels undermine profitability by increasing provisioning expenses and diminishing income-generating assets (Retnowati & Jayanto, 2020; and Wulandari et al., 2019). Nevertheless, recent empirical evidence suggests that the effect of Non-Performing Financing (NPF) on profitability varies across institutional contexts, regulatory frameworks, and stages of banking development. This heterogeneity implies that credit risk should be examined jointly with financing structure and liquidity behavior, rather than in isolation.

Despite the expanding body of empirical research on Islamic bank profitability, significant gaps remain unresolved in the literature. Existing studies continue to yield mixed evidence on whether profit-and-loss-sharing (PLS) financing enhances Islamic bank profitability, reflecting an ongoing tension between efficiency-based arguments and concerns related to monitoring costs and risk exposure (Abedifar et al., 2013; and Hassan & Aliyu, 2018). Moreover, much of the existing literature tends to examine financing structure, liquidity conditions, and credit risk in isolation, thereby overlooking their interactive effects in shaping bank performance and long-term financial sustainability (Alzoubi, 2018; and Farooq & Zaheer, 2015). Consequently, it remains unclear whether the theorized benefits of Islamic risk-sharing mechanisms persist once liquidity constraints and asset quality are jointly accounted for within an integrated empirical framework, particularly in emerging Islamic banking systems.

This study directly addresses this core question by examining the combined effects of profit and loss sharing (PLS) financing, liquidity as measured by the Financing to Deposit Ratio (FDR) and credit risk as proxied by Non-Performing Financing (NPF) on Islamic bank profitability within a unified panel data framework. Focusing on Indonesia, the analysis provides critical evidence on whether risk-sharing mechanisms genuinely enhance profitability or instead introduce new constraints, thereby advancing the understanding of Islamic banking performance and offering insights for risk governance and regulatory policy. Accordingly, the study investigates the joint impact of PLS financing, FDR, and NPF on profitability among Indonesian Islamic commercial banks over the period 2019–2023 using a fixed effects panel data model.

LITERATURE REVIEW

Profit-and-Loss-Sharing (PLS) Financing and Islamic Bank Profitability

Profit-and-loss sharing (PLS) financing, implemented through mudharabah and musyarakah contracts, is the core operational principle of Islamic banking, emphasizing risk sharing and ethical financial intermediation. From a theoretical standpoint, the risk-sharing efficiency view argues that PLS financing enhances bank profitability by aligning incentives between banks and entrepreneurs, reducing moral hazard, and promoting productive investment (Khan et al., 2020; and Widarjono & Mardhiyah, 2022). Under this perspective, profit-sharing mechanisms enable banks to participate directly in project outcomes, thereby improving screening quality and long-term financial performance.

However, an alternative risk–cost perspective suggests that PLS financing may adversely affect profitability due to higher monitoring costs, information asymmetry, and governance challenges, particularly in emerging Islamic banking systems where institutional capacity remains limited (Sutrisno & Widarjono, 2022). Empirical studies based on this view report that the complexity of PLS contracts can increase operational inefficiency and elevate financing risk, ultimately constraining bank returns.

Taken together, the mixed empirical findings indicate that the profitability impact of PLS financing remains unresolved, reflecting a broader academic debate between efficiency-oriented and cost-oriented perspectives. This inconsistency highlights the need for further empirical evidence to clarify whether PLS financing enhances Islamic bank profitability when implemented within an appropriate risk governance framework, particularly in emerging markets such as Indonesia. Based on the risk-sharing efficiency argument and the need to empirically reassess this debate, the following hypothesis is proposed:

H1: Profit-and-loss-sharing (PLS) financing has a significant effect on the profitability of Islamic commercial banks in Indonesia.

Financing to Deposit Ratio (FDR) and Liquidity Management

The Financing to Deposit Ratio (FDR) reflects a bank's ability to transform collected deposits into productive financing and is commonly used as an indicator of liquidity management. From a conventional banking perspective, a higher financing ratio is often associated with more efficient fund utilization and potentially higher profitability (Nugroho et al., 2021; and Setiawan, 2024). This view assumes that greater financing intensity enables banks to maximize the value of income-generating assets.

In contrast, studies focusing on Islamic banking highlight a liquidity risk perspective, arguing that excessive FDR may increase vulnerability to liquidity stress due to limited Sharia-compliant liquidity instruments and underdeveloped interbank markets (Harjanti & Farhan, 2021; and Maritsa & Widarjono, 2021). Empirical evidence from this strand reports insignificant or negative relationships between FDR and profitability, suggesting that aggressive financing without adequate liquidity buffers may undermine financial performance.

The inconclusive empirical evidence reflects a fundamental trade-off between liquidity utilization and liquidity risk in Islamic banking. This unresolved debate indicates that the relationship between FDR and profitability is not theoretically predetermined and requires empirical validation within specific institutional contexts. Accordingly, the following hypothesis is formulated:

H2: Financing to Deposit Ratio (FDR) has a significant effect on the profitability of Islamic commercial banks in Indonesia.

Non-Performing Financing (NPF) and Credit Risk

Non-Performing Financing (NPF) is widely recognized as a key indicator of credit risk and asset quality in Islamic banks. The dominant view in the literature posits that higher NPF levels erode profitability by increasing provisioning costs and reducing income from impaired financing (Retnowati & Jayanto, 2020; and Wulandari et al., 2019). From this perspective, effective credit risk management is essential to sustain Islamic bank profitability.

Nevertheless, several empirical studies report variations in the magnitude and significance of the NPF and profitability relationship, suggesting that institutional context, regulatory frameworks, and risk governance practices may moderate this effect (Fajriati et al., 2021; and Gazi et al., 2024). These findings imply that the adverse impact of NPF on profitability may not be uniform across banking systems.

Although the prevailing theoretical expectation associates higher NPF with lower profitability, the presence of context dependent empirical evidence underscores the importance of reassessing the role of credit risk within a comprehensive performance framework. Accordingly, the following hypothesis is proposed:

H3: Non-Performing Financing (NPF) has a negative and significant effect on the profitability of Islamic commercial banks in Indonesia.

RESEARCH METHOD

This study employs a quantitative research design using panel data analysis to examine the effects of profit-and-loss-sharing (PLS) financing, Financing to Deposit Ratio (FDR), and Non-Performing Financing (NPF) on the profitability of Islamic commercial banks in Indonesia. The dataset comprises quarterly observations from 2019 to 2023 for five Islamic commercial banks, yielding a total of 100 balanced panel observations. The use of quarterly data enables a more detailed assessment of short-term dynamics in financing behavior, liquidity management, and credit risk compared to annual data. The data were obtained from the Financial Services Authority (OJK) via Sharia Banking Statistics and from the official financial reports published on each bank's website.

The sample comprises five Islamic commercial banks: Bank BCA Syariah, Bank Muamalat Indonesia, Bank Syariah Indonesia (BSI), Bank Victoria Syariah, and Bank BJB Syariah. These banks were purposively selected based on data availability, asset size, institutional diversity (state-owned, regional, and private banks), and consistency in reporting throughout the observation period. This selection ensures a representative cross-section of the Indonesian Islamic banking sector, which has experienced continuous expansion in market share alongside rising demand for sharia-compliant financial services.

To analyze the relationship among the variables, the study specifies the following panel regression model:

$$ROA_{it} = \alpha + \beta_1 Log(PLS)_{it} + \beta_2 FDR_{it} + \beta_3 NPF_{it} + \varepsilon_{it} \quad \text{.....(1)}$$

where ROA_{it} represents the Return on Assets of the bank i in period t, PLS_{it} is the natural logarithm of total profit-and-loss-sharing financing, consisting of *mudharabah* and *musyarakah* contracts, FDR_{it} denotes the Financing to Deposit Ratio, and NPF_{it} represents the Non-Performing Financing ratio. The logarithmic transformation of PLS financing is applied to reduce scale differences across banks, mitigate potential heteroscedasticity, and allow for a more stable interpretation of elasticity effects. The constant term is denoted by α, β_1 to β_3 are the estimated coefficients, and ε_{it} is the error term.

The empirical model is specified within a panel data framework, where the unit of analysis consists of Islamic commercial banks observed over time. In this model, the subscript *i* denotes the individual bank (*i* = 1, 2, …, 5), while *t* represents the quarterly time period (*t* = 2019Q1, …, 2023Q4). Accordingly, each observation reflects the performance of the bank i in period t. This specification allows the model to capture both cross-sectional heterogeneity across banks and temporal variation over time.

Panel data estimation was conducted using three alternative approaches: the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The most appropriate model was determined through a sequence of

specification tests, including the Chow test to compare CEM and FEM, the Hausman test to choose between FEM and REM, and the Lagrange Multiplier test to select between CEM and REM. Based on the test results, the Fixed Effect Model (FEM) was chosen as the most consistent specification, as it effectively controls for unobserved bank-specific heterogeneity that may influence profitability.

To ensure the robustness of the estimation results, several diagnostic tests were performed. Multicollinearity was assessed using the Variance Inflation Factor (VIF), while heteroscedasticity was examined using the White and Breusch–Pagan tests. Hypothesis testing was conducted using t-tests to evaluate the individual significance of each explanatory variable and F-tests to assess their joint significance. The model's explanatory power was evaluated using the coefficient of determination (R^2). The methodological framework adopted in this study emphasizes model parsimony by focusing on key financing and risk indicators, thereby avoiding over-parameterization given the sample's limited cross-sectional dimension. By employing a fixed-effects panel framework with quarterly data, this study captures short-term dynamics and bank-specific characteristics, providing a more integrated assessment of Islamic bank profitability than prior studies that rely on annual data or single-bank analyses.

RESULTS AND DISCUSSION

Descriptive Statistics

Before conducting the regression analysis, a descriptive statistical evaluation was performed to understand the distribution and central tendencies of the variables used in this study, namely Profit and Loss Sharing (PLS) financing, Financing to Deposit Ratio (FDR), Non-Performing Financing (NPF), and Return on Assets (ROA). This preliminary step is essential for providing insights into the dataset's characteristics and detecting any irregularities or extreme values that may affect the robustness of the econometric results. The descriptive statistics are based on a balanced panel dataset comprising 100 quarterly observations, drawn from five Islamic commercial banks observed over the 2019–2023 period.

Table 1. Descriptive Statistical Analysis

Variable	N	Minimum	Maximum	Mean	Std. Deviation
PLS	100	5.570000	7.950000	6.695000	0.623286
FDR	100	38.33000	107.8500	78.01170	14.99743
NPF	100	0.480000	10.92000	3.275800	1.972643
ROA	100	0.020000	2.480000	0.791500	0.645000
Valid N	100				

Source: Processed Data 2025

The descriptive statistics yield several key observations. The mean PLS financing value is 6.70, with a standard deviation of 0.62, indicating moderate variability and suggesting consistent use of Sharia-compliant financing among the sampled banks. The FDR ranges from 38.33% to 107.85%, with a mean of 78.01% and

a standard deviation of 14.99, reflecting substantial differences in liquidity management and financing aggressiveness across banks and over time. Notably, FDR values exceeding 100% may signal potential liquidity strain and warrant further examination in relation to profitability.

The NPF variable, which measures credit risk, ranges from 0.48% to 10.92%, with an average of 3.28% and a standard deviation of 1.97. This wide dispersion indicates varying risk management effectiveness among banks, potentially influenced by differences in customer segments, collateral policies, and governance structures. The ROA, serving as a proxy for profitability, averages 0.79% with a standard deviation of 0.65, spanning from 0.02% to 2.48%. This substantial variation in profitability may result from differences in asset utilization, operational efficiency, and risk exposure. These findings empirically support the study's hypotheses. The observed variability justifies the application of panel data regression to account for unobserved heterogeneity and time-invariant bank-specific effects. It underscores the relevance of the selected variables for explaining Islamic bank profitability in Indonesia.

Model Selection Test: Chow and Hausman Tests

In empirical panel data analysis, selecting the appropriate econometric model is essential to ensure valid and reliable estimation results. This study employs three primary approaches commonly used in panel data modeling: Pooled Ordinary Least Squares (Pooled OLS), Fixed Effects Model (FEM), and Random Effects Model (REM). The decision to use FEM or REM is based on the results of the Chow Test and the Hausman Test, both of which determine whether unobserved heterogeneity (individual-specific effects) significantly influences the dependent variable in this case, bank profitability (ROA).

The Chow Test compares the Pooled OLS model with the Fixed Effect Model. At the same time, the Hausman Test distinguishes between Fixed Effect and Random Effect Models by testing for correlation between individual effects and the regressors. If such a correlation exists, the FEM is preferred, as the REM assumptions would be violated. The results of both tests are shown in Table 2.

Table 2. Chow and Hausman test result

Test Type	Chi-Square Probability	Significance Level (α)	Model Chosen
Uji Chow	0.0000	0.05	Fixed Effect Model
Uji Hausman	0.0160	0.05	Fixed Effect Model

Source: Proccesed Data. 2025

The results of the Chow Test indicate a Chi-square probability value of 0.0000, which is lower than the 5% significance threshold (α = 0.05). This strongly suggests that the Fixed Effect Model is superior to the Pooled OLS model, as it accounts for bank-specific heterogeneity that would otherwise be ignored in the pooled

regression. Following this, the Hausman Test returns a probability value of 0.0160, also below the 0.05 significance level, leading to the rejection of the null hypothesis that the random effects are uncorrelated with the independent variables. Therefore, the Fixed Effect Model is statistically preferred over the Random Effect Model.

These two sequential test results consistently point to the Fixed Effect Model as the most appropriate estimator for this study. Given this outcome, the Lagrange Multiplier (LM) test, which is typically used to compare Pooled OLS and REM, is no longer necessary. The FEM allows for a more accurate estimation by controlling for time-invariant bank-specific characteristics, which is particularly crucial when analyzing financial performance data across multiple Islamic banks that may differ in governance, size, strategy, and clientele. Accordingly, all subsequent regression analyses in this study will be based on the Fixed Effects specification.

Classical Assumption Testing

Before conducting panel data regression, it is essential to ensure that the model satisfies key classical assumptions to produce unbiased, efficient, and consistent estimators. In this study, two critical diagnostic tests were performed: the multicollinearity test and the heteroscedasticity test. Multicollinearity refers to a situation in which independent variables are highly correlated with one another, which can distort the estimation of regression coefficients. To detect multicollinearity, this study employs the correlation matrix approach, where a coefficient above 0.80 or below -0.80 may indicate the presence of multicollinearity (Gujarati & Porter, 2009).

Heteroscedasticity, on the other hand, occurs when the variance of residuals is not constant across observations. To detect it, the Glejser test is applied. If the probability values are greater than the significance level (usually $\alpha = 0.05$), the null hypothesis of homoscedasticity is not rejected, implying the model is free from heteroscedasticity. The results of these diagnostic tests are presented in Table 3.

Tabel 3. Classical Assumption Test Results

Multicolinearity Test: Correlation Matrix			
Variable	PLS	FDR	NPF
PLS	1.000000	-0.180103	-0.149678
FDR	-0.180103	1.000000	-0.141872
NPF	-0.149678	-0.141872	1.000000
Heteroscadastisity Test (Glejser Test)			
Variable	Probability	Decision	
PLS	0.6098	No heteroscedasticity detected	
FDR	0.4627	No heteroscedasticity detected	
NPF	0.4432	No heteroscedasticity detected	

Source: Processed Data. 2025

The results of the multicollinearity test indicate that the correlation coefficients among the independent variables are all <0.80, indicating no serious multicollinearity. This suggests that each independent variable provides unique

information to explain variation in the dependent variable (ROA), thereby improving the reliability of regression estimates. Moreover, the heteroscedasticity tests show p-values greater than 0.05 for all variables (PLS = 0.6098, FDR = 0.4627, NPF = 0.4432), indicating that the null hypothesis of homoscedasticity is not rejected. This confirms that the model satisfies the constant error variance assumption. In conclusion, the results of both diagnostic tests confirm that the model is statistically sound and free from significant violations of classical regression assumptions. Therefore, the subsequent panel data regression analysis can proceed with confidence that the estimated coefficients will be both valid and robust.

Panel Data Regression

After confirming that the selected model fulfills the classical assumption tests and that the Fixed Effect Model (FEM) is the most appropriate specification, a panel data regression was conducted to assess the effect of Profit and Loss Sharing (PLS) Financing, Financing to Deposit Ratio (FDR), and Non-Performing Financing (NPF) on Return on Assets (ROA) of Islamic Commercial Banks in Indonesia during the 2019–2023 period. The results are presented in Table 4.

Table 4. Estimation Results of Panel Regression (Fixed Effect Model)

Variable	Coefficient	Probability	Significance
Constant	-7.420662		
PLS	1.338660	0.0000	Significant
FDR	-0.006244	0.0720	Not Significant
NPF	-0.080316	0.0003	Significant
F-statistic	42.11511	0.0000	Significant
Adjusted R^2	0.7621		

Source: Processed Data. 2025

To further interpret the magnitude and direction of the relationships among the variables, the regression equation is derived from the estimation results. This equation illustrates how changes in Profit and Loss Sharing (PLS) Financing, Financing to Deposit Ratio (FDR), and Non-Performing Financing (NPF) affect the dependent variable, Return on Assets (ROA), while controlling for individual bank effects over the observation period. The coefficients reflect the expected change in ROA given a one-unit change in each explanatory variable, holding other variables constant. The estimated regression model is expressed as follows:

$$ROA_{it} = -7.420662 + 1.338660(PLS) - 0.006244(FDR) - 0.080316(NPF) \quad \text{..... (2)}$$

The regression analysis shows that the Profit and Loss Sharing (PLS) variable has a positive and significant impact on profitability (ROA), with a coefficient of 1.338660 and a p-value of 0.0000 (<0.05). This result aligns with previous findings Abedifar et al. (2015); and Lustiana et al. (2023) that emphasize the financial benefits

of ethical, risk-sharing-based financing models for enhancing banking performance. It suggests that an increase in PLS financing is associated with a substantial improvement in bank profitability, possibly due to higher engagement and trust between banks and customers in profit-sharing contracts.

In contrast, Financing to Deposit Ratio (FDR) exhibits a negative and has insignificant effect on profitability (coefficient = -0.006244, p-value = 0.0720). While the negative sign may indicate a potential risk of over-aggressive financing or liquidity constraints, the lack of statistical significance implies that FDR does not have a definitive direct effect on profitability in this study. This result may reflect inconsistent liquidity management practices across Islamic banks or contextual factors affecting financing efficiency.

Non-Performing Financing (NPF) variable shows a negative and significant effect on profitability (coefficient = -0.080316, p-value = 0.0003), which is consistent with the theoretical expectation and prior studies (Retnowati & Jayanto, 2020; and Wulandari et al., 2019). High levels of non-performing financing reduce the bank's income-generating assets and increase provisioning costs, thereby negatively impacting returns. This finding underscores the importance of credit risk management in ensuring the sustainable profitability of Islamic banks.

An F-statistic of 42.11511 with a p-value of 0.0000 indicates that the model is jointly significant, meaning that all independent variables, such as PLS, FDR, and NPF, simultaneously affect profitability. Additionally, the adjusted R-squared value of 0.7621 indicates that approximately 76.21% of the variation in bank profitability can be explained by the independent variables in the model. In comparison, the remaining 23.79% is attributable to other factors not captured in this study.

In summary, the regression findings provide robust empirical evidence that PLS and NPF are critical determinants of Islamic bank profitability in Indonesia, while the effect of FDR remains inconclusive. These insights have practical implications for bank managers, regulators, and policymakers aiming to enhance financial performance through optimized financing strategies and improved risk governance.

Discussion

The empirical results of this study indicate that Profit and Loss Sharing (PLS) financing has a positive and statistically significant effect on the profitability of Islamic commercial banks in Indonesia. This finding confirms that an increase in profit-sharing-based financing contributes to higher Return on Assets (ROA), suggesting that risk-sharing instruments play a substantive role in enhancing bank performance. From a theoretical standpoint, this result reinforces the foundational principle of Islamic finance, which posits that equitable risk sharing between banks and customers improves allocative efficiency and investment outcomes. Consistent with this view, prior studies emphasize that PLS-based contracts promote a closer alignment of incentives and encourage banks to focus on the long-term viability of financed projects, thereby improving overall financial performance (Abedifar et al.,

2016; and Hassan & Aliyu, 2018). Unlike debt-based contracts, PLS financing embeds partnership values that foster joint responsibility and performance monitoring, incentivizing banks to allocate funds to projects with stronger fundamentals. Consequently, the positive and significant relationship observed in this study supports the argument that PLS financing is not merely a symbolic Sharia compliance instrument, but a viable performance-enhancing mechanism when supported by adequate governance structures (Farooq & Zaheer, 2015; and Narayan & Phan, 2019).

The positive impact of PLS financing on profitability is consistent with theoretical arguments emphasizing the reduction of information asymmetry and the alignment of incentives between banks and entrepreneurs. Darma & Afandi (2021) Argue that profit-sharing contracts mitigate moral hazard by requiring banks to engage more actively in monitoring and evaluation processes. This argument is supported by international evidence suggesting that PLS arrangements enhance screening quality and promote closer bank-client relationships, thereby improving risk assessment and project selection (Azmat et al., 2021; Bourkhis & Nabi, 2013; and Nosheen & Rashid, 2021). Through closer involvement in financed projects, banks gain superior information regarding business performance, enabling timely corrective actions and more disciplined financing decisions. However, other studies caution that the effectiveness of PLS financing is highly conditional, as high monitoring costs, agency problems, and weak institutional capacity may offset its potential benefits (Alharbi, 2017; Iqbal et al., 2024; and Parsa, 2022). This divergence in findings suggests that the performance impact of PLS financing depends critically on institutional quality and managerial capability. Therefore, the observed increase in ROA in this study indicates that Indonesian Islamic banks may have reached a level of managerial and institutional maturity that allows PLS financing to function effectively as a performance-enhancing instrument.

Beyond firm-level financial performance, the improvement in profitability associated with PLS financing has broader developmental implications. Higher ROA strengthens banks' capital positions and operational resilience, enabling Islamic banks to expand financing outreach to sectors traditionally underserved by conventional banking, particularly micro, small, and medium enterprises (MSMEs). This role is consistent with international findings highlighting the contribution of Islamic banks, through risk-sharing instruments, to inclusive growth and real-sector development (Avdukic & Asutay, 2025; and Imam & Kpodar, 2016). In the Indonesian context, where MSMEs are central to employment creation and economic inclusivity, access to Sharia-compliant financing becomes strategically important. Empirical evidence from Abedifar et al. (2015); and Nurmawati et al. (2020) supports this argument by demonstrating a positive and significant relationship between PLS financing and financial performance in Indonesian Islamic banks. Similarly, Argantara & Fitriyah (2024) show that *musyarakah* and *mudharabah* financing positively affect bank performance. These findings are also consistent with cross-country evidence

indicating that Islamic banks with higher engagement in profit-sharing activities tend to exhibit stronger resilience and long-term performance, provided that risk governance frameworks are well established (Abedifar et al., 2016; and Čihák & Hesse, 2010).

In contrast to PLS financing, the Financing to Deposit Ratio (FDR) exhibits a negative but statistically insignificant effect on profitability. Although conventional intermediation theory often links higher financing intensity to higher returns, evidence in Islamic banking suggests that profitability is frequently driven more by pricing efficiency, cost discipline, and risk governance than by the sheer volume of financing expansion. Cross-country evidence shows that Islamic bank profitability is not necessarily driven solely by lending/financing intensity. In many cases, fee-based activities, efficiency, and risk conditions can outweigh the marginal profitability gains from higher loan/financing-to-deposit ratios (Azad et al., 2023). In addition, Islamic banks tend to face distinct liquidity constraints and balance-sheet frictions, where increasing financing aggressiveness may heighten liquidity pressure without producing proportional ROA improvements (Belkhaoui et al., 2020; and Boukhatem & Djelassi, 2020). More broadly, liquidity risk and funding structure have been shown to shape bank profitability meaningfully. Still, not always linearly or directly, and higher liquidity strain can reduce profitability through adjustment costs, while conservative liquidity buffers can also dilute returns (Hassan et al., 2019; and Saleh et al., 2020). Therefore, the insignificant FDR result in this study supports the argument that liquidity deployment alone is an insufficient explanation of profitability differentials in Islamic banks when liquidity risk exposure and cost–risk trade-offs are binding (Boukhatem & Djelassi, 2020; and Saleh et al., 2020).

The weak relationship between FDR and profitability also reflects structural constraints in Islamic liquidity management, particularly the limited depth of Sharia-compliant liquidity instruments and underdeveloped interbank markets. These constraints reduce banks' ability to convert higher financing intensity into stable earnings, making liquidity expansion less effective as a profitability driver (Belkhaoui et al., 2020; and Boukhatem & Djelassi, 2020). Empirical studies further show that liquidity risk exposure in Islamic banks is highly context-dependent and interacts with credit risk, capitalization, and regulatory settings, which can offset the expected benefits of higher financing ratios (Hassan et al., 2019). While some international evidence suggests that financing intensity can enhance profitability when supported by efficient pricing and strong liquidity infrastructure (Azad et al., 2023), Other studies indicate that liquidity-driven expansion may increase vulnerability without improving returns (Viverita et al., 2023; and Widarjono et al., 2022). Taken together, these mixed findings suggest that the profitability impact of FDR is conditional rather than universal, helping to explain its insignificant role in this study.

The analysis confirms that Non-Performing Financing (NPF) has a negative and statistically significant effect on profitability (ROA), highlighting credit risk as a binding constraint on Islamic banking performance. An increase in NPF raises

impairment provisioning and weakens realized returns from financing portfolios, thereby directly eroding net income and asset utilization efficiency. This mechanism is consistent with international evidence showing that rising credit risk undermines bank profitability, particularly in emerging markets where financing quality and monitoring capacity vary across institutions(Hassan et al., 2019; Lassoued, 2018; Sobarsyah et al., 2020). In Islamic banks, the adverse impact is amplified because financing remains the dominant earning asset, making asset-quality deterioration immediately reflected in ROA movements (Iqbal et al., 2022). Moreover, elevated NPF signals weaknesses in screening, monitoring, and recovery governance, suggesting that profitability losses can become structural rather than merely cyclical when risk governance is fragile (Noory et al., 2021).

At the same time, the literature suggests that the profitability impact of credit risk is conditional, as capitalization strength, portfolio composition, and managerial efficiency can partially absorb NPF shocks (Belkhaoui et al., 2020; and Saleh et al., 2020). The negative and significant NPF effect observed in this study indicates that, for Indonesian Islamic banks, asset-quality deterioration remains sufficiently material to outweigh available buffers, consistent with cross-country evidence that credit risk is central to Islamic banking vulnerability and resilience (Iqbal et al., 2022; and Lassoued, 2018). Therefore, these findings reinforce the view that improving Islamic bank profitability requires strengthening underwriting discipline, early warning systems, and recovery effectiveness, so that the benefits of Sharia-compliant intermediation are not offset by persistent deterioration in asset quality.

Overall, the findings of this study provide an integrated and nuanced perspective on Islamic bank profitability, demonstrating that performance is shaped by the interaction among financing structure, liquidity behavior, and credit risk governance rather than by any single factor in isolation. The positive and significant effect of profit and loss sharing (PLS) financing confirms that risk-sharing instruments can enhance profitability when supported by adequate institutional capacity and governance quality. However, the insignificant role of the Financing to Deposit Ratio (FDR) suggests that liquidity expansion alone does not guarantee higher returns, particularly in the presence of structural liquidity constraints and cost-risk trade-offs in Islamic banking. More importantly, the substantial negative impact of Non-Performing Financing (NPF) highlights credit risk as a binding constraint that can offset the potential benefits of both PLS financing and liquidity deployment. These results contribute to the ongoing academic debate by showing that Islamic risk-sharing mechanisms are conditionally effective and critically dependent on asset quality and risk management discipline. By jointly analyzing PLS, FDR, and NPF within a unified panel data framework, this study extends prior literature that has broadly examined these determinants in isolation and offers empirical evidence supporting a strategic shift in Islamic banking toward value-based intermediation, integrated risk governance, and sustainable profitability. This agenda is particularly relevant for emerging economies such as Indonesia.

CONCLUSION

This study concludes that the profitability of Islamic commercial banks in Indonesia is shaped by the interaction between financing structure, liquidity behavior, and credit risk governance rather than by financing expansion alone. The empirical findings demonstrate that profit-and-loss-sharing (PLS) financing has a positive and statistically significant effect on profitability, indicating that risk-sharing instruments can enhance bank performance when supported by adequate institutional capacity and governance quality. In contrast, the Financing to Deposit Ratio (FDR) does not exhibit a significant effect on profitability, suggesting that liquidity intensity alone is insufficient to generate higher returns under structural liquidity constraints and cost risk trade-offs in Islamic banking. Meanwhile, Non-Performing Financing (NPF) has a negative and significant impact on profitability, confirming credit risk as a binding constraint that can offset the benefits of both PLS financing and liquidity deployment. Collectively, these results contribute to the academic debate by showing that Islamic risk-sharing mechanisms are conditionally effective and critically dependent on asset quality and risk management discipline. This study extends prior literature by jointly examining PLS, FDR, and NPF within a unified panel data framework. It highlights the importance of value-based intermediation and integrated risk governance as key foundations for achieving sustainable profitability in Islamic banking, particularly in emerging economies such as Indonesia.

ACKNOWLEDGEMENT

The research/publication of this article was funded by Universitas Sriwijaya 2025, in accordance with the Rector's Decree Number: 0027/UN9/LPPM.PT/2025, On September 17, 2025

REFERENCES

Abedifar, P., Ebrahim, S. M., Molyneux, P., & Tarazi, A. (2015). Islamic banking and finance: Recent empirical literature and directions for future research. *Journal of Economic Surveys*, *29*(4), 637–670. https://doi.org/https://doi.org/10.1111/joes.12113

Abedifar, P., Hasan, I., & Tarazi, A. (2016). Finance-growth nexus and dual-banking systems: Relative importance of Islamic banks. *Journal of Economic Behavior and Organization*, *132*, 198–215. https://doi.org/10.1016/j.jebo.2016.03.005

Abedifar, P., Molyneux, P., & Tarazi, A. (2013). Risk in Islamic Banking. *Review of Finance*, *17*(6), 2035–2096. https://doi.org/https://doi.org/10.1093/rof/rfs041

Alam, N. (2025). Impact of banking regulation on risk and efficiency in Islamic banking. *Journal of Financial Reporting and Accounting*, *11*(1), 29–50. https://doi.org/10.1108/JFRA-03-2013-0010

Alharbi, A. T. (2017). Determinants of Islamic banks' profitability: international evidence. *International Journal of Islamic and Middle Eastern Finance and Management*, *10*(3), 331–350. https://doi.org/10.1108/IMEFM-12-2015-0161

Alzoubi, T. (2018). Determinants of bank profitability: Islamic versus conventional banks. *Banks and Bank Systems*, *13*(3), 106–113.

Argantara, Z. R., & Fitriyah, N. (2024). The Effect of Profit-Sharing Financing on the Financial Performance of Islamic Banks. *Jurnal Ilmiah Manajemen Kesatuan*, *11*(3), 1345–1354. https://doi.org/10.37641/jimkes.v11i3.2329

Avdukic, A., & Asutay, M. (2025). Testing the development impact of islamic banking: Islamic moral economy approach to development. *Economic Systems*, *49*(2), 101229. https://doi.org/10.1016/j.ecosys.2024.101229

Azad, A. S. M. S., Azmat, S., & Hayat, A. (2023). What determines the profitability of Islamic banks: Lending or fee? *International Review of Economics and Finance*, *86*, 882–896. https://doi.org/10.1016/j.iref.2019.05.015

Azmat, S., Ali, H., Brown, K., & Skully, M. (2021). Persuasion in Islamic finance. *Australian Journal of Management*, *46*(2), 272–286. https://doi.org/10.1177/0312896220926556

Belkhaoui, S., Alsagr, N., Hemmen, S. F. Van, Belkhaoui, S., Alsagr, N., & Hemmen, S. F. Van. (2020). Financing modes, risk, efficiency and profitability in Islamic banks: Modeling for the GCC countries. *Cogent Economics & Finance*, *8*(1), 1750258. https://doi.org/10.1080/23322039.2020.1750258

Boukhatem, J., & Djelassi, M. (2020). Liquidity risk in the Saudi banking system: Is there any Islamic banking specificity? *Quarterly Review of Economics and Finance*, *77*, 206–219. https://doi.org/10.1016/j.qref.2020.05.002

Bourkhis, K., & Nabi, M. S. (2013). Islamic and conventional banks' soundness during the 2007–2008 financial crisis. *Review of Financial Economics*, *22*(2), 68–77. https://doi.org/https://doi.org/10.1016/j.rfe.2013.01.001

Čihák, M., & Hesse, H. (2010). Islamic Banks and Financial Stability: An Empirical Analysis. *Journal of Financial Services Research*, *38*(2), 95–113. https://doi.org/10.1007/s10693-010-0089-0

Darma, E. S., & Afandi, A. (2021). The Role of Islamic Corporate Governance and Risk Toward Islamic Banking Performance: Evidence from Indonesia. *Journal of Accounting and Investment*, *22*(3), 517–538. https://doi.org/10.18196/jai.v22i3.12339

Fajriati, L. A., Rahman, A. A., & Maharani, S. (2021). Effect of Financing To Deposit Ratio and Non-Performing Financing of Return on Assets With a Capital Adequacy Ratio As Variable Intervening in Islamic Banking in Indonesia in 2012-2019. *Niqosiya: Journal of Economics and Business Research*, *1*(2), 286–302. https://doi.org/10.21154/niqosiya.v1i2.427

Farooq, M., & Zaheer, S. (2015). Are Islamic Banks More Resilient During Financial Panics? *Pacific Economic Review*, *20*(1), 101–124. https://doi.org/https://doi.org/10.1111/1468-0106.12096

Financial Services Authority. (2023). *Indonesian Islamic Finance Report 2023*.

Gazi, M. A. I., Karim, R., Senathirajah, A. R. bin S., Ullah, A. K. M. M., Afrin, K. H., & Nahiduzzaman, M. (2024). Bank-Specific and Macroeconomic Determinants of Profitability of Islamic Shariah-Based Banks: Evidence from New Economic Horizon Using Panel Data. *Economies*, *12*(3), 66. https://doi.org/https://doi.org/10.3390/economies12030066

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (Fifth Edit). McGraw-Hill/Irwin.

Harjanti, W., & Farhan, A. (2021). The Effect of FDR, NPF and Liquidity Ratio on

Profitability of Islamic Banks in Indonesia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *4*(4), 13600–13608.

Hassan, M. K., & Aliyu, S. (2018). A contemporary survey of Islamic banking literature. *Journal of Financial Stability*, *34*, 12–43. https://doi.org/10.1016/j.jfs.2017.11.006

Hassan, M. K., Khan, A., & Paltrinieri, A. (2019). Liquidity risk, credit risk and stability in Islamic and conventional banks. *Research in International Business and Finance*, *48*(October 2018), 17–31. https://doi.org/10.1016/j.ribaf.2018.10.006

Imam, P., & Kpodar, K. (2016). Islamic banking: Good for growth? *Economic Modelling*, *59*, 387–401. https://doi.org/10.1016/j.econmod.2016.08.004

Iqbal, M., Hakim, L., & Aziz, M. A. (2024). Determinants of Islamic bank stability in Asia. *Journal of Islamic Accounting and Business Research*, *February*, 1–17. https://doi.org/10.1108/JIABR-07-2022-0174

Iqbal, M., Kusuma, H., & Sunaryati, S. (2022). Vulnerability of Islamic banking in ASEAN. *Islamic Economic Studies*, *29*(2), 159–168. https://doi.org/10.1108/IES-10-2021-0040

Khan, M., Siswantoro, D., & Ur Rahman, A. (2020). the Obstacle Factors of Musharakah and Mudharabah Application in Pakistan. *Jurnal Akuntansi Dan Keuangan Indonesia*, *17*(2), 183–196. https://doi.org/10.21002/jaki.2020.11

Lassoued, M. (2018). Comparative study on credit risk in Islamic banking institutions: The case of Malaysia. *Quarterly Review of Economics and Finance*, *70*, 267–278. https://doi.org/10.1016/j.qref.2018.05.009

Lustiana, F. U., Nurhayati, I., & Suharti, T. (2023). Analysis of The Effect of Financing on Profitability In Sharia Commercial Banks. *Jurnal Ilmu Manajemen*, *6*(1), 81–90.

Maritsa, F. H. N., & Widarjono, A. (2021). Indonesian Islamic Banks And Financial Stability: An Empirical Analysis. *EkBis: Jurnal Ekonomi Dan Bisnis*, *5*(1), 71–87. https://doi.org/https://doi.org/10.14421/EkBis.2021.5.1.1279

Narayan, P. K., & Phan, D. H. B. (2019). A survey of Islamic banking and finance literature: Issues, challenges and future directions. *Pacific-Basin Finance Journal*, *53*, 484–496. https://doi.org/10.1016/j.pacfin.2017.06.006

Noory, S. N., Shahimi, S., & Ismail, A. G. (2021). A Systematic Literature Review on the Effects of Risk Management Practices on the Performance of Islamic Banking Institutions. *Asian Journal of Accounting and Governance*, *16*, 53–75. https://doi.org/10.17576/ajag-2021-16-05

Nosheen, & Rashid, A. (2021). Financial soundness of single versus dual banking system: explaining the role of Islamic banks. *Portuguese Economic Journal*, *20*, 99–127. https://doi.org/https://doi.org/10.1007/s10258-019-00171-2

Nugroho, L., Mastur, A. A., Ulfa, U., Wahyono, T., & Soeharjoto, S. (2021). Comparative Analysis of the Determinant Factors of Return on Assets between Islamic Commercial Banks (BUS) and Islamic Business Units (UUS). *Jurnal Economia*, *17*(1), 124–140. https://doi.org/10.21831/economia.v17i1.34853

Nurmawati, B. A., Rahman, A. F., & Baridwan, Z. Z. (2020). the Moderating Role of Intellectual Capital on the Ralationship Between Non Profit Sharing Financing, Profit Sharing Financing and Credit Risk To Financial Performance of Islamic Bank. *Jurnal Reviu Akuntansi Dan Keuangan*, *10*(1), 38–52. https://doi.org/10.22219/jrak.v10i1.10628

Parsa, M. (2022). Efficiency and stability of Islamic vs. conventional banking models:

a meta frontier analysis. *Journal of Sustainable Finance & Investment*, *12*(3), 849–869. https://doi.org/10.1080/20430795.2020.1803665

Retnowati, A., & Jayanto, P. Y. (2020). Factors Affecting Non-Performing Financing at Islamic Commercial Banks in Indonesia. *Accounting Analysis Journal*, *9*(1), 38–45. https://doi.org/10.15294/aaj.v9i1.20778

Saleh, I., Afifa, M. A., & Murray, L. (2020). The effect of credit risk, liquidity risk and bank capital on bank profitability: Evidence from an emerging market. *Cogent Economics & Finance*, *8*(1), 1814509. https://doi.org/10.1080/23322039.2020.1814509

Setiawan. (2024). Optimizing Indonesian Sharia Rural Banks' Performance: Insights from Internal Factors. *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan Dan Akuntansi*, *16*(2), 76–88. https://doi.org/10.35313/ekspansi.v17i1.6437

Sobarsyah, M., Soedarmono, W., Salasi, W., Yudhi, A., Trinugroho, I., Warokka, A., & Pramono, S. E. (2020). Loan growth, capitalization, and credit risk in Islamic banking. *International Economics*, *163*, 155–162. https://doi.org/10.1016/j.inteco.2020.02.001

Sutrisno, S., & Widarjono, A. (2022). Is Profit–Loss-Sharing Financing Matter for Islamic Bank's Profitability? The Indonesian Case. *Risks*, *10*(11), 1–12. https://doi.org/10.3390/risks10110207

Viverita, V., Bustaman, Y., & Nastiti, D. (2023). Liquidity creation by Islamic and conventional banks during the Covid-19 pandemic. *Heliyon*, *9*(4), e15136. https://doi.org/10.1016/j.heliyon 2023.e15136

Widarjono, A., & Mardhiyah, Z. (2022). Profit-Loss Sharing Financing and Stability of Indonesian Islamic Banking. *International Journal of Islamic Business and Economics (IJIBEC)*, *6*(1), 1–16. https://doi.org/10.28918/ijibec.v6i1.4196

Widarjono, A., Wijayanti, D., & Suharto, S. (2022). Funding liquidity risk and asset risk of Indonesian Islamic rural banks Funding liquidity risk and asset risk of Indonesian Islamic rural banks. *Cogent Economics & Finance*, *10*(1), 2059911. https://doi.org/10.1080/23322039.2022.2059911

Wulandari, M. V., Suryana, & Utami, S. A. (2019). Determinant of Non-performing Financing in Indonesia Islamic Bank. *KnE Social Sciences*, *3*(13), 453. https://doi.org/10.18502/kss.v3i13.4223