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Determinants of Islamic Banking Profitability: A Cross-Country Panel Analysis from IFSB Data (2016-2024)

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Abstract

Background: Islamic banking plays a crucial role in promoting financial inclusion and economic stability across member countries of the Islamic Financial Services Board (IFSB). However, the variability in profitability across nations raises questions regarding which internal financial factors most strongly influence performance at the industry level.
Objectives: This study aims to analyze the influence of CAR, NPF, CIR, and LR on the ROA of Islamic banking industries across twelve IFSB member countries during 2016-2024.
Novelty: This study provides a cross-country industry-level analysis of Islamic banking profitability, revealing that efficiency and credit risk management are stronger determinants of performance than capital strength.
Research Methodology / Design: This research employs panel data regression using secondary data from IFSB. The sample includes 12 countries with consistent financial reporting from 2016–2024.
Findings: The results reveal that NPF and CIR have significant negative effects on profitability, while LR has a significant positive effect. CAR shows a positive but statistically insignificant relationship.
Implication: Theoretically, the study reinforces the efficiency and risk management theories within Islamic financial systems. Practically, regulators should prioritize policies enhancing operational efficiency and credit risk governance, while banks should optimize liquidity without compromising profitability sustainability.

Keywords:
Islamic Banking, ROA, CAR, NPF, CIR, Liquidity Ratio

JEL Classifications:
G21, G24, G32, E44, O16

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A. Introduction

Islamic banking has emerged as one of the most dynamic segments of the global financial system, expanding steadily in both Muslim and non-Muslim countries. The global Islamic finance industry surpassed US$3.38 trillion in assets in 2024, and Islamic banking accounted for over 70% of that total (IFSB, 2025). This sustained growth demonstrates a significant demand for ethical and interest-free financial systems aligned with Shariah principles of justice and risk-sharing (Maulida & Firdaus, 2025). The increasing contribution of Islamic banking to global finance highlights the need to analyze its profitability determinants at a systemic level. Understanding the factors that influence profitability is essential not only for Islamic financial institutions but also for regulators seeking to strengthen financial stability and competitiveness.

Profitability serves as the primary indicator determining a bank's sustainability, as it reflects the institution's ability to generate income from its owned assets (Alqahtani & Mayes, 2018). Islamic banks face unique challenges compared to conventional banks because the profit-and-loss sharing system and the prohibition of interest (riba) alter their risk profile and financing strategies (Tarmizi et al., 2024). Dependence on the real sector results in high sensitivity to economic fluctuations, making risk management a critical aspect (Nisa et al., 2023).

The performance of global Islamic banks is also influenced by internal factors such as cost efficiency and the ability to maintain liquidity. The efficiency ratio, measured through the Cost to Income Ratio (CIR), serves as a key indicator reflecting managerial effectiveness in controlling operational expenses relative to income (Chowhury et al., 2017). On the other hand, the Liquidity Ratio (LR) assesses a bank's ability to meet short-term obligations without incurring significant losses. Islamic banks must maintain a balance between liquidity and profitability, as excessive liquidity may reduce returns, while insufficient liquidity increases the risk of default (Dabiri, 2020). Furthermore, Non-Performing Financing (NPF) has also been widely examined as a determinant of Islamic banks' profitability. Kumar & Bird (2019) found that the Non-Performing Loan (NPL) ratio has a significant negative effect on the profitability of Islamic banks in four Asian countries.

At the macro level, the global Islamic banking industry faces pressures arising from global economic uncertainty, fluctuations in international interest rates, and the ongoing transition toward green finance and digitalization (IFSB, 2025). These conditions require banks to strengthen their capital base, enhance risk management, and adapt to the increasingly dominant role of financial technology (fintech) (Al-Sharkas & Al-Sharkas, 2022). The Capital Adequacy Ratio (CAR) serves as one of the key determinants of profitability in both Islamic and conventional banks (Ibrahim et al., 2021). Nevertheless, Sobol et al. (2023) demonstrate that the effect of capital adequacy on profitability in Islamic banks is not always positive or consistent, thereby creating a research gap that warrants further investigation.

Numerous studies have examined the relationship between financial ratios and the profitability of Islamic banks; however, most remain geographically limited. Kurnia et al. (2024) analyzed the financial health of Islamic banks in Indonesia by employing variables such as Good Corporate Governance (GCG), Non-Performing Financing (NPF), and the Operating Cost to Operating Income Ratio (BOPO). Cahyani & Tubastuvi (2024) investigated the influence of capitalization, liquidity, operational efficiency, and non-performing financing on profitability across 13 Islamic banks in Indonesia. From a macroeconomic perspective, Alnajjar & Othman (2021) examined the effect of CAR on the performance of Islamic commercial banks in MENA countries, including Qatar, Oman, Bahrain, Kuwait, the United Arab Emirates, Saudi Arabia, and Jordan. Falikhatun & Mudrikah (2022) highlighted the role of human and structural capital dimensions in determining the profitability of Islamic banks in OIC member countries. Dabiri (2020) through an empirical study on Islamic banks in Malaysia and the United Kingdom, explored the relationship between profitability and liquidity. Meanwhile, Sobol et al. (2023) assessed the determinants of profitability between Islamic and conventional banks in the Middle East region. Rahmatillah et al. (2025) examined the effects of NPF and BOPO on the profitability of Islamic banks in Indonesia and Malaysia.

This study introduces several novel contributions that distinguish it from previous literature. First, it utilizes aggregated industry-level data of Islamic banks by country, as reported to the IFSB, for the 2016–2024 period. This approach enables a broader cross-country and temporal analysis compared to studies limited to individual banks or single-country observations. Second, the study integrates four key variables: capital adequacy, non-performing financing, cost-to-income ratio, and liquidity ratio, within a unified analytical framework to examine their influence on Islamic bank profitability. Third, the selected period of 2016-2024 captures recent dynamics such as the globalization of Islamic finance, new regulatory frameworks introduced by the IFSB, and liquidity challenges arising from shifts in the global economic environment. Fourth, the study employs a cross-country panel analysis with country-level aggregation, allowing the examination of macro-level effects and inter-country variations within the Islamic banking context. Therefore, this research aims to fill the existing gap in the literature and provide an updated empirical perspective on the factors influencing the collective profitability of the Islamic banking industry.

This research aims to empirically analyze the impact of Capital Adequacy (CAR), Credit Risk (NPF), Cost to Income Ratio (CIR), and Liquidity Ratio (LR) on the Profitability (ROA) of Islamic banking across countries during the period 2016-2024. The findings of this research are expected to contribute both theoretically and practically. From a theoretical perspective, the study enhances understanding of profitability determinants within the Islamic financial intermediation framework, extending the applicability of the risk return and efficiency profitability hypotheses to Sharia-compliant institutions. The incorporation of multi-country data adds empirical robustness and expands the literature on cross-national determinants of Islamic banking performance.

From a practical and policy perspective, the study's results can guide regulators, such as central banks and the IFSB, in formulating standards that balance profitability with stability. Insights into how CAR and LR influence profitability may inform capital and liquidity requirements under Islamic financial regulations. For managers, understanding the role of efficiency (CIR) and credit risk (NPF) provides actionable guidance for optimizing operational policies and risk management strategies. Ultimately, this research supports the sustainable growth of Islamic banking by promoting informed decision-making at both institutional and systemic levels.

B. Literature Review

B.1. Theoretical framework

This research is grounded in several economic and financial theories that explain the mechanisms linking financial structure, efficiency, risk, and profitability in Islamic banking. Conceptually, these theories form the analytical foundation for understanding how banks internal variables influence the financial performance of the Islamic banking industry across countries.

Financial Intermediation Theory

The Financial Intermediation Theory posits that banks act as intermediaries between surplus and deficit units with the primary objective of minimizing transaction costs and information asymmetry (Diamond, 1984). In the context of Islamic banking, this intermediation function is extended through the profit-and-loss sharing (PLS) mechanism, which emphasizes fairness and risk sharing. Effective intermediation performance is reflected in higher profitability, as efficiency in fund allocation optimizes income margins (Diamond, 2023).

Risk Management Theory

The Risk Management Theory assumes a positive relationship between the level of risk undertaken by financial institutions and the expected rate of return (Markowitz, 1952). However, within the Islamic financial system which prohibits speculation (gharar) and interest (riba) risk management adopts a distinct dimension that emphasizes maintaining a balance between prudence and efficiency (Nisa et al., 2023). In the context of Islamic banking, the profit-and-loss sharing mechanism adds complexity to credit risk management due to its inherent linkage with the real sector (Kumar & Bird, 2019). Consequently, a high level of financing risk (NPF) reflects inefficiency in fund allocation and leads to lower profitability, as explained by this theory.

Efficiency Theory

The Efficiency Theory asserts that a bank's profitability largely depends on managerial capability in controlling operational costs relative to income (Berger & Mester, 1997). In Islamic banking, efficiency extends beyond cost management to encompass adherence to Sharia principles in resource utilization and service delivery (Maulida & Firdaus, 2025). Efficiency ratios such as the Cost to Income Ratio serve as empirical reflections of this theoretical framework.

Liquidity Management Theory

The Liquidity Management Theory explains that maintaining an optimal balance between liquidity and profitability is essential for the stability of financial institutions (Bianchi & Bigio, 2022). Banks that sustain adequate liquidity levels can fulfill short-term obligations while continuing to channel financing productively (Ghenimi et al., 2021). In the Islamic financial system, liquidity management becomes more complex due to the prohibition of interest-based instruments, thereby encouraging the development and innovation of Sharia-compliant liquidity instruments such as sukuk and interbank mudarabah arrangements.

Structure Conduct Performance

The Structure–Conduct–Performance (SCP) theory emphasizes how market structure and capital composition influence the behavior and financial outcomes of institutions (Mason, 1939). In this context, the Capital Adequacy Ratio represents the industry's capacity to absorb risks and maintain systemic stability. Strong capitalization enhances market confidence and strengthens resilience against financial crises (Bashir et al., 2021).

B.2. Hypothesis Development

The Structure–Conduct–Performance (SCP) Theory posits that banks with stronger capital structures tend to have greater capacity for financing expansion, thereby enhancing profitability (Bashir et al., 2021). An empirical study by Metwally et al. (2025) found that the Capital Adequacy Ratio (CAR) positively influences ROA and ROE among Islamic banks in the GCC region, as higher capitalization provides a stronger buffer against potential losses. Similar findings were reported by Alnajjar & Othman (2021), who demonstrated that CAR positively affects profitability because higher capital increases depositor confidence and expands financing capacity. However, Sobol et al. (2023) identified insignificant results in certain countries, suggesting that the impact of CAR on profitability may depend on market structure and national regulatory frameworks. Nevertheless, most banking theories emphasize that high capital adequacy enhances a bank's resilience to financial risks, thereby supporting profit stability. From the perspective of agency theory, stronger capitalization also mitigates conflicts between shareholders and management regarding investment risks (Jensen & Meckling, 1976). Therefore, the Capital Adequacy Ratio is expected to have a positive effect on the profitability of Islamic banks.

H_1: The Capital Adequacy Ratio has a positive effect on the profitability of the Islamic banking industry in each country.

Credit risk reflects the likelihood of default by borrowers on financing provided by banks and serves as a key factor influencing profitability (Kumar & Bird, 2019). According to Risk Management Theory, a higher level of Non-Performing Financing (NPF) requires banks to allocate larger loan-loss provisions, thereby reducing net income (Maulida & Firdaus, 2025). Empirical evidence across countries consistently demonstrates that NPF exerts a negative effect on the profitability of Islamic banks (Sobol et al., 2023). Ahmed & Khan (2021) found that an increase in NPF decreases intermediation efficiency and reduces profit margins among Southeast Asian Islamic banks. From the perspective of Agency Theory, high credit risk may also indicate weak monitoring mechanisms between management and shareholders (Khan et al., 2024). Furthermore, a cross-country study by Alqahtani & Mayes (2018) confirmed that elevated financing risk undermines the ability of Islamic banks to allocate funds efficiently, thereby negatively affecting ROA and ROE. Both theoretically and empirically, the negative relationship between credit risk and profitability has been strongly established in the Islamic banking literature.

H_2: Non-Performing Financing (NPF) has a negative effect on the profitability of the Islamic banking industry in each country.

The Efficiency Theory posits that banks capable of managing operational costs effectively will achieve higher levels of profitability (Rusydiana et al., 2023). The Cost to Income Ratio (CIR) serves as the primary indicator of efficiency, as it reflects the proportion of operating expenses relative to the income generated (Hawaldar et al., 2016). Empirical studies on Islamic banks in Nigeria indicate that CIR has a negative effect on ROA, suggesting that higher cost ratios correspond to lower profitability (Ayinuola & Gumel, 2023). Similarly, Metwally et al. (2025) emphasized that cost efficiency is one of the main determinants of the financial performance of Islamic banks in the MENA region. From the perspective of Agency Theory, inefficient management in controlling operational costs tends to reduce profitability due to opportunistic behavior (Jensen & Meckling, 1976). Within the framework of Structure–Conduct–Performance Theory, high operational efficiency enhances a bank's competitiveness and strengthens its market share (Bashir et al., 2021). Therefore, both theoretical and empirical evidence support the existence of a negative relationship between CIR and profitability.

H_3: The Cost to Income Ratio has a negative effect on the profitability of the Islamic banking industry in each country.

The liquidity ratio reflects a bank's ability to meet its short-term obligations without disrupting operational activities (Dabiri, 2020). According to Liquidity Management Theory, an adequate level of liquidity enables banks to extend financing optimally, thereby increasing income (Bianchi & Bigio, 2022). Ghenimi et al. (2021) found that Islamic banks with higher liquidity ratios tend to experience more stable profitability, as sufficient liquidity helps avoid the costs associated with emergency funding. Similarly, Metwally et al. (2025) reported a positive relationship between liquidity ratio and profitability among Islamic banks in the Middle East, as strong liquidity enhances depositor confidence. However, excessive liquidity may suppress profit margins if funds are not allocated productively. Based on Efficiency Theory and Portfolio Theory, liquidity optimization is necessary to balance risk and return (Marozva & Makina, 2021). Overall, both theoretical and empirical evidence support a positive relationship between liquidity and the profitability of Islamic banks.

H_4: The Liquidity Ratio has a positive effect on the profitability of the Islamic banking industry in each country.

C. Research Methodology

This study utilizes secondary data obtained from the official publications of the Islamic Financial Services Board (IFSB), accessible through its data portal at https://www.ifsb.org/data-metadata/. The IFSB data were selected as they represent an authoritative and standardized global source of financial statistics for the Islamic banking industry, covering multiple countries over an extended period. All data were collected on an annual basis for the period 2016–2024, thereby capturing the dynamics of Islamic banking performance over nearly a decade. This observation period was chosen as it reflects the post-global crisis stabilization phase and the COVID-19 pandemic period, both of which significantly influenced the financial performance of Islamic banks. The IFSB data are advantageous because they undergo a verification and standardization process across member jurisdictions, ensuring reliability for cross-country empirical analysis.

The population of this study comprises all IFSB member countries that possess Islamic banking systems and regularly report financial data during the 2016–2024 period. However, according to IFSB publications, not all countries have completed and consistent data for all required variables. Therefore, this study applies a purposive sampling technique, selecting only countries with available and consistent data across the observation period. Based on these criteria, 12 countries were included in the final sample: Brunei Darussalam, Egypt, Indonesia, Kuwait, Malaysia, Nigeria, Pakistan, Palestine, Qatar, Saudi Arabia, Turkey, and the United Arab Emirates. This sample is considered representative, as it encompasses the major regions of Islamic banking activity, namely Southeast Asia, the Middle East, and South Asia. A country-level (not bank-level) approach is adopted because this study focuses on industry-level analysis, capturing the aggregated performance of Islamic banking within each country. Hence, each country is treated as one observational unit in a panel data model observed over nine years.

Profitability, the dependent variable, is measured using Return on Assets (ROA), calculated as the ratio of net income after tax to total assets. This ratio indicates the ability of the Islamic banking industry to generate profit from its assets. Capital Adequacy (CAR) is measured as the ratio of capital to risk-weighted assets, reflecting the capacity of a country's Islamic banking sector to absorb potential losses and maintain financial stability. Credit Risk is proxied by the Non-Performing Financing (NPF) ratio, representing the proportion of non-performing financing to total financing, which indicates the level of credit risk faced by Islamic banks. Cost to Income Ratio (CIR) is calculated as the ratio of total operating expenses to total operating income and serves as an indicator of operational efficiency. Liquidity Ratio (LR) is measured as the ratio of liquid assets to total assets, showing the ability of a country's Islamic banking industry to meet its short-term obligations. All variables are sourced from the IFSB dataset and expressed in percentages (%).

The analytical method employed in this study is panel data regression analysis, as the data have both cross-sectional (countries) and time-series (years) dimensions for the period 2016–2024. The panel data model enables control over both country-specific heterogeneity and temporal variations that may affect profitability. Three main estimation approaches are considered: Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM). The best-fitting model is determined through the Chow test, Hausman test, and Lagrange Multiplier (LM) test. The research model of this study is specified as follows:

$$ROA_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 NPF_{it} + \beta_3 CIR_{it} + \beta_4 LR_{it} + \varepsilon_{it}$$

Where:

ROA_{it}: Return on Assets

CAR_{it}: Capital Adequacy Ratio

NPF_{it}: Nonperforming Financing

CIR_{it}: Cost to Income Ratio

LR_{it}: Liquid Assets Ratio

ε_{it}: Error term

After determining the most appropriate model, the next step involves conducting classical assumption tests, including the normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. Once the model satisfies all classical assumptions, a significance test at the 5% confidence level will be performed to examine the effect of each independent variable on profitability.

D. Result & Discussion

D.1. Result

The descriptive statistical results presented in Table 1 indicate that the average profitability of Islamic banks across countries (Y_ROA) is 0.0184 or approximately 1.84%, reflecting a moderate level of profit during the 2016–2024 period. The mean value of X1_CAR is 0.1856, suggesting that the Islamic banking industry maintains a relatively strong capital position to absorb financing risks. The average of X2_NPF, amounting to 0.0474, indicates that the level of non-performing financing remains within a reasonable and manageable range. Meanwhile, the mean value of X3_CIR, at 0.4706, signifies a fairly good level of operational efficiency, although the relatively high standard deviation of 0.1997 suggests considerable variation across countries. The average of X4_LR is 0.3121, implying that Islamic banks are able to maintain adequate liquidity to support intermediation stability.

Table 1. Statistic Descriptive

Statistic Results	Y_ROA	X1_CAR	X2_NPF	X3_CIR	X4_LR
Mean	0.018430	0.185553	0.047397	0.470567	0.312143
Median	0.015667	0.181986	0.049465	0.451468	0.269739
Maximum	0.053115	0.329113	0.156874	0.949958	0.694700
Minimum	-0.000588	0.102643	-0.080868	0.087622	0.092907
Std. Dev.	0.009512	0.031400	0.050040	0.199726	0.170220
Skewness	1.139217	1.148250	-0.442745	0.306824	0.892014
Kurtosis	4.741097	7.112752	3.332151	2.678913	2.704294
Jarque-Bera	37.00205	99.84888	4.024869	2.158472	14.71588
Probability	0.000000	0.000000	0.133663	0.339855	0.000638
Sum	1.990481	20.03969	5.118893	50.82129	33.71140
Sum Sq. Dev.	0.009680	0.105496	0.267928	4.268291	3.100304
Observations	108	108	108	108	108

The results of the Chow test presented in Table 2 show that the probability values for both the Cross-section F and Cross-section Chi-square tests are 0.0000, which are below the significance level of 0.05. This indicates that the Fixed Effects Model (FEM) is more appropriate to use compared to the Pooled Least Squares (PLS) model.

Table 2. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.995538	(11,92)	0.0000
Cross-section Chi-square	90.641500	11	0.0000

The results of the Hausman test presented in Table 3 show a Chi-Square statistic value of 27.1234 with a probability level of 0.0001, which is well below the significance threshold of 0.05. This indicates that the Fixed Effects Model (FEM) is once again more appropriate than the Random Effects Model (REM) for this study. Accordingly, there are significant cross-country differences in the profitability structure of the Islamic banking industry that cannot be ignored by models without individual effects. This finding confirms the presence of cross-country heterogeneity, where each country possesses specific characteristics such as regulatory frameworks, operational efficiency, and financing risk levels that influence its profitability performance. Methodologically, these results suggest that employing a fixed-effects model provides more accurate estimates in capturing the systemic variations among countries.

Table 3. Hausman Test

Test Summary	Chi-Sq. Statistic	d.f.	Prob.
Cross-section random	24.333367	4	0.0001

Figure 1 presents the results of the residual normality test using the Jarque–Bera test, which produced a statistic value of 4.290757 with a probability level of 0.117024, exceeding the significance threshold of 0.05. This result indicates that the residuals in the regression model are normally distributed, thereby confirming that the classical assumption of normality is satisfied.

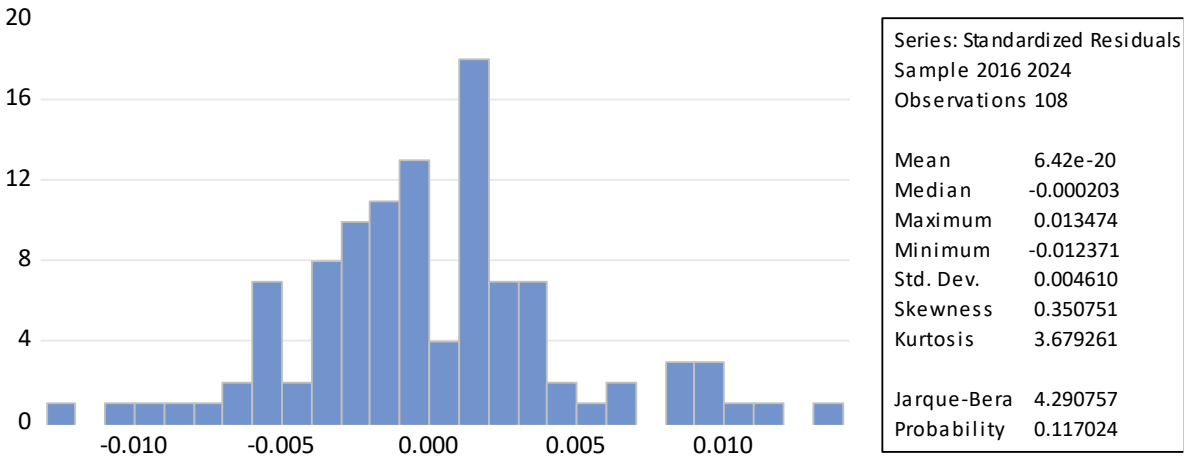

Figure 1. Normality Test

The results of the multicollinearity test presented in Table 4 indicate that the Centered Variance Inflation Factor (VIF) values for all independent variables are below the critical threshold of 10. This finding suggests that there is no serious multicollinearity among the independent variables used in the model. In other words, the relationships among the explanatory variables CAR, NPF, CIR, and LR, are relatively weak and do not distort the estimation of the regression parameters.

Table 4. Multicollinearity Test

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	3.03E-05	63.97819	NA
X1_CAR	0.000549	41.10760	1.134093
X2_NPF	0.000226	2.252909	1.182291
X3_CIR	1.47E-05	8.095579	1.226063
X4_LR	2.12E-05	5.644383	1.284535

The results of the heteroskedasticity test presented in Table 5 indicate that all independent variables have probability values (p-values) above the 0.05 significance level. Specifically, the p-values for X1_CAR (0.0673), X2_NPF (0.3935), X3_CIR (0.8918), and X4_LR (0.4160) suggest that there is no significant indication of heteroskedasticity in the regression model. Therefore, it can be concluded that the residual variance is homogeneous (homoscedastic), meaning that the error variance does not systematically vary with the values of the independent variables. This condition is crucial for ensuring the validity of statistical significance tests, as models with constant error variance produce efficient parameter estimates.

Table 5. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.011183	0.004827	2.316924	0.0408
X1_CAR	0.005279	0.002602	2.029338	0.0673
X2_NPF	-0.013082	0.014729	-0.888181	0.3935
X3_CIR	0.000493	0.003543	0.139192	0.8918
X4_LR	0.005217	0.006172	0.845170	0.4160

The following section presents the results of the panel data regression conducted for this study (see Table 6).

Table 6. Panel Data Regression Output

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032316	0.006238	5.180130	0.0000
X1_CAR	0.015980	0.019878	0.803889	0.4235
X2_NPF	-0.081751	0.023017	-3.551756	0.0006
X3_CIR	-0.042383	0.006679	-6.345710	0.0000
X4_LR	0.022324	0.009057	2.464795	0.0156

The constant value of 0.032316 indicates that when all independent variables X1_CAR, X2_NPF, X3_CIR, and X4_LR are zero, the profitability (ROA) of the Islamic banking industry is estimated to be 0.0323, or approximately 3.23%. The regression coefficient for X1_CAR is 0.015980, implying that a one-unit increase in the Capital Adequacy Ratio, holding other variables constant, would increase ROA by 0.01598 units. However, with a probability value of 0.4235, which exceeds 0.05, the effect of CAR on profitability is not statistically significant, indicating that increased capitalization does not directly translate into higher industry-level profits. Meanwhile, X2_NPF has a coefficient of -0.081751, meaning that a one-unit increase in the Non-Performing Financing ratio, ceteris paribus, would decrease ROA by 0.08175 units. The negative and statistically significant coefficient ($p = 0.0006$) demonstrates that higher financing risk has a direct and adverse impact on the profitability of Islamic banks across countries.

For X3_CIR, the coefficient is -0.042383, indicating that a one-unit increase in the Cost to Income Ratio reduces profitability by 0.04238 units. The very significant negative relationship ($p = 0.0000$) confirms that operational efficiency is a crucial determinant of the profit performance of the Islamic banking industry. Finally, X4_LR has a coefficient of 0.022324, implying that a one-unit increase in the Liquidity Ratio raises ROA by 0.02232 units. With a probability value of 0.0156, this effect is significant at the 5% level, indicating that the ability to maintain adequate asset liquidity contributes positively to profitability. Banks with sufficient liquidity are better able to meet short-term obligations while seizing productive investment opportunities.

The R-squared value reported in Table 7 is 0.765042, indicating that approximately 76.50% of the variation in profitability (ROA) of the Islamic banking industry across countries can be explained by the independent variables included in the model, namely CAR, NPF, CIR, and LR. This high coefficient of determination demonstrates that the model possesses strong explanatory power in analyzing the factors affecting the profitability of Islamic banking at the country level. The remaining 23–27% of the variation is attributed to other factors outside the model.

Table 7. R-squared Test

R-squared	0.765042
Adjusted R-squared	0.726734

The results of the F-statistic test presented in Table 8 show an F-statistic value of 19.97068 with a probability (Prob F-statistic) of 0.000000, which is well below the 0.05 significance level. This indicates that, simultaneously, all independent variables CAR, NPF, CIR, and LR, have a significant effect on the ROA of the Islamic banking industry across countries during the 2016–2024 period.

Table 8. F Statistic Test

F-statistic	19.97068
Prob(F-statistic)	0.000000

D.2. Discussion

The results of the first hypothesis test indicate that CAR has a positive coefficient of 0.015980 but is not statistically significant (p = 0.4235). This finding suggests that an increase in capital does not necessarily lead to higher profitability in the Islamic banking industry across countries. This result is consistent with Sobol et al. (2023) who found that the relationship between capital adequacy and profitability varies across countries depending on market structure and operational efficiency. Similarly, Minarni et al. (2023) and Nisa et al. (2023) reported that the capital adequacy ratio does not significantly contribute to the profitability of Islamic banks in Indonesia, whereas Alnajjar & Othman (2021) found a positive effect in MENA countries with more integrated financial systems. These differences indicate that, in a global context, capital strengthening functions more as a stability instrument rather than a direct driver of profitability.

The results of the second hypothesis test show that NPF has a negative and significant effect on profitability (coefficient = -0.081751; p = 0.0006). This finding aligns with the results of Kumar & Bird (2019) and Alqahtani & Mayes (2018) which emphasize that an increase in the non-performing financing ratio reduces the profits of Islamic banks due to higher loan loss provisions. Cross-country studies by Rahmatillah et al. (2025) also report a similar pattern in Indonesia and Malaysia, where rising NPF consistently suppresses ROA. Theoretically, these results reinforce Risk Management Theory, which posits that higher default risk reduces a bank's ability to generate net profits (Maulida & Firdaus, 2025). Moreover, the findings support Agency Theory, indicating that high NPF reflects weak management monitoring mechanisms in maintaining asset quality (Khan et al., 2024). Therefore, these results highlight that credit risk control is a critical factor for sustaining profitability in Islamic banks, particularly within systems based on profit-and-loss sharing and linkage to the real sector.

The results of the third hypothesis test indicate that CIR has a negative and significant effect on profitability (coefficient = -0.042383; p = 0.0000). This finding is fully consistent with Efficiency Theory, which asserts that banks with higher efficiency levels achieve better profitability (Rusydiana et al., 2023). Empirically, these results are supported by studies conducted by Cahyani & Tubastuvi (2024), Wati & Rosyadi (2025), and Ayinuola & Gumel (2023) all of which found a negative relationship between the cost-to-income ratio and profitability across various countries. The significance of this relationship at the cross-country level indicates that operational efficiency is a universal determinant of Islamic banks' financial performance, regardless of geographic context or regulatory differences. In other words, Islamic banks that can effectively control operational costs relative to revenue tend to achieve higher competitiveness and superior performance. This finding also aligns with Agency Theory, where efficient management reflects the capacity to mitigate opportunistic behavior and maximize institutional value.

For the fourth hypothesis, the analysis results indicate that the Liquidity Ratio (LR) has a positive and significant effect on profitability (coefficient = 0.022324; p = 0.0156). This finding supports Liquidity Management Theory, which posits that an optimal level of liquidity enhances a bank's ability to provide productive financing while maintaining operational stability (Bianchi & Bigio, 2022). The results are consistent with the studies of Ghenimi et al. (2021) and Metwally et al. (2025) which found that banks with higher liquidity exhibit more stable profitability, particularly in the Middle East. From a cross-country perspective, Dabiri (2020) also highlighted that efficient liquidity management is a key determinant in sustaining profits in Malaysia and the United Kingdom. However, research by Marozva & Makina (2021) cautions that excessive liquidity may reduce profit margins if idle funds are not productively deployed. Therefore, the positive relationship observed in this study indicates that most countries in the sample have achieved an efficient level of liquidity that supports the profitability performance of the global Islamic banking industry.

Overall, the results of this study indicate that NPF and CIR have a significant negative effect on profitability, while LR has a significant positive effect, and CAR does not have a significant impact. This pattern suggests that, at the industry level across countries, operational efficiency and credit risk management are the two primary pillars determining profitability. These findings reinforce the results of Sobol et al. (2023) and Al-Sharkas & Al-Sharkas (2022) which emphasize that internal factors particularly efficiency and credit risk contribute more strongly to the financial performance of global Islamic banks than capital strength. Critically, the synthesis of these findings highlights that global Islamic banking profitability is more influenced by managerial capability in risk and efficiency management than by capital alone. Consequently, policy strategies focusing on asset quality improvement and operational efficiency are more relevant than merely increasing capital ratios.

E. Conclusions & Policy Recomendation

The study's findings indicate that all independent variables simultaneously have a significant effect on profitability, suggesting that the model possesses strong explanatory power for cross-country variations in ROA. Partially, NPF and CIR exhibit a significant negative impact on profitability, LR shows a significant positive effect, while CAR has a positive but insignificant influence. These results underscore that cost efficiency and credit risk management are the primary determinants of financial performance in the global Islamic banking industry. Meanwhile, the insignificant effect of CAR suggests that capital functions more as a mechanism for stability and risk resilience rather than as a direct driver of profitability.

This research has several limitations. First, the use of secondary data from the Islamic Financial Services Board (IFSB) restricts the sample to 12 countries with consistent reporting, meaning the results do not fully represent all countries. Second, the study employs a macro-level quantitative approach, which does not account for differences in institutional structures, fiscal policies, or the development of Islamic financial markets across countries. Third, the variables are internal banking indicators (financial ratios) and do not include external factors such as inflation, GDP, or financial stability indices. Fourth, cross-country comparisons are conducted at an aggregate level, so the findings should be interpreted as empirical indications rather than micro-level generalizations for individual banks.

Based on the findings, several policy implications and recommendations can be drawn for stakeholders. For regulators and Islamic financial authorities, the results highlight the importance of strengthening credit risk management (NPF) and improving operational efficiency (CIR) through risk-based supervision and the implementation of best practices in productive asset management. Prudential policies should not only emphasize capital adequacy ratios but also focus on the effectiveness of financing distribution and operational cost control. For Islamic banks and industry practitioners, the study emphasizes the need to enhance managerial efficiency and optimize cost structures to strengthen competitiveness. The adoption of digital technologies and data-driven management can help reduce operational costs and improve service quality. Additionally, liquidity management should be maintained at an optimal level to prevent idle funds from lowering profitability. Such harmonization is crucial for enhancing transparency, cross-country performance comparisons, and the effectiveness of cross-jurisdictional policies. For academics and future researchers, this study can be extended by incorporating external variables such as macroeconomic stability, Shariah benchmark interest rates, or global Islamic financial indices to capture broader contextual effects. Moreover, applying Dynamic Panel Models (GMM) or Quantile Regression can help analyze variations in profitability dynamics across countries based on the maturity level of the Islamic banking industry.

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