

THE EFFECT OF LIQUIDITY, LEVERAGE, CAPITAL, EFFICIENCY, AND ASSET QUALITY ON ISLAMIC BANKS PROFITABILITY IN ASIA

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Accepted: April 17, 2025

Revised: September 29, 2025

Published: November 24, 2025

Abstract: Sharia banking in Asia has experienced rapid asset growth and has become a major contributor to the global Islamic finance industry. However, this asset growth has not always been accompanied by stable profitability due to high operating costs and financing risks. This study aims to examine the FDR, DAR, CAR, CIR, and NPF on ROA in Islamic banking in Asia. This study uses a descriptive quantitative approach with panel data regression analysis. The results show that, partially, the variables FDR, DAR, and CAR do not have a significant effect on ROA, while the variables CIR and NPF have a significant negative effect on ROA in Islamic banks in Asia. Simultaneously, all independent variables have a significant effect on ROA in Islamic banks in Asia. This study explains that asset efficiency and quality are important factors that affect the profitability of Islamic banking in Asia. The implication of this study is the need to strengthen financing risk management and improve operational efficiency to maintain the financial performance of Islamic banking.

Keywords: Liquidity; Leverage; Capital; Efficiency; Asset Quality

Abstrak: Perbankan syariah di Asia mengalami pertumbuhan aset yang pesat dan menjadi kontributor utama bagi industri keuangan islam secara global. Namun, pertumbuhan aset tersebut belum selalu diiringi dengan kinerja profitabilitas yang stabil dikarenakan masih dipengaruhi oleh biaya operasional yang tinggi dan risiko pembiayaan. Penelitian ini bertujuan untuk menguji FDR, DAR, CAR, CIR, dan NPF terhadap ROA pada perbankan syariah di Asia. Penelitian ini menggunakan metode pendekatan kuantitatif deskriptif dengan analisis regresi data panel. Hasil penelitian ini menunjukkan bahwa secara parsial variabel FDR, DAR, dan CAR tidak berpengaruh signifikan terhadap ROA, sedangkan variabel CIR dan NPF berpengaruh negatif signifikan terhadap ROA pada bank syariah di Asia. Adapun secara simultan, seluruh variabel independent berpengaruh signifikan terhadap ROA pada bank syariah di Asia. Penelitian ini menerangkan bahwa faktor efisiensi dan kualitas aset merupakan aspek penting yang memengaruhi profitabilitas perbankan syariah di Asia. Adapun implikasi dari penelitian ini perlunya penguatan manajemen risiko pembiayaan dan peningkatan efisiensi operasional untuk menjaga kinerja keuangan perbankan syariah.

Kata Kunci: Likuiditas, Hutang, Permodalan, Efisiensi, Kualitas Aset

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Introduction

Over time, Islamic banking has continued to show consistent growth in line with the increasing interest in Islamic finance globally.¹ Based on the *Islamic Financial Services Board (IFSB)*. Global Islamic banking assets grew by around 4% (YoY), from USD 3.2 trillion in 2022 to USD 3.38 trillion in 2023. Asia is the region with the largest market share, accounting for around 70% of total global Islamic financial assets, making Islamic banking the main driver of overall industry growth in the last decade.² Rapid growth in financing and investment activities in most jurisdictions across various sectors, such as property in the UAE and oil and gas in Qatar, has also helped Islamic banks record high asset growth rates in their balance sheets.³ This asset growth not only reflects industry expansion, but is also directly related to the profitability of Islamic banks, as increased assets should improve the bank's ability to generate sustainable profits, provided that this is balanced with operational efficiency and good risk management.

On the other hand, Asia is a region that plays an important role in global economic development and Islamic economics. With the largest Muslim population in the world, around 67%, this region is dominated by the Sharia banking industry, so it is not surprising that Asia has become the main driver of the global economy.⁴ Countries such as Iran, Saudi Arabia, Malaysia, and the United Arab Emirates are the largest contributors to global Islamic banking assets. However, this dominance is not without challenges. Regulatory diversity among Asian countries remains an obstacle to creating an efficient Islamic financial market integration. In addition, geopolitical risks, energy price volatility, and relatively high levels of non-performing loans in some countries can also put pressure on the profitability of Islamic banks.⁵ Thus, even though Asia has a large asset base, the profitability of Islamic banks in this region remains dependent on their ability to manage risk and adapt to applicable regulations.

Significant asset growth in Islamic banks indicates the institution's capacity to carry out operational activities. However, this growth must also be balanced with an optimal profitability so that the bank can maintain its performance in a sustainable manner. Therefore, it is important to evaluate how these growing assets contribute to increasing bank profitability.⁶ The importance of profitability can be explained through the theory of financial intermediation, in which banks act as intermediaries between surplus and deficit funds. The success of this intermediary function is reflected in the ability of banks to

¹ Astiwi Indriani, Endang Tri Widyarti, And Shoimatal Fitria, "Capital Structure Perbankan Syariah Di Asia Tenggara: Sebuah Pendekatan Empiris," *Al Tijarah* 3, no. 2 (2017): 97.

² Stability Islamic Financial Services Board Report, "Islamic Financial Services Board," 2024.

³ Mohammad Ashraful Ferdous Chowdhury And Mohamed Eskandar Shah Mohd Rasid, "The Determinants Of The Profitability Of Islamic Banks: A Cross-Sectional Study From Asia And Africa," *International Journal Of Business And Globalisation* 15, no. 3 (2015): 375.

⁴ Mastercard Crescentrating, *Global Muslim Travel Index 2019*, (Singapore: Mastercard, 2023).

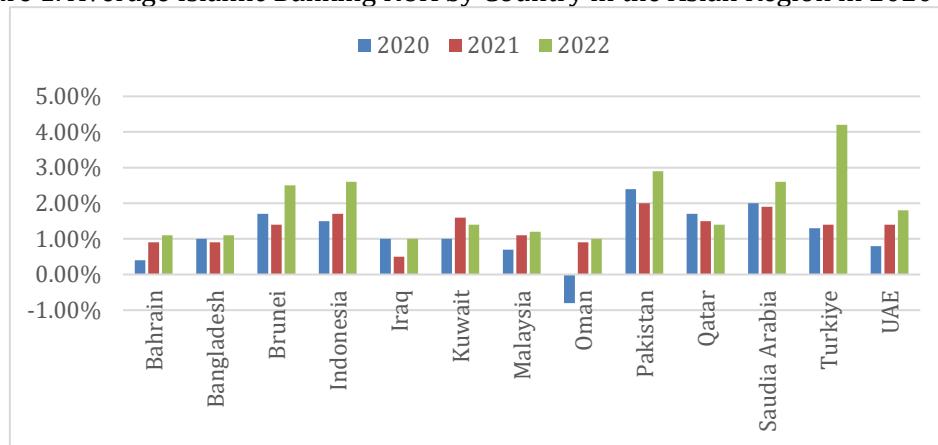
⁵ Islamic Finance Development Report LSEG and ICD, "Islamic Finance Development Report 2023: Navigating Uncertainty," 2023.

⁶ Wina Aprilia And Nana Diana, "Pengaruh Pembiayaan Mudharabah, Musyarakah Dan Non Performing Financing Terhadap Profitabilitas Bank Pembiayaan Rakyat Syariah Di Provinsi Jawa Barat Periode 2017-2020," *JLAI (Jurnal Ilmiah Akuntansi Indonesia)* 6, no. 1 (2021).

generate profits on a sustainable basis.⁷ In addition, efficiency theory also emphasizes that profitability can increase if banks are able to minimize operational costs and maximize the productive use of assets. Thus, profitability not only serves as an indicator of financial health, but also as a reflection of the effectiveness of Islamic banking intermediation.⁸

One of the tools to measure the value of profitability is *Return On Asset* (ROA).⁹ ROA was chosen as an assessment indicator because it is comprehensive and has represented to measure the level of profitability seen from assets where most of the funds are from the public.¹⁰ The average growth chart of Islamic banking ROA based on countries in the Asian region is shown in figure 1, below:

Figure 1. Average Islamic Banking ROA by Country in the Asian Region in 2020-2022



Source: Data Processed by Authors, 2025

Figure 1, shows that the profitability of Islamic banks in Asia has fluctuated despite continued asset growth. For example, in the GCC region, the decline in ROA, as seen in Oman, was largely influenced by dependence on unstable oil prices and high operating costs during the pandemic. Brunei Darussalam experienced similar conditions, where increased operating costs reduced the effectiveness of assets in generating profits. This pattern illustrates that the profitability of Islamic banks in Asia is not only influenced by the internal performance of banks, but also by external factors such as commodity prices, the pandemic, and operational costs. This means that even though Islamic banking assets continue to grow, the sustainability of profitability still depends on the ability of banks to manage risk and efficiency amid economic uncertainty. In addition, Bangladesh and Pakistan also faced profitability pressures due to the impact of the pandemic, declining revenues, and rising inflation and operating costs that caused fluctuations, with profitability declining in 2021

⁷ Franklin Allen And Anthony M Santomero, "The Theory Of Financial Intermediation," *Journal Of Banking & Finance* 21, no. 11 (1997): 1461.

⁸ Guntur Kusuma Wardana And Noer Aisyah Barlian, "Determinant Of Islamic Banks On The World Capital Structure," *IQTISHODUNA: Jurnal Ekonomi Islam* 11, no. 2 (2022): 197–208.

⁹ Mamduh M Hanafi And Abdul Halim, *Analisis Laporan Keuangan*, (Yogyakarta: UPP STIM YKPN, 2016).

¹⁰ Helvy Rafika Krisdiyanti, Titi Rapini, And Umi Farida, "Pengaruh Kinerja Keuangan Terhadap Kemampuan Membayar Zakat Perusahaan," *ASSET: Jurnal Manajemen Dan Bisnis* 2, no. 2 (2020).

due to the impact of COVID-19. The COVID-19 pandemic has implications for all aspects of life, both positive and negative.¹¹

The COVID-19 pandemic and international conflicts such as Russia-Ukraine not only disrupt global economic stability, but also have a direct impact on the performance of Islamic banking.¹² This sector is expected to face a number of challenges that could affect its performance.¹³ This challenge arose during the COVID-19 pandemic. During the pandemic, many Islamic and conventional banks experienced a decline in efficiency due to an increase in operating costs and a decline in productivity, resulting in a decrease in net profit from assets.¹⁴ On the other hand, the risk of non-performing loans also increases as customers' ability to pay their obligations weakens, which has implications for a decline in ROA. Under these conditions, Islamic banks must adjust their strategies to maintain profitability amid economic uncertainty.¹⁵ This indicates that the profitability of Islamic banks in Asia is not only determined by asset growth, but is also highly vulnerable to external shocks that affect operational efficiency and asset quality.¹⁶ From several previous studies related to financial performance on profitability, there are still differences in research results.

Table 1. Previous Research

Variable	Source	Result
FDR	Munir, 2018. ¹⁷ Rahmawati dkk, 2021. ¹⁸	No significant effect
	Sihotang dkk, 2022. ¹⁹ Subekti & Wardana 2022. ²⁰	Have a significant impact

¹¹ Bambang Suhada, Agus Alimuddin, And Liska Aisyah, "COVID-19 And The Implementation Of Qawā'id Fiqhiyyah In E-Commerce," *Justicia Islamica* 17, no. 2 (2020): 365.

¹² Connie Rahakundini Bakrie, Mariane Olivia Delanova, And Yanyan Mochamad Yani, "Pengaruh Perang Rusia Dan Ukraina Terhadap Perekonomian Negara Kawasan Asia Tenggara," *Caraka Prabu: Jurnal Ilmu Pemerintahan* 6, no. 1 (2022): 65.

¹³ Destina Fitria Sasmita And Ahmad Tibrizi Soni Wicaksono, "Macroeconomic Influence And Credit Risk On Sharia Banking Asset Growth In Asia," 2023.

¹⁴ Dimas Pratomo And Rahmat Fajar Ramdani, "Analisis Pertumbuhan Kinerja Keuangan Perbankan Syariah Dan Konvensional Di Era Pandemi Covid 19," *Derivatif: Jurnal Manajemen* 15, no. 2 (2021): 260.

¹⁵ Wahyu Agung Panji Subekti And Guntur Kusuma Wardana, "Pengaruh CAR, Asset Growth, BOPO, DPK, Pembiayaan, NPF Dan FDR Terhadap ROA Bank Umum Syariah," *INOBIS: Jurnal Inovasi Bisnis Dan Manajemen Indonesia* 5, no. 2 (2022): 270.

¹⁶ Muhammad Syakhrun, Anwar Anwar, And Asbi Amin, "Pengaruh CAR, BOPO, NPF Dan FDR Terhadap Profitabilitas Pada Bank Umum Syariah Di Indonesia," *BJRM (Bongaya Journal Of Research In Management)* 2, no. 1 (2019): 1.

¹⁷ Misbahul Munir, "Analisis Pengaruh CAR, NPF, FDR Dan Inflasi Terhadap Profitabilitas Perbankan Syariah Di Indonesia," *Ihtifaz: Journal Of Islamic Economics, Finance, And Banking* 1, no. 2 (2018): 89.

¹⁸ Ula Aulia Rahmawati, Mohammad Balafif, And Susi Tri Wahyuni, "Analisis Pengaruh CAR, NPF, FDR, BOPO, Dan NOM Terhadap Kinerja Keuangan (ROA) Pada Bank Umum Syariah Periode 2015-2019," *Bharanomics* 2, no. 1 (2021): 93.

¹⁹ Mutiah Khaira Sihotang, Uswah Hasanah, And Isra Hayati, "Model Of Sharia Bank Profitability Determination Factors By Measuring Internal And Externals Variables," *Indonesian Interdisciplinary Journal Of Sharia Economics (IIJSE)* 5, no. 1 (2022): 235.

²⁰ Wahyu Agung Panji Subekti And Guntur Kusuma Wardana, "Pengaruh CAR, Asset.

DAR	Nugroho dkk, 2023. ²¹ Pratama, 2022. ²² Lase, 2020. ²³ Azzahra & Wibowo, 2019. ²⁴ Marusya, 2016. ²⁵	No significant effect Have a significant impact
CAR	Farizky, 2021. ²⁶ Aldizar & Agustina, 2022. ²⁷ Sunaryo, 2020. ²⁸ Mainata & Ardiani, 2017. ²⁹	No significant effect Have a significant impact
CIR	Fatimah & Lestari, 2021. ³⁰ Jovita & Wahyudi, 2017. ³¹ Yuni dkk, 2024. ³²	Have a significant impact No significant effect
NPF	Afifah & Wardana, 2022. ³³ Haris dkk, 2024. ³⁴ Soeharjoto & Hariyanti, 2019. ³⁵ Addury dkk, 2024. ³⁶	Have a significant impact No significant effect

Source: Data Processed by Authors, 2025

²¹ Dimas Nugroho, Riyanti Riyanti, And Luqman Hakim, "Pengaruh Pembiayaan Bagi Hasil, Inflasi, Current Ratio Dan Debt To Asset Ratio Terhadap Return On Asset Pada Bank Umum Syariah Yang Terdaftar Di Otoritas Jasa Keuangan," *Jurnal Muhammadiyah Manajemen Bisnis* 4, no. 1 (2023): 33.

²² Versiandika Yudha Pratama And Alfi Rohmawati, "Analisis Pengaruh Rasio Solvabilitas Dan Efisiensi Perbankan Terhadap Profitabilitas Bank Umum Syariah Periode 2016-2020," *Studia Economica: Jurnal Ekonomi Islam* 8, no. 1 (2022): 152.

²³ Destika Lase, Cia Cia Na, Vivi Sumanti, and Enda Noviyanti Simorangkir, "Quick Ratio, Perputaran Modal Kerja Dan DAR Terhadap ROA Pada Sektor Infrastruktur Utilitas & Transportasi," *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)* 4, no. 3 (2020): 1010.

²⁴ An Suci Azzahra And Nasib Wibowo, "Pengaruh Firm Size Dan Leverage Ratio Terhadap Kinerja Keuangan Pada Perusahaan Pertambangan," *Jurnal Wira Ekonomi Mikroskil* 9, no. 1 (2019): 13.

²⁵ Pontororing Marusya, "Pengaruh Struktur Modal Terhadap Profitabilitas Pada Perusahaan Tobacco Manufacturers Yang Terdaftar Di Bursa Efek Indonesia (BEI) Periode 2008-2015," *Jurnal Berkala Ilmiah Efisiensi* 16, no. 3 (2016).

²⁶ T Muhammad Farizky, "Factors Determining Profitability Of Islamic Bank Empisire Study In Indonesia's Sharia Banking," *International Journal Of Applied Finance And Business Studies* 9, no. 3 (2021): 107.

²⁷ Addys Aldizar And Vepy Agustina, "Analysis Of The Influence Of Asset Quality, Liquidity, And Capital On Profitability," *International Journal Of Economics, Business And Accounting Research (IJEBAR)* 6, no. 2 (2022): 1702.

²⁸ Deni Sunaryo, "The Effect Of Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), Non-Performing Loan (NPL), And Loan To Deposit Ratio (LDR) Against Return On Asset (ROA) In General Banks In Southeast Asia 2012-2018," *Ilomata International Journal Of Management* 1, no. 4 (2020): 149.

²⁹ Dedy Mainata And Addien Fahma Ardiani, "Pengaruh Capital Adequacy Ratio (CAR) Terhadap Return On Aset (Roa) Pada Bank Syariah," *Al-Tijary*, (2017): 19.

³⁰ Vivi Nur Fatimah And Henny Setyo Lestari, "Pengaruh Credit Risk Management Pada Financial Performance Bank Konvensional Yang Terdaftar Di BEI," *Jurnal Ekonomi* 26, no. 3 (2021): 447.

³¹ Amelia Jovita And Sugeng Wahyudi, *The Impact Of Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), Loan To Deposit Ratio (LDR), And Cost To Income Ratio (CIR) Toward Banks Profitability (Comparison Study Of Domestic Bank And Foreign Bank In Indonesia From 2011 To 2015)*, (Jawa Tengah: Universitas Diponegoro, 2017).

³² Yuni Yuni, Hendrianto Hendrianto, And Harianto Harianto, *Pengaruh FDR, CIR, BOPO Terhadap ROA Pada Bank Muamalat Indonesia Tahun 2019-2023*, (Bengkulu: Intitut Agama Islam Negeri Curup, 2024).

³³ Dian Ayu Nur Afifah And Guntur Kusuma Wardana, "Pengaruh Likuiditas, Efektivitas, Dan Pembiayaan Bagi Hasil Terhadap Profitabilitas Perbankan Syariah Di Indonesia," *Jurnal Tabarru': Islamic Banking And Finance* 5, no. 1 (2022): 158.

³⁴ Dea Aryandhana Mulyana Haris, Ulumuddin Nurul Fakhri, Akmal Huda Nasution, And Abiyajid Bustami "Dampak Kinerja Keuangan Terhadap Profitabilitas Bank Syariah: Analisis Perbandingan Bank Syariah Di Indonesia Dan Malaysia," *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam* 5, no. 7 (2024): 3986.

³⁵ Soeharjoto Soeharjoto And Dini Hariyanti, "Pengaruh Makro Ekonomi Dan Fundamental Perusahaan Terhadap Kinerja Perbankan Syariah Di Indonesia," *Jurnal Akuntansi, Keuangan, Dan Manajemen* 1, no. 1 (2019): 1.

³⁶ Multazam Mansyur Addury, Nur Hishaly GH, Muh Dzulfikar Izzaturrahman, And Dian Resky Pangestu, "Performance Analysis Of Islamic Banks Using Error Correction Model," *Etihad: Journal Of Islamic Banking And Finance* 4, no. 1 (2024): 27.

Based on Table 1, previous studies have produced inconsistent results across all variables. These differences indicate a research gap, making this study important in order to provide the latest empirical evidence on internal factors affecting the profitability of Islamic banks in Asia. From the results of the description of existing problems, this study aims to examine the effect of FDR, DAR, CAR, CIR, and NPF on the level of ROA in Islamic banking in Asia partially and simultaneously.

Methods

This research uses quantitative research with a descriptive approach.³⁷ The data used is secondary data in the form of annual reports from Islamic banks in Asia for the period 2019–2023. The research population includes 100 Islamic banks that are registered and included in The Largest Islamic Bank ranking according to The Asian Banker Insight for that period.³⁸ Sampling was carried out using purposive sampling based on the availability of complete and relevant financial reports. The research stages included data collection, validation, variable measurement, and statistical analysis to test the hypothesis. The criteria used in determining the sample in this study are shown in table 2 as follows:

Table 2. Sampling Results

Sample Selection Criteria	Sample Quantity
Islamic banks listed and ranked as The Largest Islamic Bank by The Asian Banker	100
Islamic banks that are consistently ranked as The Largest Islamic Bank by The Asian Banker Insights as of 2019-2023	58
Islamic banking that is among the top 2 Islamic banks with the highest assets in each country in the Asia region	21
Total Islamic banking in the sample	21

Source: Data Processed by Authors, 2025

Based on the criteria and sample calculation results listed in Table 2, a research sample of 21 Islamic banks was obtained. This number was chosen because it represents the largest Islamic banks in the Asian region with criteria of data consistency and availability of financial reports during the research period, so that it is considered representative for measuring profitability performance. The variables measured in this study include independent and dependent variables. Independent variables include liquidity(FDR), leverage (DAR), capital (CAR), efficiency (CIR), and asset quality (NPF). Meanwhile, the dependent variable is profitability, measured using the ROA variable. The selection of these variables is based on the financial intermediation theory, which explains that bank profitability is influenced by the ability to collect and distribute funds efficiently, as well as the efficiency and risk management theory, which emphasizes the importance of capital structure, liquidity, and asset quality in maintaining bank stability and profitability.³⁹ The data analysis models used in this study are descriptive analysis techniques, panel data

³⁷ Sugiyono, *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif Dan R&D*, (Jawa Barat: Alfabeta, 2019).

³⁸ Banker The Asian, “The Asian Banker,” <https://www.theasianbanker.com/>, (23 March 2025).

³⁹ Franklin Allen And Anthony M Santomero, “The Theory Of Financial Intermediation.

regression analysis, classical assumption tests, and hypothesis testing using Eviews 12 software.

Result And Discussion

Descriptive Statistics Test

By conducting descriptive analysis, it can form a picture of the data by taking values such as the average, standard deviation, maximum value, and minimum value of the variables studied.⁴⁰ The descriptive statistical results of the 105 total studies are shown in table 3 as follows:

Table 3. Descriptive Statistics

	ROA (Y)	FDR (X ₁)	DAR (X ₂)	CAR (X ₃)	CIR (X ₄)	NPF (X ₅)
Mean	1,330476	83,50514	68,70990	18,79438	45,21705	3,050381
Median	1,350000	85,80000	86,67000	18,50000	44,02000	2,100000
Maximum	3,020000	188,7000	96,46000	32,70000	98,60000	12,06000
Minimum	-0,910000	38,33000	8,470000	11,41000	0,0000000	0,0000000
Std.Dev	0,770330	24,39940	31,95681	3,777948	19,68450	2,526547
Observations	105	105	105	105	105	105

Source: Eviews 12, Data Processed by the Authors, 2025

Based on table 3 above, the results of data processing using Eviews 12 software show that The average ROA of Islamic banks in Asia for the 2019–2023 period was 1.33%, indicating a relatively stable ability to generate net income from total assets despite variations between banks. Liquidity (FDR) was at an average of 83.5%, indicating a fairly strong position despite differences between countries. The DAR ratio is relatively high at an average of 68.7%, indicating dependence on debt in the funding structure. Meanwhile, CAR has an average of 18.79%, still above the minimum regulatory standard, reflecting sound capitalization. The average CIR of 45.21% indicates potential for operational efficiency that can be further improved. The NPF is relatively low and stable with an average of 3.05%, indicating that the quality of Islamic bank assets in Asia is fairly well maintained.

Panel Data Regression Model Selection

In panel data regression testing, to determine the best estimation model used in this study, we used the chow test, hausman test, and lagrange multiplier (LM) test. The Chow test aims to determine the best model between the Common Effect Model (CEM) approach or the Fixed Effect Model (FEM) approach when performing panel data regression. The Hausman test aims to determine the appropriate model between the FEM model or the Random Effect Model (REM) model used in estimating panel data. The LM test aims to determine the CEM or REM model to be used in estimating panel data.⁴¹

⁴⁰ Rahmad Hamid, *Panduan Praktis Ekonometrika Konsep Dasar Dan Penerapan Menggunakan Eviews 10*, (Serang Banten: CV. A.A Rizky, 2020).

⁴¹ Indra Sakti, "Analisis Regresi Data Panel Menggunakan Eviews," *Modul Eviews 9* (2018): 1.

Table 4. Results of Panel Data Model Selection Tests

Test	Probability	Result
Chow Test	0,0000 < 0,05	FEM
Hausman Test	0,9021 > 0,05	REM
LM Test	0,0000 < 0,05	REM

Source: Eviews 12, Data processed by the Authors, 2025

Based on the three panel data regression model test results above, it can be concluded that the REM model is selected. The panel data regression results using the REM model are shown in table 5 below:

Table 5. Selected Regression Model (Random Effect Model)

Variable	Coefficient	Std. Error	t-Statistik	Prob.
Constanta	2,253180	0,522639	4,311159	0,0000
FDR (X ₁)	-0,001902	0,002680	-0,709456	0,4797
DAR (X ₂)	0,002962	0,002947	1,004914	0,3174
CAR (X ₃)	0,006213	0,013914	0,446509	0,6562
CIR (X ₄)	-0,019907	0,003297	-6,038249	0,0000
NPF (X ₅)	-0,060328	0,024660	-2,446424	0,0162
R-squared	0,317192		F-statistic	9,197885
Adjusted R-Squared	0,282706		Prob (F-statistic)	0,000000

Source: Eviews 12, Data Processed by the Authors, 2025

The following are the results of the panel data regression equation used in this study:
 $ROA = 2,253180 - 0,001902 FDR + 0,002962 DAR + 0,006213 CAR - 0,019907 CIR - 0,060328 NPF$.

Classical Assumption Test

The classic assumption test is used to determine whether the regression model has residual normality, multicollinearity, heteroscedasticity and autocorrelation.⁴²

Normality Test

The results of the normality test are shown in table 6 below:

Table 6. Normality Test Results

Jarque-Bera	3,849713
Probability	0,145897

Source: Eviews 12, Data Processed by the Authors, 2025

Based on table 6, One way to detect whether the model is normal or not is to use Jarque-Bera.⁴³ it can be seen that the Jarque-Bera probability value is $0,145897 > 0,05$. Therefore, it

⁴² Mochammad Ilyas Junjunan And Ajeng Tita Nawangsari, *Pengolahan Data Statistik Dengan Menggunakan Eviews Dalam Penelitian Bisnis*, (Sumatera Barat: Insan Cendekia Mandiri, 2021).

⁴³ Agus Tri Basuki And Nano Prawoto, *Analisis Regresi: Dalam Penelitian Ekonomi Dan Bisnis*, (Depok: Rajagrafindo Persada, 2019).

can be said that the assumption of normality is fulfilled because the data in this study are normally distributed.

Multicollinearity Test

The multicollinearity test results are shown in table 7 below:

Table 7. Multicollinearity Test Result

Variable	Centered VIF
FDR (X1)	1,098925
DAR (X2)	1,049072
CAR (X3)	1,184531
CIR (X4)	1,023886
NPF (X5)	1,068583

Source: Eviews 12, Data Processed by the Authors, 2025

Based on the multicollinearity test results in table 1.7 It is known that all independent variables, namely FDR, DAR, CAR, CIR, and NPF, have a VIF value $<10,00$ so that the data in this study do not experience multicollinearity problems. Thus, the classical assumptions in the multicollinearity test are stated to be fulfilled.

Heteroscedasticity Test

The results of the heteroscedasticity test in this study are shown in table 8 below:

Table 8. Heteroscedasticity Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0,155556	0,346914	0,448398	0,6548
FDR (X ₁)	0,001157	0,001742	0,664346	0,5080
DAR (X ₂)	-0,000444	0,001396	-0,318189	0,7510
CAR (X ₃)	0,009430	0,010110	0,932249	0,3535
CIR (X ₄)	0,002996	0,002091	1,432620	0,1551
NPF (X ₅)	-0,018158	0,015186	-1,195735	0,2347

Source: Eviews 12, Data Processed by the Authors, 2025

Based on table 8 of the heteroscedasticity test results, it is known that all independent variables have a probability value $> 0,05$, meaning that in this study there are no symptoms of heteroscedasticity in each independent variable. Thus, the classical assumptions in the heteroscedasticity test have been met.

Autocorrelation Test

The results of the autocorrelation test are shown in table 9 below:

Table 9. Autocorrelation Test Result

Test	DW
Durbin-Watson Stat	1,275852

Source: Eviews 12, Data Processed by the Authors, 2025

Based on table 9, the autocorrelation test method in this study uses the Durbin-Watson test (DW test),⁴⁴ it can be seen that the Durbin Watson value is 1,275852. This Durbin Watson value is located between -2 and +2 so it can be concluded that there is no autocorrelation problem in the data in this study, so the data distribution in the FDR, DAR, CAR, CIR and NPF models of Islamic banking ROA in the region is stated to fulfill the autocorrelation assumption.

Hypothesis Test

Hypothesis testing can be done by measuring the t statistical value, the F statistical value and the coefficient of determination. The results of hypothesis testing in this study are shown in table 5, including:

Partial Test (t-test)

Partial test (t test) is used to determine each independent variable individually whether it has a significant effect on the dependent variable or not. The test is carried out using the t test, namely comparing the t-count with the t-table⁴⁵. If the probability significance value <0.05 means that hypothesis is accepted, which means that there is a partial influence between the independent variable and the dependent variable. The results of the t test in this study have been displayed in table 5 suggesting that :

The partial test results show that the probability value of FDR is $0.4797 > 0.05$, which means that the 1st hypothesis is rejected, meaning that the FDR variable has no significant effect on ROA partially. The results of this study indicate that the financing channeled by Islamic banking in the Asian region has not been fully productive or has not generated optimal returns for Islamic banking, causing non-current financing to increase along with the total financing carried out by Islamic banking in each country in the Asian region.⁴⁶ The research also stated that FDR has no significant effect. This indicates the need for more effective financing risk management and stricter project selection in Islamic banks in Asia. The implication is that Islamic banks in Asia need to focus on improving the quality of financing and financing risk management so that the distribution of funds can actually contribute to increasing profitability.

The test result of DAR variable partially shows the probability value of $0.3174 > 0.05$, which means that the 2nd hypothesis is rejected, meaning that DAR variable has no significant effect on ROA partially. The high level of debt (liabilities) to total assets does not necessarily affect bank profitability. In other words, a debt-based funding structure does not necessarily burden financial performance if managed appropriately.⁴⁷ In addition, the high DAR in some Islamic banks reflects a rational and not necessarily high-risk funding

⁴⁴ Sunyoto Danang, *Metodologi Penelitian Akuntansi*, (Bandung: PT Refika Aditama,2013).

⁴⁵ Imam Ghazali, “Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23,” 2016.

⁴⁶ Intan Sari Budhiarjo And Hadijah Febriana, “Pengaruh FDR (Financing To Deposit Ratio), NPF (Non Performing Financing), Dan BOPO (Biaya Operasional Pendapatan Operasional) Terhadap Profitabilitas (ROA) Pada PT Bank Syariah Mandiri Tbk,” *JIMF (Jurnal Ilmiah Manajemen Forkamma)* 5, no. 3 (2022).

⁴⁷ Yesi Lianawati And Atri Nodi Maiza Putra, “Pengaruh Debt To Asset Ratio Dan Debt To Equity Ratio Terhadap Profitabilitas Di Ukur Dengan Return On Equity Pada PT. FAP Agri, Tbk Periode 2021-2023,” *Jurnal Intelek Dan Cendikiawan Nusantara* 1, no. 5 (2024): 6565.

strategy.⁴⁸ Hence, Islamic banking in Asia tends to remain within the healthy limits of liability utilization. This study is supported by research that explains that the DAR variable does not have a significant effect on ROA. The implication is that Islamic banks need to emphasize the efficiency and effectiveness of debt usage rather than merely reducing the amount of liabilities, because a healthy financing structure can still support financial performance even if it does not have a direct effect on ROA.

The partial CAR test results show a probability value of $0.6562 > 0.05$, which means that the 3rd hypothesis is rejected, meaning that the CAR variable has no significant effect on ROA partially. This study indicates that high capital does not necessarily have a direct impact on profitability if it is not accompanied by a productive financing distribution strategy.⁴⁹ In other words, high capital without an effective distribution strategy will not increase ROA significantly.⁵⁰ The implication is that Islamic banks need to manage capital efficiently to optimize financial performance. This study is in line with research findings that explain that CAR has no significant effect on ROA.

The partial CIR test results show a probability value of $0.0000 < 0.05$, which means that the 4th hypothesis is accepted, meaning that the CIR variable has a significant effect on ROA partially. This research indicates that the higher the CIR, the lower the ROA.⁵¹ This shows that operational inefficiencies, such as high administrative and operational costs, can reduce the profitability of Islamic banks. Therefore, a high CIR tends to have a negative influence on ROA as it increases costs without providing a significant increase in revenue.⁵² This implies that Islamic banks in Asia need to improve cost efficiency in order to optimize their profits and competitiveness amidst regional economic dynamics. The results of this study support the findings of research stating that CIR has a significant effect on ROA.

The partial test results of NPF show a probability value of $0.0162 < 0.05$, which means that the 5th hypothesis is accepted, meaning that the NPF variable has a significant effect on ROA partially. This means that an increase in non-performing loans will reduce the profitability of Islamic banks in Asia. This is in line with research indicating that asset quality, measured by the NPF variable, has a significant effect on ROA. The high NPF is consistent with the still high financing risk in Asia, indicating that there is problematic financing that not only hinders cash flow but also forces Islamic banks to bear potential

⁴⁸ Meiliani Luckieta, Ali Amran, And Doni Purnama Alamsyah, "Pengaruh DAR Dan Ukuran Perusahaan Terhadap ROA Perusahaan Yang Terdaftar Di LQ45 Pada BEI," *Jurnal Perspektif* 19, no. 1 (2021): 17.

⁴⁹ Norhayati Norhayati, "Pengaruh Capital Adequacy Ratio (CAR), Financing To Deposit Ratio (FDR), Non Performing Financing (NPF) Terhadap Return On Asset (ROA) Bank Syariah," *Al-Idarah: Jurnal Manajemen Dan Bisnis Islam* 4, no. 1 (2023): 101.

⁵⁰ Trevorio Dwi Alfonso And Nana Diana, "Pengaruh CAR, NPF Dan FDR Terhadap ROA Pada Perusahaan Perbankan Syariah Yang Terdaftar Di Bursa Efek Indonesia Tahun 2010-2019," *YUME: Journal Of Management* 4, no. 3 (2021).

⁵¹ Amelia Jovita And Sugeng Wahyudi, *The Impact Of Capital Adequacy*.

⁵² Yuni Yuni, Hendrianto Hendrianto, And Harianto Harianto, *Pengaruh FDR, CIR*.

losses, thereby reducing net profit.⁵³ Therefore, Islamic banks need to strengthen their financing risk management to maintain asset quality and prevent a decline in profits due to non-performing financing. Consequently, the increase in NPF in Islamic banks in Asia directly reduces the efficiency and operating profits of banks, which in turn has a negative impact on ROA.

Simultaneously Test (F- test)

The F test is basically used to determine whether all independent variables included in the model simultaneously (simultaneously) can affect the dependent variable. The results of the F test in this study have been displayed in table 1.5 showing that the calculated F value of 9.197885 > F table of 0.000000. The probability value of F statistics is 0.000000 < 0.05. This means that in this study, the independent variables, namely FDR, DAR, CAR, CIR, and NPF as independent variables simultaneously affect the dependent variable, namely ROA. This indicates that the five variables, when analyzed together, are able to contribute to changes in the profitability of Islamic banks in the Asian region.

Coefficient of Determination

The Coefficient of Determination (R^2) basically measures how far the model's ability to explain the variation in the dependent variable⁵⁴. The level of the coefficient of determination can be seen through the R-Squared value. Based on table 1.6, The results of the determination test obtained an R-squared value of 0.317192 or 31.72%, which means that the contribution of the independent variables FDR, DAR, CAR, CIR, and NPF can explain 31.72% of the dependent variable, namely ROA. The remaining 68.28% is influenced by other variables not used in this study.

Conclusion

The results of this study indicate that, partially, the variables FDR, DAR, and CAR do not have a significant effect on the ROA of Islamic banks in Asia, while the variables CIR and NPF have a negative and significant effect on ROA. Simultaneously, the variables FDR, DAR, CAR, CIR, and NPF have a significant effect on the ROA of Islamic banks in Asia. This study reinforces the theory of efficiency and risk in Islamic banking, where cost efficiency and financing risk management are key factors in maintaining profitability. Practically, the results of this study imply that bank management needs to focus more on operational cost control strategies and improving financing quality to minimize non-performing loans. However, this study has limitations in terms of its geographical coverage, which only includes Islamic banks in Asia with a limited observation period, and does not consider external factors such as inflation, GDP, and other macroeconomic conditions. Therefore, further research is recommended to expand the geographical coverage, extend the observation period, and include external variables in order to gain a more comprehensive understanding of the factors that affect the profitability of Islamic banks.

⁵³ Ni Nyoman Sawitri, "The Prediction Of Third Party Funds, Interest Rates, And Non-Performing Loans Toward Loan To Deposit Ratios And Its Impact On Return On Assets On Commercial Banks In Indonesia," *Jurnal Manajemen* 22, no. 3 (2018): 409–20.

⁵⁴ Imam Ghazali, "Aplikasi Analisis Multivariete."

Acknowledgments

The author would like to express his gratitude to Mr. Guntur Kusuma Wardana, S.E., M.M., as the supervising lecturer who has provided guidance and support during this research. Thanks are also extended to Asian Banker and Islamic banks in the Asian region that have provided financial report data so that this research could be completed.

Author Contributions Statement

LK was responsible for the entire research process, including problem formulation, data collection, data analysis, and article writing. GW acts as an academic advisor who provides direction, conceptual and substantive input, and systematic corrections to the writing of the article. MH also contributed in the form of academic support that supported the smooth running of the research process until the article was ready for publication.

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