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Macroeconomic Drivers of ROA in Indonesian Islamic Commercial Banks: A Time Series Analysis (2019-2024)

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Abstract This study examines the impact of the BI Rate, inflation, and the rupiah exchange rate on the profitability of Islamic Commercial Banks in Indonesia during 2019–2024. Previous studies on Islamic bank profitability have produced inconsistent findings due to differences in research periods, data structures, and analytical approaches. Most prior studies relied on annual or panel data, limiting their ability to capture short-run macroeconomic dynamics during the post-pandemic recovery period and monetary policy tightening. This study addresses these gaps by employing monthly time-series data and the Error Correction Model (ECM) framework to analyze both short-run and long-run relationships within the Monetary Transmission Mechanism (MTM) perspective. Secondary data were obtained from Bank Indonesia, the Financial Services Authority (OJK), and Statistics Indonesia (BPS), comprising 72 monthly observations from January 2019 to December 2024. The findings reveal that, in the long run, the BI Rate negatively and significantly affects Return on Assets (ROA), while inflation and the exchange rate positively and significantly influence profitability. In the short run, macroeconomic variables do not significantly affect ROA, indicating that Islamic bank profitability is relatively resilient to temporary macroeconomic shocks. However, the significant Error Correction Term (ECT) confirms the existence of a long-run adjustment mechanism toward equilibrium. This study aims to fill the gap in knowledge about banking and provide new perspectives for policymakers, especially central banks, managers, and stakeholders. By focusing on macroeconomic factors that influence profitability.

Keyword Exchange Rates, Inflation, BI Rates, Islamic Banking, Return on Asset (ROA)

INTRODUCTION

The profitability of Islamic commercial banks has come under pressure during the post-pandemic recovery period. This is evident from the slowdown in the growth of total assets of Islamic commercial banks in Indonesia, from 20.36% in 2022 to 11.82% in 2023 and 0.57% in 2024 (Andriani, 2024). This slowdown indicates that the performance of Islamic banking is still influenced by macroeconomic conditions. In this study, profitability is measured using Return on Assets (ROA) because it reflects a bank's ability to manage assets to generate profit (Raharjo et al., 2020), as presented in Figure 1.

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Figure 1. Growth in Assets and Total Assets of Islamic Banks
Source: Data compiled by researchers in 2026

Within the framework of the Monetary Transmission Mechanism (MTM), changes in the BI Rate, inflation, and exchange rates affect banking profitability through funding costs, liquidity, loan quality, and profit expectations (Miskhin & Apostolos, 2011; Warjiyo, 2004).BI Rate adjustments function as a primary monetary policy instrument for controlling inflation and influencing economic activity through the monetary transmission mechanism (Laili & Siswanto, 2021). An increase in the BI Rate intensifies competition with interest-based instruments, leading to a decline in third-party funds for Islamic banks and putting pressure on financing margins (Abidillah & Ryandono, 2019). Inflation reduces public purchasing power and the ability to repay loans, thereby potentially increasing financing risks (Sehany & Nurhidayati, 2022). The depreciation of the rupiah exchange rate also increases external pressure and the risk of asset quality deterioration, particularly in sectors related to international trade (Fitri & Putra, 2024; Sabrina et al., 2021). The development of ROA, BI Rate, inflation, and the rupiah exchange rate during the 2019–2024 period is presented in Figure 2.

Figure 2. Trends in ROA, the BI Rate, Inflation, and the Exchange Rate in Indonesia 2019-2024
Source: Data compiled by researchers in 2026

Previous research has yielded inconsistent results regarding the impact of macroeconomic variables on the profitability of Islamic banks. Gazi et al. (2024) and Humta et al. (2024) found that inflation and interest rates have a positive effect on profitability, whereas Fatmawati & Hakim, (2020) found a negative and insignificant effect. Research Anindyaa et al. (2022) and Husen & Fahlevi. (2024) found that the impact of exchange rates on profitability varies depending on economic conditions, financing structure, and the bank's ability to manage risk. These differing results indicate that the relationship between macroeconomic variables and the profitability of Islamic banks still requires further testing. Most previous studies used annual or panel data, thus failing to capture short-term macroeconomic dynamics during the pre-pandemic and post-pandemic recovery periods. Previous research generally tested macroeconomic variables in isolation it did not integrate the BI rate, inflation, and exchange rates within a single Monetary Transmission Mechanism (MTM) framework to explain the transmission channels affecting Islamic bank profitability.

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This study aims to analyze the impact of the BI Rate, inflation, and the rupiah exchange rate on the ROA of Islamic commercial banks in Indonesia during the 2019–2024 period using monthly time-series data. This study contributes by providing empirical evidence regarding the relationship between macroeconomic variables and the ROA of Islamic banks during the post-pandemic recovery period and monetary policy tightening. The results of this study are expected to serve as a reference for regulators, bank management, and stakeholders in maintaining the stability of Islamic banking profitability.

LITERATURE REVIEW

Table 1 presents a literature mapping of previous research on the influence of the BI Rate, inflation, and exchange rates on Islamic banking profitability. The mapping is based on variables, methods, research results, and research gaps to demonstrate the position and novelty of this research compared to previous research.

Table 1 Literature Mapping

No	Researcher	Variables	Method	Findings	Research Gap
1	Gazi et al. (2024)	X: Interest Rate, CAR, Operational Costs; Y: Profitability	Panel Data Regression (OLS, FEM, REM, GMM)	Interest rates and inflation have a positive and significant effect on Islamic bank profitability.	The study focuses on Bangladesh and includes internal banking variables, it does not specifically examine Islamic Commercial Banks in Indonesia during the latest period.
2	Rathnasiri, (2024)	X: GDP, Inflation, Money Supply, Exchange Rate Y: Profitability	Panel Data Regression (FEM and REM)	Inflation has a positive and significant effect on profitability.	The study focuses on commercial banks in Sri Lanka and uses additional macroeconomic variables.
3	Anindyaa et al. (2022)	X: Inflation, BI Rate, Exchange Rate Y: ROA	Multiple Linear Regression (EViews 12)	Inflation has a positive but insignificant effect, while interest rates have a negative and significant effect.	The study period only covers 2012–2021 and does not reflect the latest economic recovery conditions.
4	Fatmawati & Hakim, (2020)	X: Interest Rate, Exchange Rate Y: Profitability	ARDL	Interest rates have a negative but insignificant effect, while exchange rates have a negative and significant effect.	The study uses the ARDL method and an earlier period of 2009–2018.
5	Sholihah & Wardana, (2025)	X: Inflation, Bank Size, Operational Efficiency	Panel Data Regression (EViews 12)	Inflation significantly affects the ROA	The study focuses on Asia and includes internal banking factors.

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		Y: Profitability		of Islamic banks in Asia.	
6	Abidillah & Ryandono, (2019)	X: Inflation, Interest Rate, Exchange Rate Y: Profitability	Panel Data Regression	Interest rates and inflation significantly affect the profitability of Islamic and conventional banks with different directions of influence.	The study compares Islamic and conventional banks and uses an earlier research period.
7	Sabrina et al. (2021)	X: Inflation, Exchange Rate Y: Profitability	Panel Data Regression	Inflation and exchange rates positive affect Islamic Commercial Bank profitability.	The study does not include the BI interest rate variable.
8	Husen & Fahlevi, (2024)	X: Inflation, Exchange Rate Y: Profitability	Multiple Linear Regression	Inflation and exchange rates have a positive not significant effect on Islamic bank profitability.	The study does not include BI interest rates as an independent variable.
9	Khotimah et al. (2024)	X: Inflation, Interest Rate, Exchange Rate Y: Profitability	Multiple Linear Regression	Inflation, interest rates, and exchange rates negatively and significantly affect Islamic banking profitability.	The research object and period differ from the current study.

Source: Data compiled by researchers in 2026

Based on literature mapping, three main research gaps exist. First, previous research results remain inconsistent, as the effects of the BI Rate, inflation, and exchange rates on Islamic bank profitability vary, ranging from positive to negative and insignificant. Second, most studies use panel or annual data, thus failing to capture short term dynamics during the post-pandemic recovery period and monetary policy tightening. Third, previous research generally examines macroeconomic variables partially and fails to integrate the BI Rate, inflation, and exchange rates within a single Monetary Transmission Mechanism (MTM) framework, which explains the transmission pathways leading to Islamic bank profitability.

Monetary Transmission Mechanism Theory (MTM)

The Monetary Transmission Mechanism (MTM) theory explains that monetary policy influences the banking sector through interconnected channels of interest rates, inflation, and exchange rates, influencing liquidity, financing behavior, funding structure, and bank profitability (Mishkin, 2022; Warjiyo, 2004). In Islamic banking, this transmission continues to occur indirectly because changes in the BI Rate affect customer behavior and bank funding

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structure (Nasution et al., 2024). Increases in the BI Rate increase return expectations and encourage a shift in funds to interest-based instruments, thereby reducing Islamic bank liquidity, increasing the cost of funds, and depressing profitability, as measured by ROA (Gazi et al., 2024; Husna et al., 2021). Inflation affects public purchasing power, financing demand, and financing risk, while exchange rate depreciation increases external pressures and the risk of asset quality decline (Sehany & Nurhidayati, 2022). However, previous studies still show inconsistent results regarding the effect of inflation and exchange rates on ROA (Abidillah & Ryandono, 2019; Anindyaa et al., 2022). This study uses the MTM theory to explain the relationship between the BI Rate, inflation, and exchange rates in influencing the profitability of Islamic commercial banks through changes in liquidity, cost of funds, and financing quality during the 2019-2024 period.

Profitability

Profitability reflects a bank's ability to generate profits through the efficient management of assets, financing, and operating costs (Raharjo et al., 2020). This study uses Return on Assets (ROA) as an indicator of profitability because ROA reflects the sensitivity of a bank's performance to changes in macroeconomic conditions (Gunanto, 2023). Changes the BI Rate affect liquidity and funding costs, inflation affects purchasing power and financing risk, while exchange rates affect asset stability and external risk. The effects of the BI Rate, inflation, and exchange rate are ultimately reflected in bank profitability through changes in ROA (Gazi et al., 2024). In Islamic banking, profitability is not solely oriented toward profit maximization, but also toward maintaining financial stability and supporting public welfare in accordance with Islamic economic principle (Ikbal et al., 2023).

BI Rate

BI Rate is the benchmark interest rate used by Bank Indonesia to manage monetary stability and influence liquidity conditions in the financial sector (Jumiati, 2022). Within the monetary transmission mechanism, changes in the BI Rate affect funding costs, investment preferences, and the allocation of bank financing (Mishkin, 2022; Warjiyo, 2004). An increase in BI Rate can drive a shift of funds toward interest-based instruments, thereby reducing the liquidity of Islamic banks and increasing funding costs (Husna et al., 2021). Rising funding costs necessitate that Islamic banks adjust profit sharing ratios and financing strategies to maintain competitiveness with conventional banks (Gazi et al., 2024). Changes in the BI Rate also affect financing demand and banks' ability to maintain operational efficiency amid shifting macroeconomic conditions. The BI Rate remains part of the macroeconomic transmission channel that affects the stability and performance of Islamic banking.

Inflation

Inflation is a general and sustained rise in the prices of goods and services that affects people's purchasing power and economic stability (Louise Celwin, 2024). In the monetary transmission mechanism, inflation affects banking activities through changes in operating costs, people's ability to save, and demand for financing (Ginting, 2024). Rising inflation can reduce the public's purchasing power, thereby diminishing their ability to save and meet financing obligations (Sehany & Nurhidayati, 2022). Such conditions have the potential to increase financing risks and degrade the quality of banking assets. However, inflation that remains within moderate limits can also stimulate economic activity and demand for financing, so its impact on Islamic banking performance may vary depending on economic conditions and the bank's ability to manage risk (Khotimah et al., 2024)

Exchange rates

Exchange rate is one of the channels in the monetary transmission mechanism that affects banking stability through changes in transaction costs, capital flows, and financing risks (Warjiyo, 2004). Depreciation of the rupiah increases external pressure and the risk of customer default, particularly in business sectors dependent on imports and foreign exchange transactions

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(Sabrina et al., 2021). These conditions can degrade asset quality, disrupt liquidity, and undermine the performance of Islamic banks. However, previous studies still show mixed results regarding the impact of exchange rates on the profitability of Islamic banks, indicating that the effects of exchange rate fluctuations are influenced by macroeconomic conditions and the bank's ability to manage external risks (Abidillah & Ryandono, 2019). Exchange rate changes are a macroeconomic factor that requires attention as they can affect the stability and performance of Islamic banking (Husen & Fahlevi, 2024).

The Impact of the BI Rate, Inflation, and the Exchange Rate on Return on Assets (ROA)

Bank profitability is influenced by macroeconomic stability through a monetary transmission mechanism linking interest rates, liquidity, financing performance, and profitability (Mishkin, 2022). Changes in BI Rate affect liquidity conditions by encouraging the shift of funds to interest-based instruments, resulting in a decrease in third-party funds and an increase in the cost of funds. This increase in the cost of funds subsequently suppresses financing margins and weakens profitability, as reflected in ROA (Gazi et al., 2024; Pratiwi et al., 2024). Inflation affects purchasing power and the ability to save, thereby impacting TPF growth and financing capacity. A slowdown in TDD can weaken intermediation functions and reduce profitability (Fadila et al., 2025; Sehany & Nurhidayati, 2022). However, Islamic banks are relatively able to maintain performance through the principle of prudence, a focus on the real sector, and profit-sharing mechanisms (Gunanto, 2023).

Exchange rates affect banking performance through changes in the value of assets, liabilities, and operating costs. The depreciation of the rupiah has the potential to increase import costs and reduce customers' ability to pay, thereby squeezing profit margins (Maronrong & Nugrhoho, 2019). Nevertheless, foreign exchange activities remain necessary to support real transactions, so the risks must be managed prudently (Fitri & Putra, 2024). Previous research still shows inconsistent results regarding the influence of macroeconomic variables on ROA, which indicates that the impact of monetary transmission is influenced by banking resilience and risk management capabilities (Anindyaa et al., 2022; Gazi et al., 2024). This study places the BI Rate, inflation, and exchange rates as interconnected macroeconomic transmission channels in influencing the profitability of Islamic commercial banks during the 2019-2024 period.

Hypothesis

Changes in the BI Rate affect the profitability of Islamic banks through liquidity and funding cost channels. An increase in the BI Rate drives a shift of funds toward interest-based instruments, causing a decline in third-party funds for Islamic banks and an increase in funding costs (Abidillah & Ryandono, 2019). This rise in funding costs compresses financing margins and reduces the bank's ability to generate profits. Additionally, an increase in the BI Rate can also reduce demand for financing as the public tends to be more cautious in engaging in economic activities. Although some studies indicate that Islamic banks can maintain performance stability through profit-sharing mechanisms (Gazi et al., 2024; Humta et al., 2024), most research finds that an increase in the BI Rate tends to reduce the profitability of Islamic banks (Anindyaa et al., 2022; Gunanto, 2023; Khotimah et al., 2024)

H1: The BI Rate has a negative impact on the ROA of Islamic commercial banks

Inflation affects the profitability of Islamic banks through changes in purchasing power, demand for financing, and financing risk. High inflation reduces the public's ability to save and increases the risk of default, thereby weakening the growth of third-party funds and the quality of financing (Sehany & Nurhidayati, 2022). These conditions can constrain intermediation functions and reduce the profitability of Islamic banks. Although some studies suggest that moderate inflation can boost financing activity (Anindyaa et al., 2022), other research finds that high inflation tends to undermine banking profitability (Khotimah et al., 2024)

H2: Inflation has a negative impact on the ROA of Islamic commercial banks.

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Changes in exchange rates affect banking profitability through operating costs, external risks, and asset quality. The depreciation of the rupiah increases import costs and the risk of customer defaults, particularly in business sectors that rely on international transactions (Khotimah et al., 2024). These conditions can lower the quality of financing and reduce the profitability of Islamic banks. Although some studies indicate that banks are able to manage exchange rate risks more effectively (Husen & Fahlevi, 2024; Sabrina et al., 2021), the majority of research finds that exchange rate depreciation tends to have a negative impact on banking profitability (Fatmawati & Hakim, 2020; Khotimah et al., 2024)

H3: The exchange rate of the rupiah has a negative impact on the profitability of Islamic commercial banks.

The BI Rate, inflation, and exchange rates simultaneously affect the ROA of Islamic banks through changes in liquidity, funding costs, financing risk, and asset quality (Miskhin & Apostolos, 2011; Warjiyo, 2004). An increase in the BI Rate raises funding costs and compresses financing margins, inflation reduces purchasing power and customers' ability to pay, while exchange rate depreciation increases external pressure and the risk of a decline in asset quality.

H4: The BI rate, inflation, and the exchange rate simultaneously affect the profitability of Islamic commercial banks

METHOD

This study adopts a quantitative approach to examine the relationship between variables using statistical analysis to test established theories (Creswell & Creswell, 2023). The object of the study is the Islamic banking industry in Indonesia based on Financial Services Authority (OJK) Islamic Banking Statistics for the period 2019–2024. The study uses monthly time series data from January 2019 to December 2024, resulting in 72 observations. The data used are secondary data in the form of national aggregate Islamic banking statistics published by official institutions.The dependent variable in this study is profitability, measured using Return on Assets (ROA). The independent variables consist of the BI Rate, inflation, and the rupiah exchange rate.

Data analysis is conducted using the Error Correction Model (ECM) to capture both short-run and long-run relationships between macroeconomic variables and ROA of Islamic Commercial Banks (Gujarati & Porter, 2009). Stationarity tests were performed using the Augmented Dickey-Fuller (ADF) test. Variables found to be non-stationary at the original level were retested at the first-difference level. Next, the Engle-Granger cointegration test was conducted to determine the long term relationship between variables. After the variables were proven to be cointegrated, the ECM model was estimated using the Error Correction Term (ECT). The classical assumption tests used include tests for normality, heteroscedasticity (White test), and autocorrelation (Breusch-Godfrey Serial Correlation LM Test). Hypothesis testing was performed using the t-test, F-test, and coefficient of determination (R^2). All data analysis was performed using EViews version 12. The cointegrasi regression model is specified as follows:

$$ROA_t = \alpha + \beta1BI_t + \beta2INF_t + \beta3\ln(ER_t) + \varepsilon_t$$

Meanwhile, the ECM model is formulated as follows:

$$\Delta ROA_t = \alpha + \beta1\Delta BI_t + \beta2\Delta INF_t + \beta3\Delta\ln(ER_t) + \lambda ECT_{(t-1)} + \varepsilon_t$$

ROA	= Return on Assets
BI	= BI Rate
INF	= Inflation
ER	= Rupiah exchange rate against the US dollar
ECT	= Error Correction Term
α	= Constant
$\beta1$, $\beta2$, $\beta3$	= Regression coefficients
λ	= Speed of adjustment coefficient
ε	= Error term
Δ	= First difference operator

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RESULTS

Descriptive Statistical Analysis

Table 2 Results of Descriptive Statistical Analysis

	Y	X1	X2	X3
Minimum	1,320000	3,500000	1,320000	9,521495
Maksimum	2,180000	6,260000	5,950000	9,703206
Mean	1,836111	4,885417	2,803333	9,603071
Std Deviasi	0,248701	1,073806	1,224709	0,047513
Obs	72	72	72	72

Source: Data compiled by researchers in 2026

Table 2 shows that the profitability of Islamic Commercial Banks, as represented by Return on Assets (ROA), tends to remain stable during the 2019–2024 period. This is reflected in the average ROA value of 1.836111% with a relatively low standard deviation of 0.248701. According to Miskhin & Apostolos, (2011), the stability of profitability indicates that Islamic banks are able to maintain financial performance amidst changing macroeconomic conditions. The BI Interest Rate recorded an average value of 4.885417%, reflecting Bank Indonesia's monetary policy in maintaining economic stability and inflation. Changes in the BI Interest Rate can affect fundraising and financing activities in Islamic banking (Warjiyo, 2004). Inflation had an average value of 2.803333%, indicating relatively controlled economic conditions during the study period. Stable inflation can support economic activity and increase demand for financing in Islamic banking (Gazi et al., 2024). The rupiah exchange rate has an average value of 9.603071 with a low standard deviation of 0.047513, indicating a relatively stable exchange rate movement. Based on research Fatmawati & Hakim, (2020), exchange rate stability can support financing activities and maintain the profitability of Islamic Commercial Banks.

Stationary Test

Table 3 Results of Stasionary Test

Variable	Value	Tingkat	Description
D(X1)	0,0040	First Difference	Stasionary
D(X2)	0,0001	First Difference	Stasionary
D(X3)	0,0000	First Difference	Stasionary
D(ROA)	0,0000	First Difference	Stasionary

Source: Data compiled by researchers in 2026

Table 3 shows that all variables become stationary at the first difference level. This indicates that macroeconomic variables and the profitability of Islamic banking are influenced by economic changes and monetary policy in the long term. This result indicates that the use of the Error Correction Model (ECM) is appropriate because it can analyse the short-term and long-term relationships between the variables. This shows that profitability is not only influenced by temporary fluctuations, but also by long-term macroeconomic stability. The results of this study are consistent with those of Fatmawati & Hakim, (2020) who found that macroeconomic variables are generally stationary at the first difference level before ECM estimation.

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Cointegration Test

Table 4. Results of Cointegration Test

Variable	Value	Description
ECT	0,0456	Cointegrated

Source: Data compiled by researchers in 2026

Table 4 shows that the variables in the study have a cointegration or long-term equilibrium relationship, indicating that, despite short-term fluctuations, the variables will move towards equilibrium in the long term. The Error Correction Model (ECM) is appropriate for analysing the short-term and long-term relationships in this study. The results of this study are consistent with those of Fatmawati & Hakim, (2020), who found a long-term relationship between macroeconomic variables and the profitability of Islamic banking.

Long Run Regression

Table 5 Results of Long Run Regression

	Coefficient	Std. Error	t-Statistic	Prob
BI Rate (X1)	-0,052315	0,025609	-2,042813	0,0449
Inflation (X2)	0,066240	0,019891	3,330082	0,0014
Exchange Rate (X3)	3,016152	0,571726	5,275523	0,0000

Source: Data compiled by researchers in 2026

Table 5 shows that the BI rate has a negative and significant impact on the profitability of Islamic banks in the long term. An increase in the BI Rate can reduce demand for financing and increase competition for funds, thereby reducing the profitability of Islamic banks. This result is consistent with that of Abidillah & Ryandono. (2019) and Anindyaa et al. (2022). Inflation has a positive and significant impact on the profitability of Islamic banks. Controlled inflation can boost economic activity and demand for financing, thus supporting the profitability of Islamic banks. These results support the findings of Gazi et al. (2024) and Rathnasiri. (2024). The value of the rupiah has a positive and significant impact on the profitability of Islamic banks. Stability in the exchange rate can support financing activities and maintain the performance of Islamic banks. This finding is consistent with that of (Sabrina et al., 2021).

Error Correction Model

Table 6 Error Correction Model

	Coefficient	Std. Error	t-Statistic	Prob
D(X1)	-0.051050	0,083827	-0.608984	0.5447
D(X2)	0.040320	0,038198	1.055569	0.2951
D(X3)	0.867029	0,524561	1.652865	0.1032
ECT(-1)	-0.167829	0,069691	-2.408187	0.0189

Source: Data compiled by researchers in 2026

Table 6 shows that, in the short term, BI Rate, inflation and exchange rates do not significantly affect the profitability of Islamic banks. This indicates that changes in macroeconomic conditions do not directly affect the profitability of Islamic banking in the short term, as Islamic banks tend to focus more on stabilising financing and managing risk. Negative and significant value of the Error Correction Term (ECT) indicates the presence of a mechanism for adjusting towards long-term equilibrium. This means that when there is an imbalance in the short term, the profitability of Bank Syariah Indonesia will adjust towards the long-term equilibrium. This finding is consistent with Fatmawati & Hakim. (2020), who found that macroeconomic variables tend to have a greater impact in the long term than in the short term on Islamic banking.

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Normality Test

Table 7 Results of the Normality Test

Statistik	Value
Jarque-Bera	1,607737
Probability	0,447594

Source: Data compiled by researchers in 2026

The Jarque-Bera test yields a probability of 0.447594 (>0.05), indicating a normal distribution of the residuals. This indicates that the error variation in the model is not dominated by extreme shocks, so fluctuations in the ROA of Islamic banks can be stably explained by the BI rate, inflation, and the exchange rate. The ECM model is suitable for analyzing short-term and long-term relationships in this study.

Multikollinearity Test

Table 8 Results of the Multicollinearity Test

Variable	VIF
BI Rate (X1)	1,392179
Inflation (X2)	1,092547
Exchange Rate (X3)	1,358469

Source: Data compiled by researchers in 2026

Table 8 shows that all independent variables have VIF values below 10, thus there are no multicollinearity issues. The BI Rate, inflation, and exchange rate are sufficiently independent of each other that they can be used together in the model. The absence of multicollinearity indicates that the ECM model used is sufficiently stable to analyze the short- and long-term relationships between macroeconomic variables and the profitability of Islamic Commercial Banks.

Heteroscedasticity Test

Table 9 Results of the Heteroscedasticity Test

Statistik	Value
Prob. Chi-square	0,9451

Source: Data compiled by researchers in 2026

Table 9 shows that the Chi-Square Probability value of 0.9451 is greater than the significance level of 0.05, indicating that the ECM model does not suffer from heteroscedasticity. This suggests that the residual variance in the model is constant, making the regression estimates more stable and unbiased. The absence of heteroscedasticity indicates that the ECM model is capable of producing more reliable estimates in analyzing the effects of the BI Rate, inflation, and the exchange rate on the profitability of Islamic Commercial Banks.

Autocorrelation Test

Table 10 Result of the Autocorrelation Test

Prob. Chi-Square	0.3657

Source: Data compiled by researchers in 2026

Table 10 shows that the Obs R-squared probability value of 0.3657 is greater than the 0.05 significance level, indicating that the ECM model does not experience autocorrelation. This indicates that the residuals between observation periods are uncorrelated, enabling the model to produce more consistent and reliable estimates. The absence of autocorrelation indicates that the

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ECM model is suitable for analyzing the short- and long-term relationships between the BI Rate, inflation, exchange rates, and the profitability of Islamic Commercial Banks.

T-Test

Table 11 Results of the T-Test

Variable	Coefficient	t-Statistik	Probability	Description
BI Rate (X1)	-0,052315	-2,042813	0,0449	Significant
Inflation (X2)	0,066240	3,330082	0,0014	Significant
Exchange Rate (X3)	3,016152	5,275523	0,0000	Significant

Source: Data compiled by researchers in 2026

Based on Table 11, it can be explained that:

1. BI Rate can reduce demand for financing and increase competition for funds, thereby reducing the profitability of Islamic banks. These results align with research by Abidillah & Ryandono. (2019) and Anindyaa et al. (2022)
2. Inflation has a positive and significant effect on the profitability of Islamic Commercial Banks. Controlled inflation can increase economic activity and demand for financing, thereby supporting increased profitability of Islamic banks. These results support research by Gazi et al. (2024) and Rathnasiri. (2024).
3. The rupiah exchange rate has a positive and significant effect on the profitability of Islamic Commercial Banks. Exchange rate stability can support financing activities and maintain the performance of Islamic banks. These results align with Sabrina et al. (2021) but differ from (Fatmawati & Hakim, 2020).
4.

F Test

Table 12 Results of the F-Test

Keterangan	**Value**
F-Statistic	15,28947
Prob(F-Statistic)	0,000000

Source: Data compiled by researchers in 2026

Table 12 shows that the Prob(F-Statistic) value is less than 0.05, indicating that the BI Rate, inflation, and exchange rates simultaneously have a significant effect on the profitability of Islamic Commercial Banks. Macroeconomic factors play a significant role in influencing the profitability of Islamic banking in Indonesia. Changes in monetary policy, inflation rates, and exchange rate stability can affect fundraising activities, financing, and the overall financial performance of Islamic Commercial Banks. The results of this study are in line with Abidillah & Ryandono. (2019) and Khotimah et al., (2024) who found that macroeconomic variables jointly influence the profitability of Islamic banking.

Coefficient of Determination (R-Square) Test

Table 13v Results of the Coefficient of Determination (R-Square) Test

R-Square	0,402819

Source: Data compiled by researchers in 2026

Table 13 shows an R-Square value of 0.402819. This means that 40.28% of the variation in Islamic commercial bank profitability can be explained by the BI Rate, inflation, and exchange rates, while the remainder is influenced by other variables outside the research model. Macroeconomic factors play a significant role in Islamic commercial bank profitability, although internal banking factors and other external conditions also influence Islamic bank profitability.

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DISCUSSION

The Effect of the BI Rate on Return on Assets (ROA)

The results indicate that the BI Rate has a negative and significant effect on the profitability of Islamic Commercial Banks in the long run. An increase in the benchmark interest rate may reduce financing demand and intensify competition in fund collection between Islamic and conventional banks. Although Islamic banks do not directly implement an interest-based system, changes in the BI Rate still influence customer behavior and banking market conditions through the Monetary Transmission Mechanism (MTM) (Warjiyo, 2004). During the post-pandemic recovery period, Bank Indonesia gradually increased interest rates to control inflation and maintain macroeconomic stability. Higher interest rates encouraged customers to shift funds to conventional banking instruments offering more competitive returns (Husna et al., 2021). This condition potentially reduced third-party funds and financing activities in Islamic banks, thereby decreasing profitability (Gunanto, 2023; Sehany & Nurhidayati, 2022). These findings support Abidillah & Ryandono. (2019) and Anindyaa et al. (2022), which stated that interest rates negatively affect Islamic banking profitability. Therefore, H1 stating that the BI Rate has a significant negative effect on ROA is accepted.

The Effect of Inflation on Return on Assets (ROA)

Inflation has a positive and significant effect on the profitability of Islamic Commercial Banks. Inflation during the study period remained under control and reflected improving economic activity during the post-pandemic recovery period. Rising consumption, investment, and business activities increased financing demand, thereby improving Islamic bank profitability (Louise Celwin, 2024; Rathnasiri, 2024). From the MTM perspective, moderate inflation may stimulate economic circulation and increase financing demand (Rajagukguk, 2020). Islamic banks were considered adaptive in responding to inflationary pressures through financing margin adjustments and productive financing strategies (Gunanto, 2023; Sholihah & Wardana, 2025). As a result, inflation supported financing growth and bank income.

These findings support Gazi et al. (2024), Rathnasiri (2024), and Sabrina et al. (2021), which found that inflation positively affects banking profitability. However, excessive inflation may still increase financing risk and operational costs. Therefore, H2 stating that inflation has a significant negative effect on ROA is rejected.

The Effect of Exchange Rates on Return on Assets (ROA)

The exchange rate has a positive and significant effect on the profitability of Islamic Commercial Banks. Exchange rate stability during the study period supported economic recovery, trade activities, and banking performance. A stable exchange rate increased business confidence and encouraged financing activities in the real sector, thereby indirectly improving bank profitability (Fitri & Putra, 2024; Husen & Fahlevi, 2024). Post pandemic exchange rate stability also reflected stronger macroeconomic resilience in Indonesia (Nasution et al., 2024). Within the MTM framework, exchange rate stability reduced uncertainty in economic activities and supported financing quality in the banking sector (Maronrong & Nugrhoho, 2019). These findings are consistent with Sabrina et al. (2021), which found a positive effect of exchange rates on profitability. Therefore, H3 stating that the exchange rate has a significant negative effect on ROA is rejected.

Short-Run Adjustment Mechanism (ECM)

The ECM estimation results show that BI Rate, inflation, and exchange rate variables do not significantly affect the profitability of Islamic Commercial Banks in the short run. This indicates that Islamic bank profitability does not immediately respond to short-term macroeconomic fluctuations because Islamic banks prioritize financing stability and long-term business relationships(Gunanto, 2023; Humta et al., 2024). This condition occurs because Islamic banking financing contracts, such as murabahah, mudharabah, and musyarakah, are generally medium- and long-term contracts that cannot be adjusted immediately when macroeconomic conditions

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change. In addition, the profit-sharing mechanism causes monetary transmission in Islamic banking to occur more slowly than in conventional banking. As a result, Islamic banks tend to be more stable during short-term macroeconomic fluctuations, particularly during the post-pandemic recovery period (Ikbal et al., 2023). However, the Error Correction Term (ECT) is negative and significant, indicating that short-run disequilibrium caused by macroeconomic shocks will gradually adjust toward long-run equilibrium. These findings support Fatmawati & Hakim. (2020), which stated that macroeconomic variables have stronger effects in the long run than in the short run.

The Effect of the BI Rate, Inflation, and the Exchange Rate on Return on Assets (ROA)

The F-test results show that BI Rate, inflation, and exchange rate simultaneously have a significant effect on the profitability of Islamic Commercial Banks. This indicates that macroeconomic stability plays an important role in maintaining the performance and sustainability of Islamic banking in Indonesia (Gazi et al., 2024; Humta et al., 2024). Within the MTM framework, changes in interest rates, inflation, and exchange rates collectively influence financing demand, liquidity conditions, fund collection, and banking profitability (Miskhin & Apostolos, 2011; Warjiyo, 2004). Therefore, Islamic bank profitability is influenced not only by internal performance but also by broader macroeconomic conditions.

Stable post pandemic macroeconomic conditions supported the recovery of financing activities and banking performance (Khotimah et al., 2024; Pratiwi et al., 2024). Compared to previous studies, this research provides a more comprehensive perspective by using monthly time series data from 2019-2024 and applying the Error Correction Model (ECM) approach to capture both short-run and long-run dynamics simultaneously. The findings indicate that Islamic banking profitability in Indonesia is relatively resilient to short-term macroeconomic fluctuations but remains influenced by long-run macroeconomic stability. Therefore, H4 stating that BI Rate, inflation, and exchange rate simultaneously have a significant effect on ROA is accepted.

CONCLUSION

This study finds that the BI Rate has a negative and significant effect on the profitability of Islamic Commercial Banks in the long run, while inflation and exchange rates have a positive and significant effect on ROA. Simultaneously, all macroeconomic variables significantly affect ROA. In the short run, these variables do not significantly affect profitability. However, the significant Error Correction Term (ECT) indicates that Islamic bank profitability gradually adjusts toward long-run equilibrium after macroeconomic shocks occur. Theoretically, this study strengthens the Monetary Transmission Mechanism (MTM) theory by showing that macroeconomic variables continue to influence Islamic banking profitability through liquidity, financing, and funding channels. This study further demonstrates that Islamic bank profitability in Indonesia responds more strongly to long-run macroeconomic stability than to short-term fluctuations, indicating the delayed nature of monetary transmission within Islamic banking operations. The results also show that macroeconomic effects are stronger in the long run than in the short run. This study differs from previous studies because it uses monthly time-series data from 2019-2024 and applies the Error Correction Model (ECM) to analyze short-run and long-run relationships simultaneously during the post-pandemic economic recovery period in Indonesia.

From a policy perspective, maintaining macroeconomic stability is important to support Islamic banking profitability. Stable inflation, controlled interest rates, and exchange rate stability can help maintain financing quality and banking performance. For the management of Islamic Commercial Banks, the findings highlight the importance of maintaining liquidity management, financing quality, and operational stability to sustain profitability amid changing macroeconomic conditions. For Bank Indonesia, the findings indicate the importance of balanced monetary policies to maintain financial stability without reducing Islamic banking liquidity. For the Financial Services Authority (OJK), the findings emphasize the need to strengthen financing risk supervision in Islamic banking institutions. Future research is recommended to include

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internal banking variables such as FDR, NPF, CAR, and BOPO, compare Islamic and conventional banks, or apply other methods such as ARDL, VAR, and VECM to provide broader evidence regarding the impact of macroeconomic variables on banking profitability.

REFERENCES

Abidillah, A. F., & Ryandono, M. N. H. (2019). Do Macroeconomics Variables Affect Conventional and Islamic Banking Profitability? *AFEBI Islamic Finance and Economic Review*, *4*(02), 101. https://doi.org/10.47312/aifer.v4i02.363

Andriani, W. (2024). Menilai Kinerja Keuangan Perbankan Syariah di Bursa Efek Indonesia : Pendekatan Analisis Rasio dan Common Size. *Istikhlaf*, *6*(2), 17–33. https://doi.org/10.51311/istikhlaf.v6i2.653

Anindyaa, A. P., Apriliantob, F., & Agustin, A. F. (2022). Pengaruh Inflasi, BI Rate, dan Kurs Terhadap Profitabilitas (Roa) Bank Umum Syariah Di Indonesia. *Journal of Islamic Economics Development and Innovation (JIEDI)*, *2*(3), 11–18. https://doi.org/10.35897/ijiedia.v5i1263

Creswell, J. W., & Creswell, J. D. (2023). *Research Design* (P. Schroeder (ed.); Sixth edit). Sage.

Fadila, L. S. W. N., Safutri, N., & Sari, Y. (2025). Pengaruh Inflation, Bi Rate, Dan Exchange Rate Terhadap Return on Asset Bank Umum Syariah Periode 2020-2024. *RIGGS: Journal of Artificial Intelligence and Digital Business*, *4*(2), 560–566. https://doi.org/10.31004/riggs.v4i2.544

Fatmawati, N. L., & Hakim, A. (2020). Analisis Tingkat Profitabilitas Perbankan Syariah di Indonesia. *Jurnal BAABU AL-ILMI: Ekonomi Dan Perbankan Syariah*, *5*(1), 1. https://doi.org/10.29300/ba.v5i1.3115

Fitri, N. A., & Putra, R. F. (2024). Konsep Nilai Tukar Rupiah , Aliran Modal Asing dan Kebijakan Moneter dalam Tinjauan. *Jurnal Al-Intifaq*, *4*(2), 61–74.

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). https://doi.org/10.3390/economies12030066

Ginting, A. L. (2024). Inflasi Dan Suku Bunga Terhadap Minat Investasi Saham Gen Z. *Jurnal Rumpun Manajemen Dan Ekonomi*, *1*(3), 339–351. https://doi.org/10.61722/jrme.v1i3.1677

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (A. E. Hilbert (ed.); 5th ed.). McGraw-Hill/Irwin.

Gunanto, A. (2023). Internal Variables and Macroeconomic Factors as Determinants of Profitability in Islamic Banking Indonesia. *Futurity Economic & Law*, *3*(4), 48–66. https://doi.org/10.57125/FEL.2023.12.25.04

Humta, H., Şahin, İ. E., & Ghafourzay, H. (2024). Capital Adequacy and Bank Profitability: the Moderating Effect of Macroeconomic Variables. *Management Sciences*, *14*(2), 39–50. https://doi.org/10.26794/2304-022x-2024-14-2-39-50

Husen, M. S., & Fahlevi, R. (2024). Pengaruh Inflasi Dan Nilai Tukar Mata Uang Asing Terhadap Profitabilitas Bank Syariah Indonesia. *At-Tamwil : Islamic Economic and Finance Journal*, *03*(02), 148–162. https://doi.org/10.33558/attamwil.v3i2.10144

Husna, A., Atika, Wahyudi, S., & Soemitra, A. (2021). Pengaruh Kebijakan Moneter Terhadap Kinerja Bisnis Perbankan Syariah. *Jurnal Riset Akutansi Dan Bisnis*, *21*(2), 215–225. https://doi.org/10.30596/jrab.v21i2.7682

Ikbal, M., Ridwan, M., & Khusnudin. (2023). Studi Komparatif Makro Ekonomi Pemikiran Cendikiawan Muslim Klasik. *Jurnal Ilmiah Ekonomi Islam*, *9*(01), 1290–1295. https://doi.org/10.29040/jiei.v9i1.7044

Jumiati, E. (2022). Kebijakan Moneter Sebagai Pengendali Inflasi Dan Nilai Tukar (Peran Bank Sentral). *Jurnal Perbankan Syariah*, *2*(1), 1–14.

Khotimah, K., Masyari, M. I., Hikam, M. N. A. H., & Abadi, M. taufiq. (2024). Pengaruh Inflasi, Suku Bunga dan Nilai Tukar Terhadap Profitabilitas Perbankan Syariah. *Jurnal Ekonomi*

Jurnal Ekonomi & Ekonomi Syariah Vol 9 No 2, Juni 2026
E-ISSN : 2599-3410 | P-ISSN : 2614-3259
DOI : https://doi.org/10.36778/jesya.v9i2.2695

Bisnis Dan Manajemen, *2*(1), 1–8. https://doi.org/10.61722/jssr.v2i1.635

Laili, S. N., & Siswanto. (2021). An Analysis of Cashless Society for Monetary Policy in Perspective of Islam. *Proceedings of the International Conference on Engineering, Technology and Social Science (ICONETOS 2020)*, *529*, 736–743. https://doi.org/10.2991/assehr.k.210421.106

Louise Celwin. (2024). Pentingnya Kesadaran Inflasi Terhadap Pertumbuhan Ekonomi Di Indonesia Tahun 2021 Hingga 2024 the Importance of Inflation Awareness To Economic Growth in Indonesia 2021 To 2024. *Jiic: Jurnal Intelek Insan Cendikia*, *1*(September), 2645–2654. https://jicnusantara.com/index.php/jiic

Maronrong, R. M., & Nugrhoho, K. (2019). Pengaruh Inflasi, Suku Bunga Dan Nilai Tukar Terhadap Harga Saham Studi Kasus Pada Perusahaan Manufaktur Otomotif Terdaftar Di Bursa Efek Indonesia Tahun 2012- 2017. *Jurnal STEI Ekonomi*, *26*(02), 277–295. https://doi.org/10.36406/jemi.v26i02.38

Miskhin, F. S., & Apostolos, S. (2011). *The economics of money, banking, and financial markets* (G. Bennett (ed.); 4th ed.). Pearson Education.

Nasution, A. A., Balqis, K. P., Zalyanti, C. A., Harahap, I. T. S., & Batubara, M. (2024). Mekanisme Trasmisi Kebijakan Moneter Di Negara Berkembang. *Ekonomi Dan Perbankan Syariah*, *9*(3), 1984–1998. https://doi.org/10.30651/jms.v9i3.23204 Volume

Pratiwi, S. N., Rusiadi, R., & Faried, A. I. (2024). Analisis Efektivitas Inflasi, Bi Rate, Nilai Tukar (KURS), Pembiayaan Murabahah, dan Pembiayaan Musyarakah Terhadap Profitabilitas Perbankan Syariah di Indonesia (Periode 2020 – Desember 2022). *Akuntansi 45*, *5*(1), 92–106. https://doi.org/10.30640/akuntansi45.v5i1.2440

Raharjo, H., Wijayanti, A., & Dewi, R. R. (2020). Analisis Pengaruh Kinerja Keuangan Dan Inflasi Terhadap Profitabilitas Bank Umum Syariah Di Indonesia (Tahun 2014-2018). *Jurnal Ilmiah Akuntansi Dan Manajemen*, *16*(1), 15–26. https://doi.org/10.31599/jiam.v16i1.110

Rajagukguk, W. (2020). Pengantar Ekonomi Makro. In *UKI Press* (1st ed.).

Rathnasiri, R. A. (2024). The Impact of Macroeconomic Stability on Commercial Bank Profitability: A Study of Sri Lanka. *International Journal of Accountancy*, *4*(1). https://doi.org/10.4038/ija.v4i1.61

Sabrina, I., Yenti, F., & Husni, A. (2021). Pengaruh Variabel Ekonomi Makro Nilai Tukar Rupiah Dan Inflasi Terhadap Profitabilitas Bank Umum Syariah Di Indonesia. *Al-Ittifaq: Jurnal Ekonomi Syariah*, *1*(1), 52. https://doi.org/10.31958/al-ittifaq.v1i1.3268

Sehany, D. M., & Nurhidayati, M. (2022). Pengaruh Dana Pihak Ketiga Dan Inflasi Terhadap Profitabilitas Pada Bank Umum Syariah Bumn Pada Tahun 2016-2020. *Jurnal Asy-Syarikah: Jurnal Lembaga Keuangan, Ekonomi Dan Bisnis Islam*, *4*(2), 92–108. https://doi.org/10.47435/asy-syarikah.v4i2.1051

Sholihah, M., & Wardana, G. K. (2025). Unveiling the drivers of islamic bank profitability : fundamental and macroeconomic factors in Asia. *Jurnal Akademi Akuntansi*, *8*(1), 130–148. https://doi.org/10.22219/jaa.v8i1.39373

Warjiyo, P. (2004). *Mekanisme Transmisi Kebijakan Moneter Di Indonesia* (Issue 11). Pusat Pendidikan dan Studi Kebanksentralan (PPSK) BI.