

Financial Inclusion and Sharia Banking Performance in Indonesia

Muhammad Khozin Ahyar

Departement of Accounting, Politeknik Negeri Samarinda
khozinahyar@polnes.ac.id

Angga Hergastyasmawan

Departement of Accounting, Politeknik Negeri Samarinda
anggahergas@polnes.ac.id

Zulfikar

Departement of Accounting, Politeknik Negeri Samarinda
zulfikar@polnes.ac.id

Bayu Pratama

Departement of Accounting, Politeknik Negeri Samarinda
bayu06623@gmail.com

Muchammad Zikri Saputra

Departement of Accounting, Politeknik Negeri Samarinda
zikrisaputra120825@gmail.com

Abstract:

This study aims to examine the impact of financial inclusion indicators on the performance of Islamic banking in Indonesia. Financial inclusion is measured through the number of Islamic bank service offices and the number of Islamic bank ATMs, while Islamic banking performance is represented by Third-Party Funds, Islamic Financing, and Return on Assets (ROA). All variables are treated as endogenous within the Vector Autoregression (VAR) framework. The data were obtained from secondary sources, primarily the Islamic Banking Statistics published by the Financial Services Authority (Otoritas Jasa Keuangan/OJK), covering the period 2020–2024. This period was chosen to capture the development of Islamic banking amid economic uncertainty and Indonesia's post-pandemic economic recovery. The findings reveal that financial inclusion has a significant short-term impact on the performance of Islamic banking in Indonesia, whereas its long-term influence is not statistically significant. These results suggest that the rapid advancement of non-cash payment systems and financial technologies has reshaped the relationship between financial inclusion and Islamic banking performance.

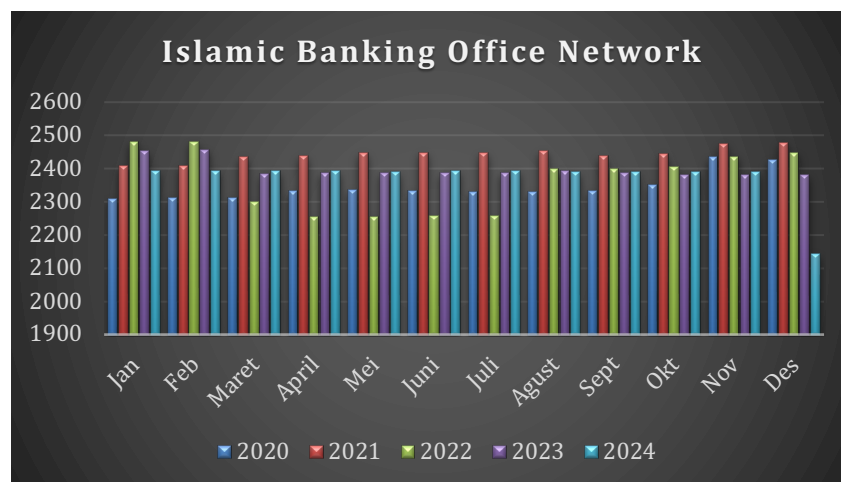
Keywords: *Financial Inclusion, Islamic Banking, Financing, ROA, ATM, Network of Bank Office*

A. INTRODUCTION

The financial industry is one of the sectors that receives special attention from the government and regulators due to its rapid growth and its role in supporting the stability of the financial system. The existence of the Financial Sector Strengthening and Development Law (UU P2SK) further emphasizes strict supervision over the financial sector in Indonesia. Financial inclusion is a crucial factor in driving sustainable economic growth and improving community welfare. Islamic banking in Indonesia plays a strategic role in expanding financial access, but the level of Islamic financial inclusion remains relatively low compared to conventional banking (Abadi et al., 2022; Ahyar & Hakim, 2021).

According to data from OJK (2025), the level of financial literacy in Islamic finance reached 43.42%, while Islamic financial inclusion was only 13.41%. This gap shows that although public understanding is increasing, access is still limited. Factors such as lack of financial infrastructure, limited products, and low penetration of Islamic financial technology are the main challenges. The number of Islamic banking branches has continued to decrease year after year.

Figure 1. Islamic Banking Office Network

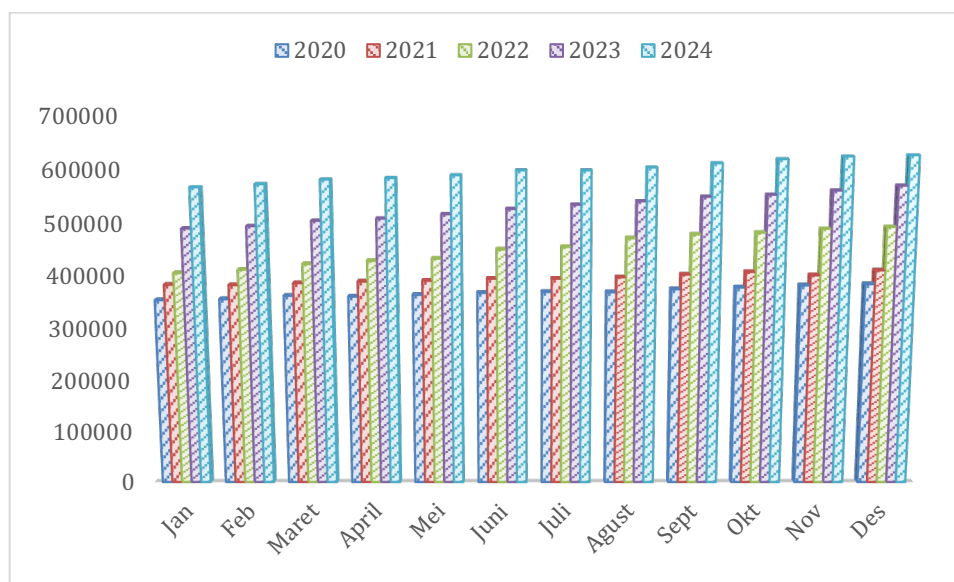


Source: Data Processed (2025)

Despite these challenges, the performance of Islamic banking in Indonesia continues to improve, as shown in the Islamic Banking Statistics (SPS) published by OJK. This inverse relationship has sparked the researcher's interest in studying the impact of accessibility (financial inclusion) on the performance of Islamic

banking. Previous studies mainly analyzed third-party funds (DPK) and financing products, while this research will also add the profitability performance, specifically Return on Assets (ROA).

Figure 2. Oustanding of Financing in Islamic Banking



Source: Data Processed (2025)

Previous studies have primarily examined the impact on the performance of third-party funds (funding products) and financing products (Ahyar & Hakim, 2021; Dz., 2018; Ninglasari et al., 2023). This study seeks to extend the analysis by incorporating the profitability performance of Islamic banking, specifically measured through Return on Assets (ROA).

B. LITERATURE REVIEW

Financial Inclusion

The implementation of financial inclusion in Indonesia is highly diverse and has been carried out for a long time, including the existence of cooperatives and the Kredit Usaha Rakyat (KUR) or People's Business Credit (Wahid, 2014). Similarly, in Islamic finance, the concept of Baitul Maal wat Tamwiil (BMT) represents a form of Islamic financial inclusion. The presence of cooperatives, BMTs, and KUR contributes to enhancing Islamic financial inclusion in Indonesia (Nengsih, 2015; Wahid, 2014).

Several studies indicate that financial inclusion is driven by a number of factors, such as the availability of bank branch networks, ATMs, and banking

agents (Ahyar & Hakim, 2021; Dz., 2018; Widyandri & Laila, 2022). Other literature also highlights that mobile banking is a component that can further strengthen financial inclusion (Bharali & Borman, 2017; Hasanah & Istikomah, 2023; S & Balaji, 2022; Widyandri & Laila, 2022; Zheng et al., 2023).

However, the availability of Islamic banking networks remains a significant challenge. The limited number and uneven distribution of branches and ATMs present barriers to financial inclusion. According to Fahrudin & Yulianti, (2015), the location of bank branches influences people's decisions in choosing or purchasing banking products. Similarly, Darmawan et al., (2019) state that location is one of the key factors for customers when deciding to save in a bank. Thus, it can be understood that the proximity of banking networks strongly affects the majority of people's decisions to use banking services.

The Financial Services Authority (OJK), as the regulator of the financial services industry in Indonesia, routinely conducts surveys on financial literacy and inclusion. Each survey consistently shows an improvement in the Islamic financial literacy and inclusion indices (Table 1). This indicates that the efforts undertaken by the relevant authorities and other stakeholders have been successful in enhancing the Islamic financial literacy and inclusion indices.

Table 1. Islamic Financial Literacy and Inclusion Indices

Islamic Index	2023	2024	2025
Literacy	9,14%	39,11%	43,42%
Inclusion	12,12%	12,88%	13,41%

Source: OJK (2025)

Financial inclusion is not only supported by the presence of bank branches but also by other infrastructures such as Automated Teller Machines (ATMs). ATMs play a crucial role in facilitating financial transactions in Indonesia today. Their presence enables customers to carry out transactions more easily anytime and anywhere. With 24-hour operations, ATMs provide customers with convenience in performing financial activities, even when bank branches are closed or not in operation.

Access

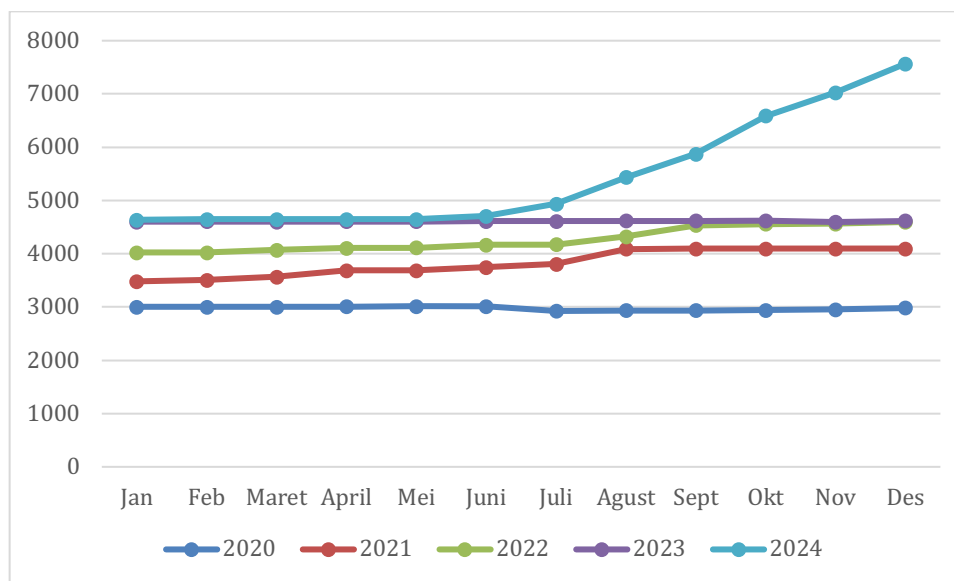
Access is one of the key dimensions of financial inclusion indicators. Presidential Regulation No. 82/2016 defines access as the ability to utilize formal financial services in terms of both physical and cost affordability. Fairuz et al. (2022) and Rifa'i (2017) also explains that access refers to the ability of banks to reach the public in accessing formal financial institutions, both for saving and obtaining financing, as well as other financial services. Based on these definitions,

several aspects are associated with indicators within the access dimension that can describe access in financial inclusion, namely physical access, cost access, access to savings products, and access to financing products. In this study, the author employs the concept of physical access to represent the accessibility of Islamic banking in Indonesia.

According to Fahrudin & Yulianti (2015); Saifurrahman & Kassim (2022), the location of a bank office can influence people's decisions in choosing or purchasing banking products. In line with this, (Darmawan et al., 2019) also state that location is one of the key factors influencing customers' decisions to save in a bank. Therefore, it can be understood that the proximity of banking office networks significantly affects most people's decisions to use banking products and services.

Beyond bank office or branch networks, other facilities or infrastructures that can promote financial inclusion include Automated Teller Machine (ATM) networks. The use of ATMs has become increasingly essential in supporting financial transactions in Indonesia. The presence of ATMs enables customers to conduct transactions easily anytime and anywhere. The 24-hour operational nature of ATMs provides customers with greater convenience in carrying out financial activities at any time, allowing them to transact normally even when bank offices are closed or not operating.

Figure 3. ATM of Islamic Banking Network



Source: Data Processed (2025)

The network of Islamic banking ATMs in Indonesia has continued to increase from year to year (Figure 3). During the period of 2020–2024, the Islamic banking ATM network in Indonesia consistently demonstrated a positive and stable trend. The most significant increase occurred in 2024, when the number of ATMs rose from 4,700 at the beginning of the year to 7,500 by December. These ATMs have been widely distributed across various regions throughout Indonesia. This upward trend reflects either a large-scale expansion strategy or a rising demand for Islamic banking services during that period.

In contrast, the number of Islamic banking branch office networks in the country has continued to decline (Figure 1). This indicates that the existence of branch office networks in Islamic banking is becoming less relevant in the current digital era. The enhancement of technology-based services accessible to customers at any time has become the primary choice for banking customers (Mujiatun et al., 2023; Ristianawati & Hartono, 2022; S & Balaji, 2022).

Another facility that can facilitate public or customer access to banking services is mobile banking and internet banking. Although mobile banking and internet banking are two different concepts, their usage methods are similar. Both rely on internet connectivity to access the banking system. The distinction lies in the medium used: mobile banking operates through applications installed on smartphones, whether Android or iOS-based, while internet banking is accessed through a website platform. Both forms of e-banking serve as instruments to promote financial inclusion (Ayu & Filianti, 2022; Tikku & Singh, 2023). Due to their global nature, these e-banking models are highly accessible to the general public. Today, mobile and internet banking are not only used for financial transactions, purchases, or payments, but their functions have expanded to include account opening services. This functional expansion further enhances public convenience in accessing banking services effectively and efficiently (Zhang et al., 2025).

Most countries around the world have adopted mobile banking as one of the tools to promote financial inclusion (Hasanah & Istikomah, 2023; S & Balaji, 2022). Bharali & Borman (2017) state that most customers in Jorhat City, India, prefer and are enthusiastic about using mobile banking for their banking transactions. They argue that mobile banking has significant potential to enhance financial inclusion and contribute to national financial growth. Indicators within the access dimension reflect the depth of financial service outreach, such as the penetration of bank branches in particular regions (Soetiono & Setiawan, 2018).

Islamic Banking Performance

The performance of Islamic banks can be seen in financial reports or through Islamic banking statistical reports published by the Financial Services Authority (OJK). In this research, there are several financial performances that will be used as variables, namely Third-Party Funds, Islamic Financing Amount, and Return on Asset (ROA). These three components of Islamic bank performance are used as variables because they represent the progress of Islamic banks. Third Party Funds indicate that Islamic banks have successfully attracted the public to be generous, loyal, and trusting in using services at Islamic banks. The amount of Islamic financing shows that the community has chosen Islamic financing to meet their needs. Return on Asset reflects the capability of Islamic banks in generating profits through the optimization of asset utilization. Additionally, these three components can also describe the business activities process of Islamic banks as a Sharia-based financial intermediary institution.

Based on the Sharia Banking Statistics (SBS) of the OJK for 2020-2024, the amount of Third-Party Funds (DPK) in Islamic banking has continued to increase year by year (Figure 4). This indicates growth in performance and public trust in Islamic banking, as well as increasing related economic activities. Overall, the collection of public funds in Islamic banking shows positive development over the last five years. However, there are 3 interesting aspects that can be further analyzed from the graph, namely:

a. Consistent Increase

Consistent monthly DPK growth every year. This growth appears consistent and significant from 2020-2024, despite being in the midst of a health crisis that also impacted the economy, even extending into the post-COVID-19 economic recovery period. Additionally, various events that significantly impacted Indonesia's Islamic banking industry did not cause Islamic banking DPK to decline. The consistency of Islamic banking DPK growth in the country is evidence that the Islamic banking industry has not lost the trust of the community or its customers..

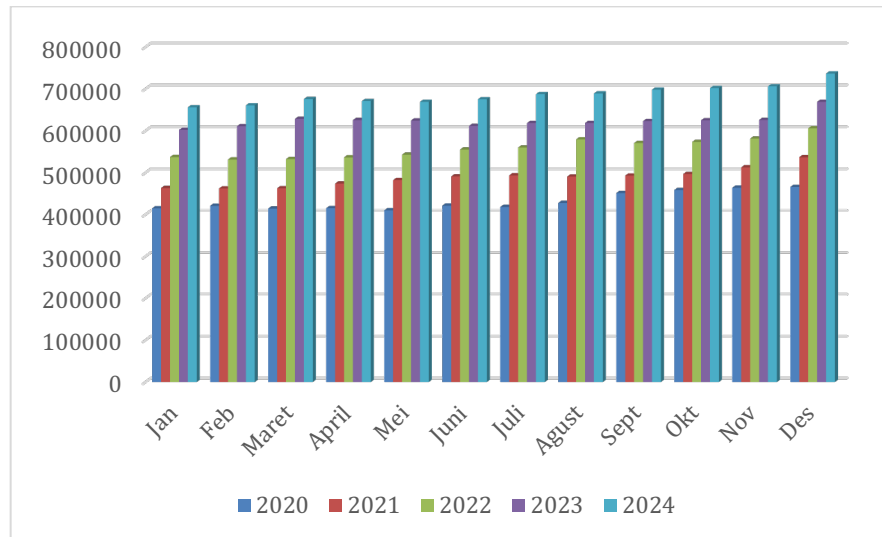
b. Stable Growth

2024 has been the most stable and highest growth across all months, with the peak value in December. This stable growth occurred while Indonesia had to face global uncertainty in terms of continuously escalating economic and geopolitical issues. The shadow of an economic recession haunting Indonesia's economy did not escape serious attention. The cybercrime attack on mobile banking of one of the largest Islamic banks in Indonesia did not cause a decline in Islamic banking DPK. This indicates that public confidence in Islamic banking has not decreased.

c. Season Trend

At the end of the year (November and December), DPK tends to increase compared to previous months in all years. This may be related to community savings patterns or increased economic activities toward the end of the year..

Figure 4. Islamic Banking DPK Chart



Source: Processed Data (2025)

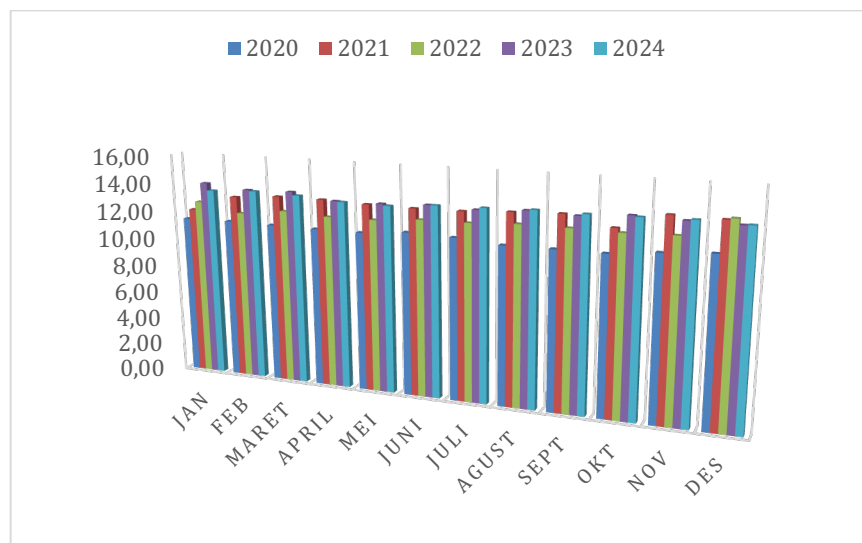
ROA is an important performance indicator in measuring the efficiency of banks in generating profits from their total assets. Generally, the graph shows an increasing trend year by year with small fluctuations each year (Figure 4). The highest ROA was consistently achieved by the Islamic banking industry in 2023 and 2024. This indicates an improvement in the increasing efficiency and financial performance of Islamic banking.

The increasing ROA trend indicates that the Islamic banking sector has shown improvement in financial performance year by year. Additionally, the rising ROA trend also suggests that the Islamic banking sector is becoming more mature and capable of competing fairly in the national financial industry. However, there are several important points that can be further interpreted based on the chart, namely:

- a. The year 2020 showed the lowest ROA compared to other years. Islamic banking ROA grew ranging from 11% to 11.8% throughout the year. This could be caused by the strong impact of COVID-19 on economic activities in Indonesia. Unpreparedness in facing COVID-19 could also be a trigger for the slow increase trend.

- b. A gradual increase in ROA occurred in 2021-2022, indicating a recovery in performance after 2020. ROA steadily increased in the range of 12% to 13%.
- c. In 2023 and 2024, the Islamic banking industry successfully recorded the highest ROA, with figures ranging from 13% to 14%. The ROA appeared quite stable and consistent throughout the year, reflecting more efficient and optimal performance growth.
- d. Islamic banking has consistently maintained its financial performance without sharp fluctuations. This can be seen from the monthly ROA which tends to grow steadily.

Figure 5. ROA of Islamic Banking in Indonesia



Source: Processed Data (2025)

C. RESEARCH METHODOLOGY

This study is quantitative research utilizing secondary data. The population of this study consists of Islamic banking institutions in Indonesia. The sample drawn from this population includes Islamic Commercial Banks (BUS) and Islamic Business Units (UUS). The data employed in this research are monthly data from the Islamic Banking Statistics (SPS) in Indonesia over the past four years, totaling 48 months, covering the period from 2020 to 2024. This period was selected because Islamic banking experienced significant development during the health crisis that affected the economy as well as during the post-pandemic economic recovery. The sample data used in this study are as follow:

Table 2. List of Research Sample Data

No	Data	Period
1	Return On Asset (ROA)	January 2020 – December 2024
2	Third-Party Funds (DPK)	January 2020 – December 2024
3	Total Financing	January 2020 – December 2024
4	Islamic Bank Branch Network (BUS & UUS)	January 2020 – December 2024
5	Islamic Bank ATM Network (BUS & UUS)	January 2020 – December 2024

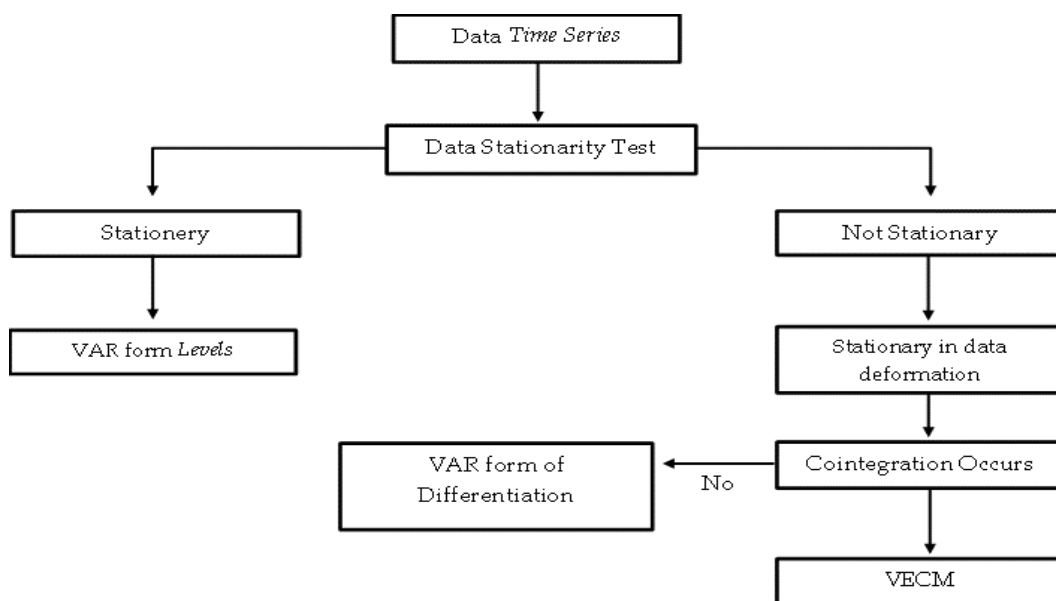
Source: Data Is Processed (2025)

This study employs a quantitative method with time series data analysis. The model applied in this research is the Vector Autoregression (VAR) model. Vector Autoregression (VAR) is a regression system model consisting of two or more dependent variables (Hakim, 2017). This model is used to analyze time series data. The use of VAR in this study aims to capture the phenomena occurring in Islamic banking in terms of financial inclusion while minimizing theoretical assumptions. To examine the influence of financial inclusion variables on third-party funds (DPK) in Islamic banking, the analysis can be conducted through the following VAR equation model:

$$Y_{nt} = \beta_0 + \sum_{i=1}^p \beta_i Y_{nt-i} + \sum_{i=1}^p \alpha_i Y_{nt-i} + \sum_{i=1}^p \gamma_i Y_{nt-i} + e_{nt} \quad (3.2)$$

The above equation represents an example with two endogenous variables. In conducting an analysis using VAR, several testing procedures are required. The testing process in the VAR method includes the stationarity test, cointegration test, and VAR test. After performing these tests, the VAR method provides several techniques to further analyze the results, namely the impulse response, variance decomposition, and Granger causality test. The process of constructing the VAR model in a more concise form can be seen in the following figure:

Figure 6. VAR Formation Process



Source: (Widarjono, 2018)

The process of forming a VAR model begins with testing the stationarity of time series data. If the data are stationary at the level, the model used is VAR in level form. If not, and the data become stationary after differencing, then a cointegration test is required. If no cointegration exists, the model remains VAR in level form; if cointegration exists, the model used is VECM (Vector Error Correction Model), which shows a long-term relationship among variables (Widarjono, 2018).

D. RESULTS AND DISCUSSION

Result

Stationarity Test

Stationary tests are very important in a time series data analysis. A data is declared time series if it has a constant mean, constant variance and constant auto variance for a given lag length or known as the concept of weak stationarity (Hakim, 2017). Stationarity testing is carried out using a root test (unit root test) with an Augmented Dickey Fuller (ADF) test. In the stationarity test, the data is tested first, whether the data is stationary at the degree in level, first difference or second difference. The first process, the data is tested at the degree in level. If the results are not stationary, the researcher conducts a data test with the first degree of

difference. However, if the results are not stationary at the first difference degree, then the researcher needs to conduct a data test using the second difference degree.

Table 3 Stationariness Test

Series	Prob.	Lag	Max Lag	Obs
D(KNTR)	0.0003	0	10	58
D(ATM)	0.0008	0	10	58
D(PBY)	0.0000	0	10	58
D(DPK)	0.0000	0	10	58
D(ROA)	0.0000	0	10	58

Source: Data Is Processed (2025)

In table 3 above, the probability value of each variable is greater than 0.05. Therefore, the decision to accept H0 was obtained with the conclusion that the data of all variables had stationarity to the mean.

Cointegration Test

Cointegration is defined when ωt is a $k \times 1$ ordered vector of some variable. The cointegration test can be used to see if the variables used in the study have a relationship between variables. This test can also be used to findout if the variables used have a long-term equilibrium relationship. The term cointegration is also known as error correction. It is said to be an error correction because if there is a deviation from the long-term balance, it will be corrected gradually through a gradual short-term partial adjustment.

Table 4 Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.459356	92.26756	88.80380	0.0275
At most 1	0.395508	56.59792	63.87610	0.1758
At most 2	0.268696	27.40262	42.91525	0.6576
At most 3	0.103888	9.252921	25.87211	0.9528
At most 4	0.048622	2.890912	12.51798	0.8892

Source: Data Is Processed

In table 4 above, the probability value at most 1 to at most 4 is greater than 0.05. Therefore, the decision to accept H0 was obtained with the conclusion that there is no cointegration relationship between variables. Therefore, data on the first difference can be used for analysis.

VAR Test

The VAR test is used to see if the data of the variable has an effect on other variables. A number or value in the sign () is a standard error, while a value in the sign () is a t-test value. The variable will have an effect if the t-test value is more than two (26). In this study, the author used five endogenous variables, so the VAR equation model can be written as follows.

$$\text{KNTR} = 0,0001 + 0,115 \text{ KNTR}(-1) - 0,110 \text{ ATM}(-1) - 0,148 \text{ PBY}(-1) + 0,102 \text{ DPK}(-1) + 0,090 \text{ ROA}(-1)$$

$$\text{ATM} = 0,004 + 0,165 \text{ KNTR}(-1) + 0,457 \text{ ATM}(-1) - 0,057 \text{ PBY}(-1) - 0,013 \text{ DPK}(-1) - 0,005 \text{ ROA}(-1)$$

Table 5 Lag Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	952.7049	NA	2.49e-21*	-33.25280*	-33.07359*	-33.18315*
1	967.3094	26.13434	3.60e-21	-32.88805	-31.81276	-32.47015
2	999.5216	51.99175*	2.85e-21	-33.14111	-31.16974	-32.37497

Source: Data Is Processed (2025)

In table 4 above, the smallest AIC value occurs at lag 1. Therefore, it is concluded that the optimal lag obtained is lag 1.

Based on the two models above, in model 1 the greatest influence was given by the KNTR(-1) variable or KNTR data in the previous year with an influence of 0.115. In model 2, the greatest influence was given by the variable ATM(-1) or ATM data in the previous year with an influence of 0.457.

Hakim (2017) dan Widarjono (2018) states that the t-test basically measures how effectively one independent variable explains variations in dependent variables. Following Widarjono (2018), the criteria for determining the t-test are as follows:

- H0 is rejected if the significance value of F is below 0.05. This shows that each independent variable has a significant influence on the dependent variable.
- H0 is accepted if the significance value of F is above 0.05. This shows that each independent variable does not have a significant influence on the dependent variable.

Table 6. VAR test

	D(KNTR)	D(ATM)	D(PBY)	D(DPK)	D(ROA)
D(KNTR(-1))	0.115660 (0.18887) [0.61237]	0.165777 (0.27668) [0.59916]	0.025104 (0.08615) [0.29139]	-0.007206 (0.16432) [-0.04385]	0.324375 (0.24698) [1.31334]
D(ATM(-1))	-0.110582 (0.08871) [-1.24659]	0.457264 (0.12995) [3.51880]	-0.040315 (0.04046) [-0.99636]	-0.044249 (0.07718) [-0.57335]	0.206331 (0.11600) [1.77869]
D(PBY(-1))	-0.148060 (0.30302) [-0.48862]	-0.057890 (0.44389) [-0.13041]	-0.038344 (0.13822) [-0.27742]	-0.214886 (0.26363) [-0.81511]	-0.041282 (0.39625) [-0.10418]
D(DPK(-1))	0.102104 (0.17374) [0.58767]	-0.013631 (0.25452) [-0.05356]	-0.126581 (0.07925) [-1.59725]	-0.066916 (0.15116) [-0.44269]	-0.358964 (0.22720) [-1.57993]
D(ROA(-1))	0.090702 (0.10277) [0.88253]	-0.005503 (0.15056) [-0.03655]	-0.002158 (0.04688) [-0.04603]	0.006323 (0.08941) [0.07071]	0.065461 (0.13440) [0.48708]
C	0.000194 (0.00188) [0.10357]	0.004273 (0.00275) [1.55481]	0.005144 (0.00086) [6.01179]	0.005644 (0.00163) [3.45815]	0.001457 (0.00245) [0.59406]

Source: Data Is Processed (2025)

Table 6 above presents the results of the variable significance tests as follows:

KNTR has a positive but insignificant effect on PBY.

ATM has a positive but insignificant effect on PBY.

KNTR has a positive but insignificant effect on DPK.

ATM has a positive but insignificant effect on DPK.

KNTR has a positive but insignificant effect on ROA.

ATM has a positive but insignificant effect on ROA.

The estimation results of the Vector Autoregression (VAR) model indicate that some variables have a significant effect on others at certain lags, while several other variables do not exhibit significant effects. This finding suggests that the relationships among the variables in the model are dynamic, meaning that changes

in one variable not only affect itself but also influence other variables with a time lag. A positive coefficient indicates a direct relationship, whereas a negative coefficient indicates an inverse relationship. Accordingly, the VAR estimation results confirm the existence of reciprocal relationships among variables in the short term and provide a foundation for further analysis using the Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) to examine the long-term responses and relative contributions of the variables within the model.

Discussion

The results of the Vector Autoregression (VAR) analysis reveal that all variables exert an influence on the financial performance of Islamic banking, although the effects are not statistically significant. This finding implies that financial inclusion potentially contributes to the enhancement of Islamic banks' financial performance; however, the magnitude of this impact remains limited. The absence of statistical significance further suggests that other determinants or structural components may also play a substantial role in shaping and improving the financial performance of Islamic banking institutions in Indonesia.

The network of Islamic banking branches in Indonesia remains considerably relevant to the financial needs of society (Fahrudin & Yulianti, 2015; Ouma et al., 2017; Pertiwi & Ritonga, 2012; Qodriyah, 2016). This relevance is particularly evident given that a significant proportion of the population still belongs to the baby boomer generation, which tends to prefer in-person banking interactions. Moreover, several banking services inherently require customers to visit physical branches, thereby reinforcing the continued importance of maintaining Islamic banking office networks. Among the services that necessitate branch-based operations are Safe Deposit Box (SDB) facilities, sharia-compliant pawn (rahn) services, and various financing products.

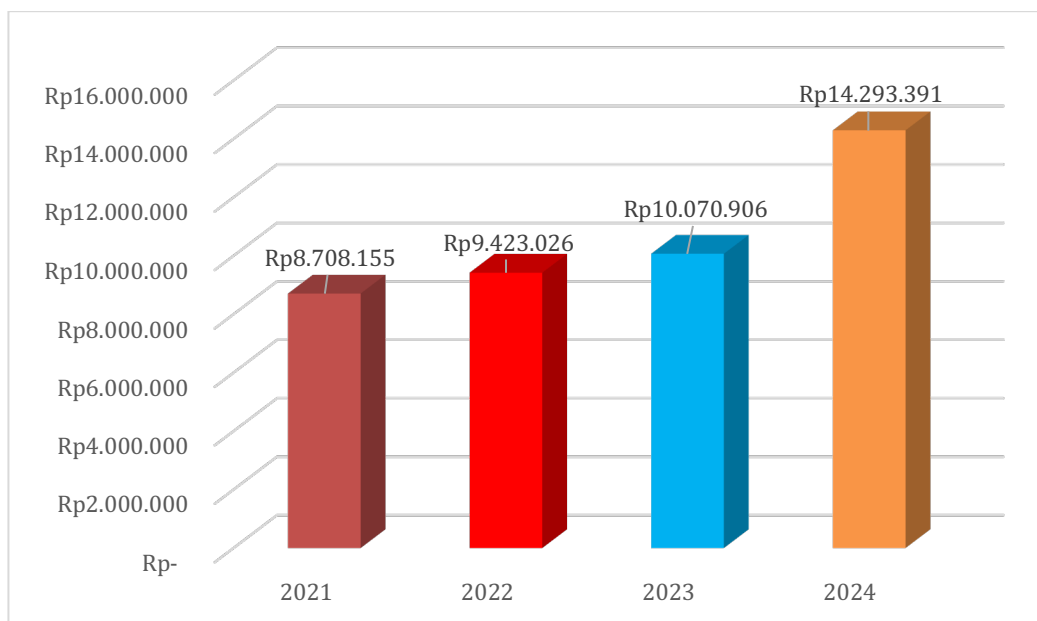
Ninglasari et al., (2023) assert that branch networks and the number of ATMs exert a significant short-term influence on the distribution of financing in Islamic banks; however, this relationship diminishes over the long term. The findings of their study lend empirical support to the results obtained in the present research. These outcomes suggest that, at the current stage, the presence of branch networks and ATMs remains essential within the Indonesian banking landscape. Nonetheless, in the foreseeable future, the relevance of these physical infrastructures is likely to decline. Consequently, Islamic banks must proactively prepare by investing in and developing information technology infrastructures that are more adaptive, efficient, and aligned with the evolving dynamics of the financial services industry.

Based on Islamic banking statistical data published by the Financial Services Authority (OJK) (Figure 1), the number of Islamic banking branch networks has exhibited a steady decline over both monthly and annual periods. In contrast, the number of Islamic banking ATMs has continued to expand, corresponding with the growing trend of non-cash transactions in Indonesia. These patterns align with the empirical findings of Ahyar et al. (2024), Ahyar & Hakim (2021), Ninglasari et al. (2023), who contend that the networks of ATMs and Islamic banking branches representing key dimensions of financial inclusion positively influence the short-term financing performance of Islamic banks. A similar trend is also observed in the performance of Third-Party Funds (DPK), where previous studies have confirmed that the presence of extensive ATM and branch networks enhances the capacity of Islamic banks to mobilize third-party funds effectively.

Referring to the studies conducted by Widyandri & Laila (2022) dan Zheng et al. (2023), it is explained that mobile banking has a significant influence on the financial performance of Islamic banks. It has also been observed that non-cash transactions have continued to grow steadily over the years (Figure 7). This trend serves as an important signal for Islamic banking institutions, indicating that society has increasingly adapted to cashless transactions, which have now become part of daily lifestyle practices. The development of non-cash transactions in Indonesia has also become more diverse, ranging from the use of electronic money to Quick Response (QR) payment systems.

Statistical data from Bank Indonesia reveal a consistent upward trend in non-cash transactions across Indonesia (Figure 7). In 2024, the total value of non-cash transactions reached IDR 14.29 trillion, and as of August 2025, the figure had already amounted to IDR 7.4 trillion (BI, 2025). This sustained growth illustrates a significant behavioral shift among Indonesian consumers toward cashless transaction practices. The increasing adoption of non-cash payments is largely driven by the rapid expansion and accessibility of digital payment channels, supported by continuous innovation in financial technology. The accelerating pace of technological advancement in the financial sector has reshaped consumer preferences, prompting individuals to favor digital transaction platforms over conventional banking methods. This transformation highlights a broader structural change in the financial ecosystem, indicating that Islamic banks must adapt strategically by enhancing their digital capabilities to remain competitive and relevant in an increasingly cashless economy.

Figure 7 Non-cash Transaction in Indonesia



Source: Bank Indonesia (2025)

The rapid expansion of digital-based businesses in Indonesia presents a significant opportunity for Islamic banks to enhance their level of financial inclusion by improving public accessibility to Islamic financial services. Given the extensive ecosystem of Islamic banking in Indonesia and its strong linkages with various institutions, Islamic banks should ideally position themselves as financial entities with a high degree of inclusiveness. Furthermore, Islamic social finance institutions such as zakat, infaq, sadaqah, and waqf (ZISWAF) organizations should be more effectively integrated into the Islamic banking system to create a more comprehensive and inclusive financial ecosystems (Fairuz et al., 2022).

E. CONCLUSION

Based on the research findings, financial inclusion has a short-term effect on the financial performance of Islamic banks. In the long term, however, financial inclusion does not have a significant impact on the performance of Islamic banking. In the short term, the ATM network of Islamic banks remains relevant for use. Nevertheless, in the long run, ATM machines may become obsolete as non-cash transaction models continue to develop in Indonesia.

REFERENCES

- Abadi, M. D., Purwanti, I., Hayat, A. A., Safitri, P. E., & Safitri, K. A. (2022). Financial Inclusion, Islamic Financial Literacy and Interest of Lamongan MSMEs to Use Islamic Bank Products. *At-Tijaroh: Jurnal Ilmu Manajemen Dan Bisnis Islam*, 8(2). <https://doi.org/10.24952/tijaroh.v8i2.5976>
- Ahyar, M. K., & Hakim, A. (2021). Affecting Financial Inclusion in Indonesia Through Third Deposit Funds of Islamic Banking. *Journal of Finance and Islamic Banking* |, 4(2).
- Ahyar, M. K., Kurniawan, C., & Efendi, D. R. (2024). Islamic Banking and Halal MSME Development: Financial Access and Inclusion. *Journal of Finance and Islamic Banking*, 7(2).
- Bharali, R. K., & Borman, R. (2017). Mobile Banking for Financial Inclusion: Adoption and Challenges. *Splint International Journal of Professionals*, 4(6), 75–80.
- Darmawan, A., Indahsari, N. D., Rejeki, S., Aris, M. R., & Yasin, R. (2019). Analisis Faktor-Faktor yang Mempengaruhi Minat Nasabah Menabung di Bank Jateng Syariah. *Jurnal Fokus Bisnis: Media Pengkajian Manajemen Dan Akuntansi*, 18(01), 43–52. <https://doi.org/10.1017/CBO9781107415324.004>
- Dz., A. S. (2018). Inklusi Keuangan Perbankan Syariah Berbasis Digital-Banking: Optimalisasi dan Tantangan. *Al-Amwal : Jurnal Ekonomi Dan Perbankan Syari'ah*, 10(1), 63–80. <https://doi.org/10.24235/amwal.v10i1.2813>
- Fahrudin, M. F., & Yulianti, E. (2015). Pengaruh promosi, lokasi, dan kualitas layanan terhadap keputusan pembelian nasabah Bank Mandiri Surabaya. *Journal of Business & Banking*, 5(1), 149–162. <https://doi.org/10.14414/jbb.v5i1.478>
- Fairuz, K., Nugraha, A. A., Yudiantyo, F. M., Sambodo, N. P., Choiriyah, E. A. N. matul, Pertiwi, U. W., & Sekaringsih, R. B. (2022). Do mosques use Islamic bank services? Evidence from Indonesia. *International Journal of Monetary Economics and Finance*, 15(3). <https://doi.org/10.1504/ijmef.2022.126892>
- Fuis Sukma Ayu, & Dian Filianti. (2022). Determinants of Financial Inclusion Information Disclosure of Islamic Rural Banks in Indonesia. *Jurnal Ekonomi Syariah Teori Dan Terapan*, 9(6). <https://doi.org/10.20473/vol9iss20226pp923-935>
- Hakim, A. (2017). *Pengantar Ekonometrika Time Series*. EKONISIA.
- Hasanah, M., & Istikomah, I. (2023). Digitalization Of Sharia Banking In Improving Financial Inclusion In Indonesia. *Proceeding International*

- Conference On Economics, Business And Information Technology (ICEBIT)*, 4, 892–895. <https://doi.org/10.31967/prmandala.v4i0.848>
- Mujiatun, S., Trianto, B., Cahyono, E. F., & Rahmayati. (2023). The Impact of Marketing Communication and Islamic Financial Literacy on Islamic Financial Inclusion and MSMEs Performance: Evidence from Halal Tourism in Indonesia. *Sustainability (Switzerland)*, 15(13). <https://doi.org/10.3390/su15139868>
- Nengsih, N. (2015). Peran Perbankan Syariah Dalam Mengimplementasikan Keuangan Inklusif di Indonesia. *ETIKONOMI*, 14(2), 221–240. <https://doi.org/10.15408/etk.v14i2.2272>
- Ninglasari, S. Y., Sulaeman, S., Supriani, I., & Himmawan, M. F. (2023). Nexus between financial inclusion and Islamic financing distribution: Evidence from Indonesian MSMEs. *Jurnal Ekonomi & Keuangan Islam*. <https://doi.org/10.20885/jeki.vol9.iss2.art2>
- Ouma, S. A., Odongo, T. M., & Were, M. (2017). Mobile financial services and financial inclusion: Is it a boon for savings mobilization? *Review of Development Finance*, 7, 29–35. <https://doi.org/10.1016/j.rdf.2017.01.001>
- Pertiwi, D., & Ritonga, H. D. (2012). Analisis Minat Menabung Masyarakat Pada Bank Muamalat Di Kota Kisaran. *Ekonomi Dan Keuangan*, 1(1), 61–69.
- Qodriyah, I. L. (2016). Faktor-Faktor Yang Mempengaruhi Minat Nasabah Untuk Menabung Di Bank Muamalat Cabang Madiun. *7th Forum Ilmiah Pendidikan Akuntansi (FIPA)*, 1–13.
- Rifa'i, A. (2017). Peran Bank Pembiayaan Rakyat Syariah dalam Mengimplementasikan Keuangan Inklusif Melalui Pembiayaan UMKM. *IKONOMIKA*, 4(2), 192–217. <https://doi.org/10.24042/febi.v2i2.1639>
- Ristianawati, Y., & Hartono, S. B. (2022). Determinasi Tantangan FI, Manfaat FI, dan Realisasi FI Pada Strategi Agility Diversifikasi Investasi. *Jurnal Ilmiah Ekonomi Islam*, 8(1). <https://doi.org/10.29040/jiei.v8i1.4676>
- S, D. L. B., & Balaji, L. (2022). Mobile Banking as a Tool for Financial Inclusion. *Saudi Journal of Business and Management Studies*, 7(9). <https://doi.org/10.36348/sjbms.2022.v07i09.006>
- Saifurrahman, A., & Kassim, S. (2022). Collateral imposition and financial inclusion: a case study among Islamic banks and MSMEs in Indonesia. *Islamic Economic Studies*, 30(1). <https://doi.org/10.1108/ies-04-2022-0023>
- Soetiono, K. S., & Setiawan, C. (2018). *Literasi dan Inklusi Keuangan Indonesia*. Rajawali Pers.

- Tikku, S. R., & Singh, A. K. (2023). Role of mobile banking in financial inclusion: evidence from agri traders of India. *International Journal of Electronic Finance*, 12(1). <https://doi.org/10.1504/IJEF.2023.10049280>
- Wahid, N. (2014). *Keuangan Inklusif: Membongkar Hegemoni Keuangan*. Kepustakaan Populer Gramedia.
- Widarjono, A. (2018). *Ekonometrika Pengantar dan Aplikasinya Disertai Panduan EViews* (Kelima). UPP STIM YKPN.
- Widyandri, D. B., & Laila, N. (2022). Analisis Pengaruh Mobile Banking Dan Keuangan Inklusif Terhadap Kinerja Keuangan Bank Syariah Di Indonesia Periode 2014-2019. *Jurnal Ekonomi Syariah Teori Dan Terapan*, 9(1). <https://doi.org/10.20473/vol9iss20221pp14-24>
- Zhang, N., Wang, Q., & Jin, C. (2025). The Impact of Self-Service Technology on User Satisfaction: A Study of Mobile Banking Apps. *International Journal of Internet Manufacturing and Services*, 11(1). <https://doi.org/10.1504/ijims.2025.10062401>
- Zheng, C., Rahman, M. A., Hossain, S., & Moudud-Ul-Huq, S. (2023). Does Fintech-Driven Inclusive Finance Induce Bank Profitability? Empirical Evidence from Developing Countries. *Journal of Risk and Financial Management*, 16(10). <https://doi.org/10.3390/jrfm16100457>
- Statistik Perbankan Syariah OJK 2020-2024. www.ojk.go.id
- Statistik Sistem Pembayaran dan Infrastruktur Pasar Keuangan (SPIP) 2021-2024. www.bi.go.id
- POJK Nomor 76 Tahun 2016 tentang Peningkatan Literasi dan Inklusi Keuangan di Sektor Jasa Keuangan Bagi Konsumen dan/atau Masyarakat
- Undang-Undang Nomor 4 Tahun 2023 tentang Penguatan dan Pengembangan Sektor Keuangan (P2SK).