



The Effect of Internal and External Factors on the Proportion of MSME Sector Financing in Sharia Business Units in Indonesia

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This paper aims to analyze the response of the proportion of MSME financing in Sharia Business Units in Indonesia to internal and external factor shocks. Additionally, it seeks to determine the contribution of each factor to the diversity of MSME financing proportions. This study employs the Vector Error Correction Model (VECM). The Covid-19 pandemic is included as an exogenous dummy variable. The analysis uses monthly data from January 2019 to December 2024, sourced from the Sharia Banking Statistics published by the Financial Services Authority (OJK). The study found that Third Party Funds, Operational Expenses to Operational Income, and the BI rate have a positive impact on MSME financing proportions in UUS. Conversely, Non Performing Financing (NPF), Return on Assets (ROA), Gross Domestic Product (GDP), Bank Indonesia Sharia Certificate (SBIS) exhibit a negative impact. The MSME financing proportion itself is the most dominant factor in financing variability, followed by NPF, BOPO, GDP, BI rate, SBIS, ROA, and DPK. This finding represents the supply side, referring to banks as financing providers. To obtain a more comprehensive perspective, further analysis is needed from the demand side by considering the characteristics of MSMEs as financing recipients. This area of research remains relatively underexplored, which is mandated to allocate at least 30% of its financing to the MSME sector, although actual disbursement remains around 10%.

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INTRODUCTION

The Micro, Small, and Medium Enterprises (MSME) sector has a strategic role in strengthening the national economy, improving societal welfare, and supporting sustainable growth (Hapsari et al., 2024). The legal foundation for MSMEs in Indonesia is stipulated in the Law of the Republic of Indonesia Number 20 of 2008 (UU, 2008a). According to data from the Ministry of Cooperatives and MSMEs as of December 2024, the number of MSMEs in Indonesia stood at 65.5 million units, slightly declining from 66 million units in 2023, though still marking the highest level since 2018. MSMEs also play a critical role in employment, accounting for approximately 97% of the national labor force (Permata, 2025). In the BRI Microfinance Outlook 2024 forum, Minister of Finance Sri Mulyani stated that MSMEs contribute around 61% to Indonesia's total GDP—a proportion higher than in other ASEAN countries and several G20 members (Andrianto, 2024).

The significant role of MSMEs in the national economy positions them as a potential market for financial institutions, including Islamic banking, in channeling financing (Purwanto, 2019). Islamic banks are considered beneficial for various stakeholders and offer several advantages over conventional banks. One of the key advantages lies in the profit-and-loss sharing mechanism, which replaces the interest-based system and thereby eliminates the burden of continuous interest payments (Jaya et al., 2015). Unlike fully independent Sharia Commercial Banks (BUS), Sharia Business Units (UUS) are defined in Article 1 of Law No. 21 of 2008 as divisions operating under the headquarters of conventional commercial banks that conduct their activities by Sharia principles (UU, 2008b). The purpose of integrating UUS within conventional banks is to provide more accessible Islamic microfinance services tailored to the needs of society. As a microfinance-based institution, UUS is expected to be more flexible and widely accepted by the public, ultimately contributing to the strengthening of the microeconomic sector (Santoso & Ahmad, 2016).

The performance of Sharia Business Units (UUS) from 2019 to 2024 showed consistent and positive growth. This progress is reflected in the stable increase in third-party fund (DPK) mobilization and the steady annual rise in financing disbursement. For instance, in 2024, UUS collected IDR 225.38 trillion in DPK and disbursed a total financing of IDR 211.31 trillion (OJK, 2025). The simultaneous growth in DPK and total financing indicates that UUS effectively

fulfilled its intermediation function. This effectiveness is further reflected in the Financing to Deposit Ratio (FDR), which has consistently been higher for UUS than for Islamic Commercial Banks (BUS). According to the Financial Services Authority (OJK, 2025), over the past six years, UUS recorded an average FDR of 95.84%, surpassing the BUS average of 76.58%. A high FDR illustrates a bank's ability to optimally channel collected funds into financing, thereby indicating strong intermediation performance (Munandar, 2022).

Banks, as financial institutions with an intermediation function, play a critical role in supporting the MSME sector, particularly in providing access to capital to enhance productivity and establish MSMEs as a cornerstone of the national economy (Aryanti et al., 2022). In accordance with Bank Indonesia Regulation No. 3/2/PBI/2001, both conventional and Islamic banks are mandated to prioritize financing for MSMEs and actively promote access to financial services (PBI, 2001). One of the regulatory frameworks supporting this objective is Bank Indonesia Regulation No. 23/13/PBI/2021 on the Macroprudential Inclusive Financing Ratio, which applies to Conventional Commercial Banks, Sharia Commercial Banks, and Sharia Business Units. This regulation requires banks to allocate at least 30% of their total financing portfolio to the MSME sector, which is in line with prevailing policies (PBI, 2021).

In terms of proportion, there is a considerable disparity between the financing allocated to the MSME sector and the non-MSME sector. Although the share of MSME financing in Sharia Business Units (UUS) has shown a gradual increase, it remains significantly lower compared to that of non-MSME financing. In 2020, the proportion of MSME financing experienced a sharp decline, reaching only 8.89%, with the six-year average standing at 10.18%. In contrast, financing in the non-MSME sector maintained a much higher average of 35.49%. This disparity is illustrated more clearly in Figure 1.

The significant disparity indicates that the share of financing allocated to the MSME sector by Sharia Business Units (UUS) remains suboptimal or relatively small. Meanwhile, the availability of financing from Islamic banks plays a crucial role in supporting MSME development (Sunaryono, 2024). The fluctuation in the MSME financing ratio within UUS reflects the influence of both internal and external policy factors in shaping the volume of financing disbursed to this sector. Accordingly, this study aims to further examine the determinants of the proportion of MSME financing in

UUS in Indonesia during the 2019–2024 period, given the limited number of studies specifically focused on Sharia Business Units.

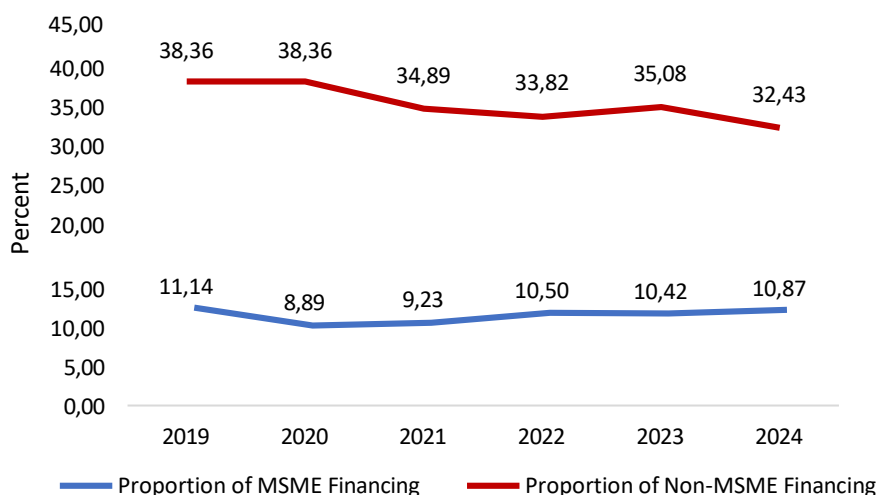


Figure 1. The Proportion of MSME and non-MSME financing in Sharia Business Units (UUS) from 2019 to 2024 (OJK, 2025)

This study is expected to assist Islamic banks, particularly Sharia Business Units (UUS), in identifying and quantifying the contribution of each influencing factor, as well as formulating more effective strategies to enhance the role of UUS in channeling financing to the MSME sector. This effort also aligns with the core objective of UUS, which is to provide inclusive Sharia-compliant microfinance services tailored to the needs of the community.

LITERATURE REVIEW

This literature review discusses the theoretical framework underlying the relationship between internal and external factors and the proportion of financing allocated to the MSME sector, as well as examines previous studies relevant to the focus of this research.

The first theoretical foundation employed in this study is the theory of financial intermediation, which emphasizes one of the core functions of banking institutions as fundamental drivers of national economic growth (Gurley and Shaw, 1956). According to Law No. 7 of 1992, amended by Law No. 10 of 1998, banks serve as intermediaries by channeling third-party funds (savings, demand deposits, and time deposits) from customers to the business sector to support economic activity and improve societal welfare (UU, 1998). In Islamic banking, financing distribution serves as a primary function for generating income. A high level of intermediation reflects the bank's efficiency and optimal performance (Bongomin et al., 2019). Kassim (2016)

further confirms that Islamic banks' intermediation activities positively contribute to long-term growth in the real sector.

The second theoretical framework adopted in this study is Keynes's liquidity preference theory. Keynes emphasizes the interconnection between the monetary and real sectors through the monetary transmission mechanism. In macroeconomic analysis, economic activity is generally divided into two primary sectors: the monetary sector and the real sector. The monetary sector includes all activities related to money circulation, interest rates, liquidity, and overall monetary policy, whereas the real sector comprises activities that directly produce goods and services, such as production, trade, and investment. Within this framework, the supply and demand for money determine the prevailing interest rate. This interaction is closely linked to the role of banks as financial intermediaries, collecting public funds through instruments such as savings and time deposits and channeling them into productive sectors in the form of credit or financing (Soemitra, 2020).

In line with the intermediation theory, Islamic banks perform the function of fund mobilization through deposit-based products, which are subsequently distributed as financing based on Sharia-compliant contracts. Therefore, the bank's ability to attract third-party funds (DPK) is a critical factor that determines its capacity to channel financing effectively and optimally. An increase in the volume of DPK received by the bank directly supports the expansion of financing activities (Selian & Lutfi, 2024). This is supported by the findings

of [Khadafi et al. \(2022\)](#), which demonstrate that third-party funds (DPK) have a positive contribution to the growth of financing allocated to the MSME sector.

[Lestari and Rani \(2022\)](#) argue that a high level of Non Performing Financing (NPF) indicates poor financing quality and low asset performance. Referring to the intermediation theory, such a condition may weaken the intermediation function of Islamic banks, as heightened risk aversion may lead banks to adopt a more cautious stance in extending financing, ultimately constraining overall financing activities ([Ainiyah & Sriyana, 2024](#)). This is consistent with the findings of [Rohmatunnisa and Pratiwi \(2020\)](#), who confirm that a high NPF level negatively affects the capacity of banks to provide working capital financing.

The distribution of Return on Assets (ROA) in the previous year can serve as a reference for a bank's lending decisions. An increase in ROA indicates asset stability and improved profit management, which may enable the bank to extend more credit in the following year ([Mahsunah, 2023](#)). According to the intermediation theory, when the bank's function as an intermediary between savers and borrowers operates efficiently, it creates opportunities for revenue generation through profit-sharing mechanisms. This revenue contributes to higher ROA, which can subsequently support the expansion of financing activities in the future. Supporting this view, [Hayat \(2018\)](#) found that ROA is positively correlated with the volume of financing distributed to the MSME sector.

A lower BOPO (Operating Expenses to Operating Income) ratio indicates greater efficiency in a bank's operational performance. In the context of financial intermediation theory, operational cost efficiency reflects the managerial capability of Islamic banks in optimally allocating operating income to support all business activities. The more efficiently these costs are managed, the greater the bank's capacity to expand financing, including to the MSME sector. This aligns with the findings of [Sudarsono \(2017\)](#), who concluded that the BOPO ratio has a negative effect on financing distribution.

According to [Sahara \(2013\)](#), an increase in the BI rate has the potential to reduce the volume of third-party funds (DPK) collected by Islamic banks. Based on liquidity preference theory, higher interest rates encourage depositors to shift their funds to conventional banks in pursuit of higher returns resulting from the rise in the BI rate. This reduction in DPK subsequently limits the capacity of Islamic banks to extend financing to customers. Supporting this view,

[Ichwani and Dewi \(2018\)](#) found that the BI rate has a significantly negative impact on Islamic bank financing, including financing directed to the MSME sector.

In the context of liquidity preference theory, Keynes explains that saving behavior is influenced by income and consumption levels. As income increases, individuals tend to raise their savings and/or consumption. If consumption remains constant, savings will increase proportionally. One of the primary indicators of rising public income is Gross Domestic Product (GDP), which reflects the overall level of economic activity in a country. GDP growth is typically associated with an increase in national income, encouraging individuals to save more. This accumulation of savings enhances banking sector liquidity, thereby expanding the capacity of banks to provide financing ([Hamid & Isbanah, 2019](#)).

In the context of liquidity preference theory, the Bank Indonesia Sharia Certificate (SBIS) serves a strategic role as a key instrument for liquidity management within the Sharia-compliant financial system. When SBIS is issued by Bank Indonesia—particularly with relatively high bonus returns—Islamic banks tend to reallocate their funds toward these instruments rather than channel them into real sector financing. This is partly because the process of extending financing to the real sector often requires more time and involves greater operational complexity. Consequently, placing funds in SBIS offers a safer and more flexible alternative, despite offering only a bonus rather than interest. As a result, Islamic banks may reduce their financing allocation to the real sector ([Fitriani, 2017](#)).

RESEARCH METHODOLOGY

Type and Source of Data

This study utilizes monthly secondary data covering the period from January 2019 to December 2024, representing all Sharia Business Units (UUS) in Indonesia. The data sources include the Financial Services Authority (OJK), Bank Indonesia (BI), Statistics Indonesia (BPS), and the World Health Organization (WHO). The data are presented in a time series format, which consists of systematically organized observations collected at specific time intervals. The variables analyzed in this study are derived from a review of the literature, including academic journals, previous research, and other relevant scholarly sources related to the research topic.

Data Processing and Analysis Method

This study employs a combination of qualitative and quantitative analysis methods. The qualitative analysis uses a descriptive approach, while the quantitative analysis is conducted using the Vector Autoregressive/Vector Error Correction Model (VAR/VECM). The VAR/VECM approach is applied to identify the influence of independent variables on the dependent variable—namely, the proportion of MSME financing—both in the short run and the long run. This method also enables the evaluation of the dynamic response of the dependent variable to shocks in each independent variable and assesses the relative contribution of each variable in explaining variations in the main variable. When all data series are stationary at level, the VAR model is appropriate. However, if the data are non-stationary at the level but cointegrated, the VECM model is more suitable as it captures long-term equilibrium relationships among the variables.

Vector Autoregressive (VAR) Method

The Vector Autoregressive (VAR) model is used to forecast data involving two or more interrelated variables with reciprocal relationships. The VAR model was first introduced by Christopher Sims in 1980 (Jimoh, 2023). One of the main advantages of using VAR lies in its simplicity. All variables in the model are treated as endogenous, eliminating the need for researchers to distinguish between endogenous and exogenous variables. Moreover, the estimation process is relatively straightforward, as it utilizes the Ordinary Least Squares (OLS) approach, allowing researchers to construct separate equations for each endogenous variable (Nasir et al., 2016).

Vector Error Correction Model (VECM) Method

The Vector Error Correction Model (VECM) is an extension of the Vector Autoregressive (VAR) model specifically designed to analyze non-stationary time series data that exhibit cointegration. Simply put, VECM can be viewed as a restricted form of VAR that captures long-term equilibrium relationships among variables (Gujarati, 2021). VECM is employed to estimate the interrelationships between one time series variable and others, accounting for both short-run dynamics and long-run equilibrium. Engle and Granger introduced VECM as a method to correct short-run deviations and guide the variables back toward their long-run equilibrium path (Nasir et al., 2016). In general, a VECM

model with lag length $p - 1$ can be formulated as follows (Gujarati, 2021).

$$\Delta yt = aet-1 + \beta_1 \Delta yt-1 + \beta_2 \Delta yt-2 + \dots + \beta_p \Delta yt-p+1 + \varepsilon t$$

where:

Δyt = vector of the first differences of the dependent variables

$\Delta yt-1$ = vector of the first differences of the dependent variables at lag 1

$\varepsilon t-1$ = the error term obtained from the regression equation between Y and X at lag 1, also known as the Error Correction Term (ECT)

εt = vector of residuals

a = cointegration coefficient matrix

βt = coefficient matrix of the lagged dependent variables, where $i = 1, 2, \dots, p$

FINDINGS AND DISCUSSION

Results of the Stationarity Test

The stationarity test in this study was conducted using the Augmented Dickey-Fuller (ADF) method. This test aims to determine whether a given time series variable is stationary. The probability values for all variables in this study range from 0.0000 to a maximum of 0.0040, which are below the 5% significance level (0.05) at the first difference level. Therefore, it can be concluded that all variables have achieved stationarity at the first difference level.

Optimal Lag Selection Results

The purpose of optimal lag selection is to determine the most appropriate time interval for observing the response of one variable to changes in another, thereby ensuring that the analysis accurately captures the dynamic relationships among variables. The optimal lag for this study is at lag 1, as indicated by the lowest values of the AIC, SC, and HQ criteria, which are -9.330011, -6.739743, and -8.302365, respectively. Therefore, lag 1 is selected as the optimal lag for the model.

VAR Stability Test Results

The VAR model stability test is essential for ensuring the validity of the results obtained from the Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) analyses. The model can be considered stable at lag 1, as the values of the roots of the characteristic polynomial are below 1, ranging from 0.981690 to 0.342309. Therefore, the VAR

model used meets the stability requirement, making the results of the IRF and FEVD analyses valid.

Cointegration Test Results

This study applies the Johansen Cointegration Test to examine whether two or more non-stationary time series variables exhibit a stable long-run relationship. If the test results indicate the presence of cointegration within the model, the subsequent analysis is conducted using the VECM approach. Cointegration is determined by comparing the trace statistic with the critical value at the 5% significance level. The results of the cointegration test show that the trace statistic values in this study are greater than the critical values at the 5% significance level, namely 211.4122 and $140.2982 > 159.5297$ and 125.6154 , indicating the presence of cointegration in the model. This implies that the VECM estimation can be applied in this study to analyze the long-term relationships among the variables.

VECM Estimation Results

The next step involves estimating the model using the Vector Error Correction Model (VECM) to assess the impact of the independent variables on the dependent variable in both the short-run and long-run perspectives. The significance of each variable is determined by comparing the t-statistic value with the critical t-table value. In this study, the t-table value used is 1.99. If the t-statistic exceeds the t-table value, the variable is considered statistically significant at the 5% level.

The VECM estimation results in this study indicate the presence of an adjustment process from the short run to long-run equilibrium, as represented by the Error Correction Term (ECT), denoted as *CointEq1*. The model estimation shows that *CointEq1* has a significantly negative effect with a coefficient value of -0.210028 . This result reflects that the independent variables contribute substantially to the changes in the dependent variable. The coefficient implies that the model adjusts toward equilibrium at a rate of 21% per month.

In addition, the Covid-19 pandemic dummy variable, which is classified as an exogenous variable in this study, is also found to have a significant short-run effect, indicating a difference in the proportion of MSME financing disbursed by UUS during the pandemic compared to the non-pandemic period. This is evidenced by a coefficient value of -0.462510 , suggesting that the proportion of MSME financing

decreased each month throughout the pandemic period. The Covid-19 pandemic triggered a widespread economic crisis affecting both national and global economies. One of the most significantly affected sectors was MSMEs, which faced pressure due to declining demand and limited access to financing. In response, the government launched the National Economic Recovery (PEN) Program to support the survival of MSMEs by expanding their access to financing (Kemenkeu, 2021).

Impulse Response Function (IRF) Analysis

The Impulse Response Function (IRF) analysis is employed to observe the response of the proportion of MSME financing in Sharia Business Units (UUS) to shocks originating from independent variables. These include internal factors such as DPK, NPF, ROA, and BOPO, as well as external factors such as the BI rate, GDP, and SBIS, over a 72-month observation period. In the VECM framework, the Cholesky Decomposition approach is used to identify the response patterns. The results and discussion of the IRF analysis are presented in Figure 2.

Third-Party Funds (DPK)

The IRF analysis reveals that a one standard deviation shock to DPK does not have an immediate effect on the proportion of MSME financing in the first month. However, in the second month, the shock begins to generate a positive response, with the proportion of MSME financing increasing by 0.101126% , which also marks the peak response. In the third month, the response declines to 0.054545% , followed by a continued decrease in the fourth month and onward through the 27th month. Long-run equilibrium begins to emerge from the 28th month until the end of the observation period, with the response stabilizing at around 0.016709% .

The consistently positive response to DPK shocks indicates that an increase in third-party funds encourages a higher proportion of MSME financing. In addition to reflecting the bank's performance in mobilizing public funds, DPK plays a crucial role in supporting Sharia Business Units (UUS) in financing activities. The greater the amount of DPK collected, the higher the bank's liquidity, thereby enhancing its capacity to extend financing. This view aligns with the findings of Khadafi et al. (2022) and Utami (2018), who state that DPK contributes positively to the growth of MSME financing.

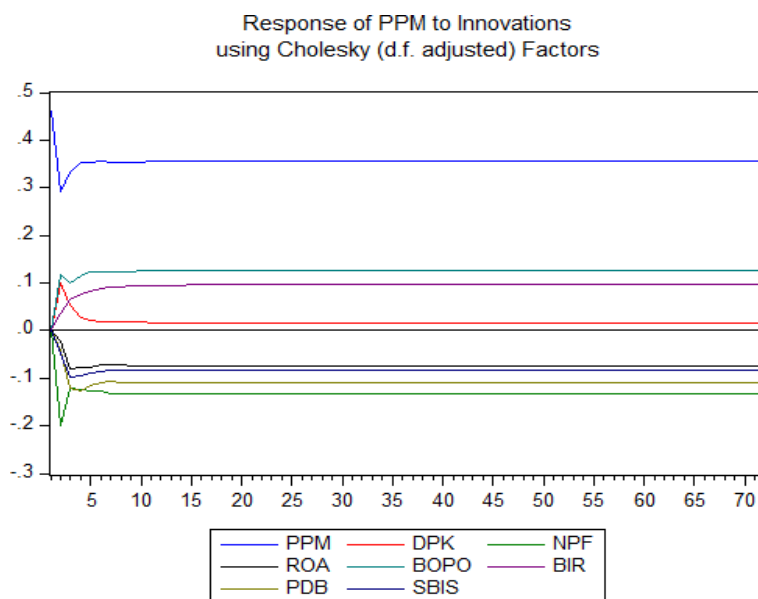


Figure 2. Results of IRF Analysis

Non Performing Financing (NPF)

The IRF analysis indicates that a one standard deviation shock to NPF does not immediately affect the proportion of MSME financing in the first month. However, by the second month, the shock elicits a negative response, with MSME financing decreasing by -0.199128%, marking the peak impact. In the third month, the negative response softens to -0.122171%, before slightly increasing again from the fourth to the twenty-fourth month. Long-run equilibrium begins to stabilize from the twenty-fifth month onward, with the response remaining steady around -0.133218%.

The consistently negative response to NPF shocks suggests an inverse relationship between NPF and the proportion of MSME financing. This indicates that as non performing financing increases, the perceived credit risk rises, prompting Sharia Business Units (UUS) to adopt a more cautious and selective approach in extending credit—particularly to the MSME sector, which generally carries a higher risk profile compared to other sectors. These findings align with the view of Sumarlin (2016), who stated that lower NPF levels reflect better financing management and more effective risk control within financial institutions. This perspective is also supported by empirical evidence from Rohmatunnisa and Pratiwi (2020)

Return on Assets (ROA)

The IRF analysis reveals that a one standard deviation shock to ROA does not have an immediate effect on the proportion of MSME financing in the first month. However, in the second month, the shock

triggers a negative response, with MSME financing decreasing by -0.023625%. In the third month, the negative response intensifies to -0.080098%, which represents the peak impact. This is followed by a gradual decline in the response until the 29th month. Long-run equilibrium begins to stabilize from the 30th month onward, with the response remaining steady at around -0.074013%.

The consistently negative response to ROA shocks indicates that an increase in ROA does not necessarily lead to a higher proportion of MSME financing. This inverse relationship suggests that when Islamic banks prioritize high ROA performance, their business strategies tend to favor consumer financing or highly collateralized loans, which are operationally more efficient and perceived to be less risky. In contrast, MSME financing—which typically involves higher operational costs and greater credit risk—tends to be reduced, as it may compress profit margins and negatively impact overall ROA. These findings are consistent with the study by Destiana (2016), which found that ROA does not have a significant positive effect on MSME financing in Islamic banks in Indonesia.

Operating Expenses to Operating Income (BOPO)

The IRF analysis shows that a one standard deviation shock to BOPO does not have an immediate effect on the proportion of MSME financing in the first month. However, in the second month, the shock generated a positive response, with MSME financing increasing by 0.118805%, which also represents the peak response. In the third month, the response declines

slightly to 0.099266%, before rising again in the fourth month and continuing upward until the 25th month. Long-run equilibrium begins to stabilize from the 26th month onward, with the response remaining stable at around 0.125463%.

The consistently positive response to BOPO shocks suggests that higher BOPO levels can lead to an increase in MSME financing by Sharia Business Units (UUS), while lower BOPO levels may reduce such financing. This pattern reflects the nature of MSME financing, which generally requires more intensive monitoring, higher transaction costs, and greater investment in human resources and infrastructure—especially due to the geographically dispersed and diverse profiles of MSME borrowers. This finding aligns with the Financial Services Authority (OJK, 2020), which notes that MSME financing demands higher operational support compared to non-MSME financing. The results are further supported by Nuriyah et al. (2018), who found a positive relationship between BOPO and the disbursement of productive financing to small and medium enterprises.

BI Rate

The IRF analysis reveals that a one standard deviation shock to the BI rate does not immediately affect the proportion of MSME financing in the first month. However, in the second month, the shock elicits a positive response, with MSME financing increasing by 0.037353%. The response continues to rise in the third month to 0.063984%, followed by a sustained upward trend until the 26th month. Long-run equilibrium begins to stabilize from the 27th month onward, with the response remaining stable at approximately 0.095807%.

The consistently positive response to BI rate shocks suggests that an increase in the BI rate is associated with a higher proportion of MSME financing. This finding can be interpreted through the lens of Keynesian liquidity preference theory, as explained in the study by Ambalau et al. (2019). According to this theory, interest rates are determined by the interaction between money supply and demand in the money market. When Bank Indonesia raises its policy rate (i.e., the BI 7-Day Reverse Repo Rate), borrowing costs theoretically increase. However, in practice, credit demand may not decline significantly, especially when the need for funds among households and businesses remains high. This interpretation is supported by the findings of Sari et al. (2021), which show a positive correlation between increases in the BI rate and MSME financing in Islamic banks.

Gross Domestic Product (GDP)

The IRF analysis shows that a one standard deviation shock to GDP does not immediately affect the proportion of MSME financing in the first month. However, in the second month, the shock triggers a negative response, with MSME financing decreasing by -0.043086%. By the fourth month, the negative response intensifies and reaches its peak at -0.127820%. The response then gradually declines from the fifth to the twenty-first month. Long-run equilibrium begins to stabilize from the twenty-second month onward, with the response remaining steady at approximately -0.108676%.

The consistently negative response to GDP shocks suggests that an increase in GDP leads to a decline in the proportion of financing allocated to the MSME sector. This phenomenon aligns with Dinger (2009), who found that in developing countries, rising GDP often coincides with heightened market activity and increased money circulation, surpassing the amount of funds deposited in banks. GDP, as reflected in per capita income, serves as an indicator of how people allocate their income to meet primary and secondary needs according to their consumption patterns. Increased household consumption encourages Sharia Business Units (UUS) to shift their financing priorities toward consumer-oriented sectors rather than productive sectors such as MSMEs. This finding points to a structural imbalance in financing orientation, where consumer financing receives a disproportionately larger share than sectors that directly drive real economic activity. This interpretation is supported by the findings of Ramadhanty and Auwalin (2021).

Bank Indonesia Sharia Certificate (SBIS)

The IRF analysis shows that a one standard deviation shock to SBIS does not immediately impact the proportion of MSME financing in the first month. However, in the second month, the shock elicits a negative response, with MSME financing decreasing by -0.048157%. In the third month, the negative response intensifies, reaching its peak at -0.097745%. The response then gradually declines from the fourth month through the twenty-fifth month. Long-run equilibrium begins to stabilize from the twenty-sixth month onward, with the response remaining steady at approximately -0.084298%.

The consistently negative response to SBIS shocks suggests that an increase in SBIS tends to reduce financing allocated to the MSME sector. This tendency can be attributed to the characteristics of SBIS as a

Sharia-compliant monetary instrument that is liquid and relatively low-risk. These findings are consistent with studies by Rasyid (2018) and Kuntari (2022), which show a negative relationship between SBIS volume and Islamic financing disbursement. As a component of Bank Indonesia’s monetary policy framework, SBIS is designed to serve as a transmission instrument for Sharia-based monetary policy. In this context, SBIS should function not only as a short-term liquidity placement tool but also as a liquidity management instrument that supports the real sector through banking-financed activities. Research by Ramadhan and Beik (2013) also indicates that the influence of SBIS on MSME financing is greater than that of the conventional Bank Indonesia Certificates (SBI) within conventional banks.

Forecast Error Variance Decomposition (FEVD) Analysis Results

The FEVD analysis is used to identify the extent to which internal and external factors contribute to MSME financing. This analysis examines the dynamic contributions of variables such as DPK, NPF, ROA, BOPO, BI rate, GDP, and SBIS in explaining variations in MSME financing by Sharia Business Units (UUS) in Indonesia. FEVD is a component of the VAR model that estimates the percentage contribution of each variable in explaining the system’s variability in response to a shock in a particular variable. This analysis provides insight into the relative importance of each variable in the VAR system when shocks occur (Juanda & Junaidi, 2012). The results and discussion of the FEVD analysis are presented in Figure 3 below.

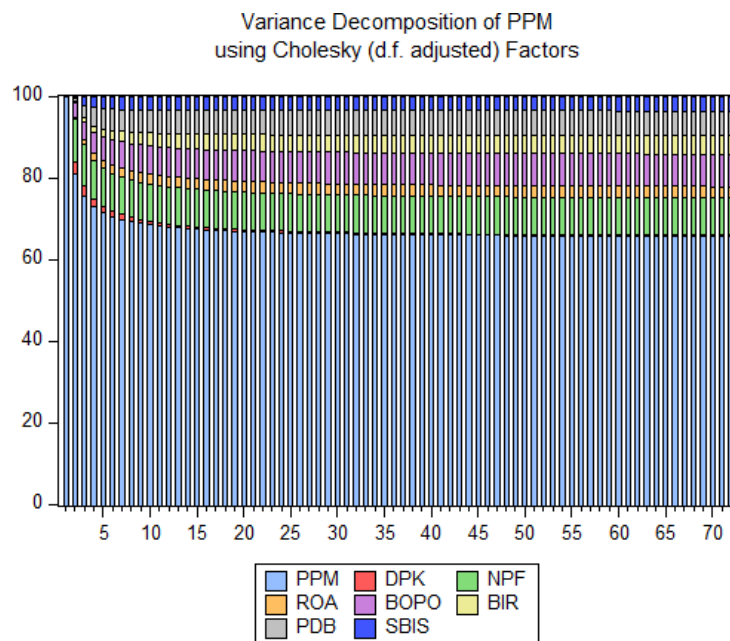


Figure 3. Results of FEVD Analysis

Figure 3 shows that in the first month, the variability in the proportion of MSME financing is entirely (100%) explained by its own past values. However, by the second month, its contribution declines to 80.9838%, and further decreases to 75.51066% in the third month. This downward trend continues until the end of the observation period, whereby the 72nd month, the contribution of MSME financing to its own variation drops to 65.58864%. This decline occurs as the influence of other variables—both internal and external—begins to play a more significant role starting from the second period.

Overall, the FEVD analysis demonstrates that each variable contributes dynamically to the variability of MSME financing. In the early stages, the most

dominant influence on the financing proportion in UUS comes from the variable itself. However, over time, this influence diminishes and is gradually replaced by the increasing contribution of other variables. Among them, NPF emerges as the second-largest contributor after MSME financing itself, although its influence tends to decline over time. In contrast, DPK shows the smallest contribution, and its influence continues to weaken throughout the observation period. On the other hand, the variables with the third to seventh-largest contributions, in descending order, are BOPO, GDP, BI rate, SBIS, and ROA. The contributions of these variables to the variability in MSME financing tend to increase over time.

CONCLUSION

The results of this study indicate that the proportion of MSME financing by Sharia Business Units (UUS) is influenced by various internal and external variables, each demonstrating different response patterns. Based on the Impulse Response Function (IRF) analysis, shocks to the MSME financing proportion itself, Third-Party Funds (DPK), BOPO, and the BI rate generate a positive response in MSME financing. Conversely, shocks to Non Performing Financing (NPF), Return on Assets (ROA), Gross Domestic Product (GDP), and the Bank Indonesia Sharia Certificate (SBIS) result in a negative response.

Furthermore, the Forecast Error Variance Decomposition (FEVD) analysis shows that the MSME financing proportion itself is the largest contributor to fluctuations in the model. However, among the other variables, the largest contributions—ranked in order—come from NPF, BOPO, GDP, the BI rate, SBIS, ROA, and DPK. These findings emphasize that financing risk, operational efficiency, macroeconomic dynamics, and monetary policy are key determinants in shaping the development of MSME financing in UUS.

Based on these findings, this study proposes several strategic recommendations. First, UUS should design optimal strategies for disbursing MSME financing by strengthening risk management, particularly in managing NPF, which has a significant impact on financing variability. Additionally, UUS should enhance DPK mobilization through product innovation and marketing strategies that attract public interest in Islamic savings products, thereby expanding the financing base. Improving operational efficiency is equally critical, as better cost management allows UUS to offer more competitive and affordable financing margins.

Second, the government is expected to ensure that economic growth is not solely consumption-driven but also supported by fiscal and monetary policies that promote sustainable MSME financing. Adjustments to the benchmark interest rate and the management of Islamic monetary instruments such as SBIS should be aligned with efforts to expand financing access without compromising the stability of the national financial system.

Third, future research is encouraged to explore additional variables such as the number and characteristics of MSMEs, and to employ more diverse analytical methods, such as ARDL or panel data approaches, using more up-to-date datasets. This would provide a more comprehensive picture of the dynamics

of MSME financing in Indonesia, particularly within the context of Islamic banking.

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