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The Impact of Islamic Monetary Instruments on the MSMEs Financing in Indonesia

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Abstract

As a monetary authority, Bank Indonesia prioritizes open market operations as one of its policies in influencing financial stability. In open market operations, business actors use SBI and PUAB short-term financial instruments in conventional banking and SBIS and PUAS in Islamic banking. Both of these instruments have a role in transmitting monetary policy to the real sector. Monetary transmission can occur through credit lines and MSME financing. This study aims to analyze the effect of sharia monetary instruments on channeling funds to the MSME sector. The data used in this study comes from Bank Indonesia and OJK for the period January 2012 to December 2021. Data analysis uses the VAR/VECM model, the Impulse Response Function (IRF) technique and the Forecast Error Variance Decomposition (FEVD). The results of the analysis show that the SBIS and PLS variables have a significant effect on MSMEs financing. Meanwhile, the PUAS variable has no significant effect on MSMEs financing channel. Based on the FEVD results, the variables of sharia instruments contributed to the MSME variable by 45.67%, while for the MSME financing variable, the financing distribution itself was 54.33%.

***Keyword**: Islamic Monetary Instruments, MSMEs, Open-Market Operation, VECM*

Introduction

In the economic world, MSMEs play an important role in development and economic growth in both developing and industrialized countries. MSMEs are the country's most strategic economic sector. In this regard, MSME is a sector of the national economy that has great potential for expansion of the country's economy, which covers the needs of many people so that it becomes one of the aspects of the country's economic growth.

Based on data from the ministry of cooperatives and SMEs as of May 2021, the number of MSMEs is currently around 6.2 million and their share in gross domestic product is 61.07% or IDR 8,573.89 trillion. The contribution of MSMEs to the Indonesian economy includes the ability to absorb 97% of the current total workforce and increase up to 60% of total investment (Limanseto, 2021). However, the large number of small and medium enterprises in Indonesia cannot be separated from the problems and challenges that must be faced. MSMEs

Indonesia continues to face various challenges, one of which is the challenge of dealing with the crisis caused by the COVID-19 pandemic. One of the weaknesses of the MSME sector is that financial financing in banks is still relatively low and financing and investment are limited. Some MSME sectors still rely on savings and informal sources such as loans from

family or relatives. Based on data from the Central Statistics Agency (BPS), only MSMEs will use loans from financial institutions in 2021.

Indonesia's economic system has a mixed economic system, in this case the Indonesian government implements a dual monetary system in the banking system to achieve financial stability. Bank Indonesia prioritizes open market operations as one of the policies that affect financial stability. In open market operations, entrepreneurs use SBI and PUAB short-term financial instruments in conventional banking and SBIS and PUAS instruments in Islamic banking. To that end, Bank Indonesia issued sharia monetary instruments in the form of Islamic Bank Indonesia Certificates (SBIS) which are parallel to Bank Indonesia Certificates (SBI), which are conventional monetary instruments. As monetary instruments, SBI and SBIS have separate transmission channels for the real sector, which affect the volume of financing and credit in the real sector.

Islamic and conventional banks have the main function as intermediary institutions, namely. distribute funds from surplus parties to those who need funds optimally (Herlina, 2021). One of the banking intermediation channels is the distribution of funds to MSMEs, namely the distribution of funds allocated for the development of micro, small or medium scale community businesses. Therefore, it is necessary to increase the provision of credit or business financing, especially in the MSME sector to increase the role of banks as intermediary institutions.

The distribution of funds to the MSME sector through banking is influenced by several factors, both internal and external factors. The internal factors that influence the distribution of credit or financing by banks, as has been the factor of profitability and profitability. Meanwhile, external factors are influenced by monetary instruments (Soekapdjo, 2021). In open market operations business actors use SBI and PUAB short-term financial instruments in conventional banking and SBIS and PUAS in Islamic banking. The presence of these monetary instruments creates an anomaly which states whether these monetary instruments can have a positive or negative impact on the allocation of funds to the MSME sector.

In this regard, examining the influence of Islamic financial instruments on the allocation of funds in the MSME sector is an important issue because it affects the performance of Islamic banking in channeling funds to the MSME sector. Therefore, the researchers analyzed quantitatively the influence of Islamic monetary instruments on channeling funds to the MSME sector in Indonesia. This study aims to identify the effect of sharia monetary instruments on channeling funds to the MSME sector in Indonesia.

Literature Review

Islamic Monetary Policy

Monetary policy is one of the government policies aimed at improving the welfare of the people in the country. In monetary policy, welfare can be seen from economic growth, price stability, price balance, and balance of payments in the form of gross domestic product (GDP) growth. To achieve this monetary policy goal, the central bank sets two goals: the ultimate goal, which usually achieves price stability and long-term economic growth.

The development of the country's economy from closed to open forced it to move away from direct policy instruments to indirect monetary policy instruments. In Indonesia, direct policy instruments began to appear ineffective in the early 1980s, which then shifted to indirect monetary policy. One of the indirect monetary policies used was open market operations, which was marked by the deregulation of the financial and banking sectors in 1983.

According to Chapra, careful control must be carried out so that economic growth is sufficient or not excessive. This focuses on the three main sources of growth in the money supply and monetary expansion. The first is budget deficit financing, deposit expansion by creating credit to commercial banks and foreign banks or using balance of payments surpluses.

According to Ascarya (2014), Islamic monetary instruments are management tools of Islamic monetary authorities which are run according to Sharia law. Meanwhile, monetary instruments, according to Chapra (1996) are a form of quantitative control over credit distribution and instruments that can be used to guarantee credit distribution in both useful and productive sectors. For direct instruments, the central bank can implement several alternative policy instruments based on sharia principles (Misfah & Ascarya, 2010), including:

1. Bank-by-bank Ceiling

Bank-by-bank Ceiling is a policy in which the central bank determines the maximum amount of credit for each bank.

2. Statutory Liquid Ratios

Statutory Liquid Ratios namely a policy implemented by requiring banks to invest part of their funds in certain types of assets such as government bonds.

3. Direct Credits

Direct credits is the policy of the central bank to finance certain sectors using the central bank channeled through commercial banks.

Meanwhile, for indirect instruments, the central bank can also carry out several types of instrument policies (Misfah & Ascarya, 2010), namely Rediscount Window, Reserve Requirement, Public Sector Deposits, Foreign Exchange Swaps and Open Market Operation Equity Based Instrument.

Chapra (1986) put forward the instruments of monetary control of the Islamic economy, namely consisting of:

1) M and M_0 Growth Targets

Every year, the central bank must determine the desired growth in the money supply (M) in accordance with national economic goals, including the desired but sustainable rate of economic growth and currency stability.

2) Public Shares on Demonstration Deposits (Currency Deposits)

A portion of commercial bank demand deposits, up to a certain size, for example 25 percent (maximum limit under normal circumstances), must be diverted to the government to enable it to finance socially beneficial projects where the principle of profit sharing is not feasible or desirable.

3) Statutory Statutory Reserves/GWM

Commercial banks are required to hold a certain proportion, for example 10%-20%, of deposits at their discretion and hold them in the central bank as mandatory reserves. The central bank has to pay the cost of mobilizing these deposits to the commercial banks, just as the government bears the cost of mobilizing the 25 percent of display deposits that are transferred to the government. This official reserve can be varied by the central bank with the advice of monetary policy.

4) Value-Oriented Credit Allocation

Credit must be allocated with the aim of helping to realize social welfare in general. This allocation criterion, as in the case of resources provided by Allah in general, should be the realization of the goals of Islamic society and then maximizing private profit.

5) Credit Limit

The tools (instruments) mentioned will make it easier for the central bank to carry out the desired expansion in high power money (Mo) credit expansion can still exceed the desired limit.

The objective of Islamic monetary policy is broadly based economic feasibility *full employment* and the optimum level of economic growth, socio-economic justice with an equal distribution of income and welfare, the stability of the value of money so that it is possible *medium of exchange* can be used as a calculation, a stable benchmark (Chapra, 2018).

SBIS (Indonesian Sharia Securities)

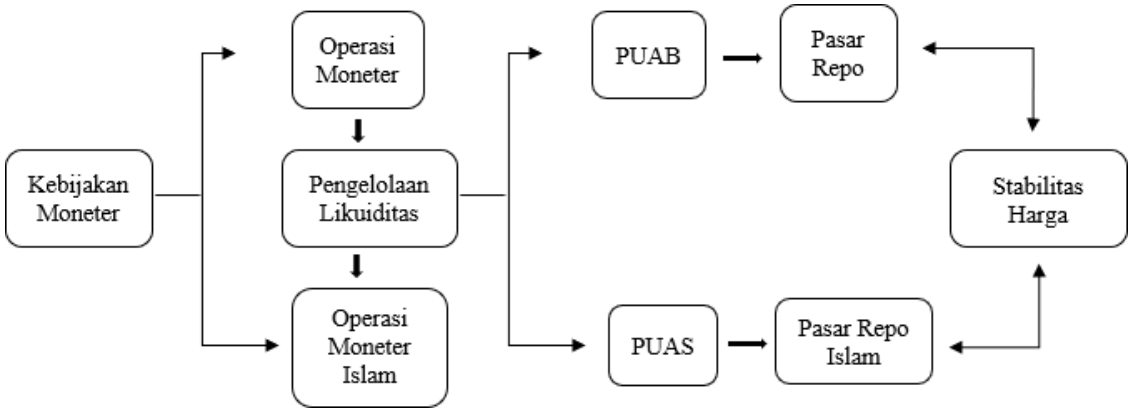
The State of Indonesia still adheres to a dual system in its economy, one of which is a dual monetary transmission system, so that in open market operations, not only SBI (Bank Indonesia Certificates) are issued but also SBIS (Bank Indonesia Sharia Certificates) are issued as one of the sharia financial instruments. . According to Bank Indonesia Regulation No. 10/11 dated 31 March 2008, Bank Indonesia Sharia Certificates (SBIS) are short-term sharia securities denominated in rupiah issued by Bank Indonesia to increase the effectiveness of sharia-based monetary mechanisms (Wahyu, 2020).

Meanwhile, liquidity management regarding SBIS in Islamic Banking is based on DSN-MUI Fatwa No: 64/DSN-MUI/XII/2007. This regulation came into effect on March 31, 2008 with permission from DSN No: 63/DSN-MUI/XII/2007 using the Ju'alah Contract. SBIS also has several characteristics as stated in Circular Letter No. 10/16/DPM to all BUS and UUS, as follows (Rahman, 2014):

1. Has units of Rp. 1,000,000.00- (one million rupiah). The term is no later than 1 (one) month and no longer than 12 (twelve) months stated in the number of calendar days and counted 1 (one) day after the transaction settlement date up to the maturity date.
2. Published without script (scripless).
3. Can be pledged as collateral to Bank Indonesia.
4. Cannot be traded on the secondary market.

PUAS (Islamic Interbank Money Market)

According to the DSN MUI fatwa No. 37/DSN-MUI/2002, the definition of PUAS is short-term financial transaction activities between market participants based on Sharia principles. According to Article 1 point (4) of Bank Indonesia Regulation No. 7/26/PBI/2005, PUAS is defined as short-term investment activities in the rupiah currency between market participants according to the principle of *mudharabah* (Muhfiatun, 2021).



Source: Juhro, et al. (2018)

PLS (Profit Loss Sharing)

Profit and Loss Sharing (PLS) can be interpreted as the distribution of some portion of profits from the employees of a company and can be in the form of an annual cash bonus based on profits earned in previous years or can be in the form of weekly or annual payments. In the financing contract there are 2 principles of profit sharing that are used namely: *revenue sharing* and *profit and loss sharing*. In *revenue sharing*, the amount that is shared is the gross income before deducting operating expenses. Meanwhile in *profit and loss sharing*, the amount that is shared is the profit/loss after all operations are taken into account (Antonio, 2001).

The level of profit sharing has a positive and significant effect on the distribution of financing in Islamic banking. This affects the amount of financing, because the higher the level of profit distribution, the more profits received by the bank and increase the amount of financing disbursement. On the other hand, in terms of lending to the public, changes in lending rates are also called negative effects, the smaller the volume of lending. The interest charged by bank customers who have taken loans from the bank is the payment received by the bank in the form of an amount of money, because loan interest is income from loans given to bank customers.

According to Law no. 10 of 1998, financing is the provision of money or bills regulated through an agreement or contract between the bank and another party that requires the lender to repay the money or bills after a certain period of time in return or profit sharing (MAsyita, 2018).

In order to increase financing and allocation of funds that play an important role in improving the quality and quality of banking, namely placement of funds in SBIS and placement of funds in PUAS. Bank Indonesia has issued monetary policy instruments in the form of Bank Indonesia Certificates (SBIS) to deposit short-term funds from sharia banks at Bank Indonesia, which also serve as*secondary reserve* for banks. In addition, Bank Indonesia also issued a monetary policy instrument in the form of the Islamic Interbank Money Market (PUAS). However, the more funds allocated to SBIS and PUAS, the lower the funding (Rusydiana, 2018).

Micro, Small and Medium Enterprises (MSMEs)

Micro business as described in the Constitution of the Republic of Indonesia No. 20 of 2008 concerning Micro, Small and Medium Enterprises. Micro-enterprises are productive businesses owned by individuals for individual business entities that meet the criteria for micro-enterprises as stipulated in the law. The criteria are having a maximum net worth of Rp. 50,000,000, - excluding land and buildings where businesses are or have income maximum annual sales of IDR 300,000,000.

Small business is a productive economic enterprise that stands alone and is carried out by individuals or business entities that are not subsidiaries or branches of companies that are owned, controlled, or directly and indirectly become part of a medium or large company that meets the criteria for a small company established under the law. act. The criteria are assets above IDR 50,000,000, up to IDR 500,000,000 excluding land and commercial buildings, or with annual sales of more than IDR 300,000,000 up to IDR 2,500,000,000.

Medium business is a productive economic business that stands alone and is managed by an individual or business entity that is not a subsidiary or affiliate of a company that is directly or indirectly owned, controlled, or part of a small or large business with total net assets

or income. annual sales as regulated by law. The criteria are having a net worth of more than IDR 500,000,000 with a maximum of IDR 100,000,000 excluding land and commercial buildings, or having annual sales of more than IDR 2,500,000,000 with a maximum of IDR. 50,000.000.000.

Micro, Small and Medium Enterprises (MSMEs) are the most strategic sectors of the national economy, which affect the lives of many people so that they become the backbone of the national economy. MSMEs are also the largest group of economic actors in the Indonesian economy, and have proven to be a key factor in securing the country's economy during the economic crisis and as a determinant of post-crisis economic growth. Through Presidential Instruction No. 6 of 2009 regarding the development of central and regional industries to support the 2009-2015 creative industry development policy, namely the development of economic activities based on creativity, skills, individual talents that have economic value and influence the welfare of the Indonesian people.

Previous Research

Kharisma Rindang Sejati (2018) by title"Comparison of the Influence of Islamic Monetary Instruments on the Distribution of Funds to the Micro, Small and Medium Enterprises (MSMEs) Sector in Indonesia."By using the Vector Error Correction Model (VECM) model, the Impulse Response Function technique and the Forecast Error Variance Decomposition (FEVD). The variables used are MSME Financing, Profit and Loss Sharing (PLS), Margins, Consumer Price Index (CPI) and SBIS. The results of the analysis show that SBIS has no significant effect on MSME financing for Islamic Banks. PLS and inflation contributed significantly to MSME financial transfers and SBIS was not an effective instrument for reducing the inflation rate.

Masyitha Mutiara Ramdhana and Irfan Syauqi Beik (2013) by title"The Influence of Sharia and Conventional Monetary Instruments on the Distribution of Funds to the Micro, Small and Medium Enterprises (MSMEs) Sector in Indonesia."By using the Vector Auto Regression model method, the Impulse Response Function technique and the Forecast Error Variance Decomposition (FEVD). The variables used are Credit, IR, PYD, Margin, PLS, SBI, and SBIS. The results of the analysis show that SBI and SBIS have a significant influence on channeling funds to the MSME sector, both from Islamic and conventional banking channels. In addition, Islamic banking MSME financing stabilizes more quickly compared to conventional banking MSME loans when monetary shocks occur. Meanwhile, the FEVD results show that the influence of SBIS on channeling funds to the MSME sector is greater than SBI.

Muhfiatun, Lailatis Syarifah and Annisa Nur Salam (2021) by title "Effectiveness of Islamic Monetary Instruments on the Distribution of Funds to the Micro, Small and Medium Enterprises (MSMEs) Sector in Indonesia."By using the Vector Autoregression (VAR) or Vector Error Correction Model (VECM) method. The dependent variable in this study is the financing provided by sharia banking to the MSME/UMKM sector in Indonesia. While the independent variables in this study are Islamic monetary instruments: SBIS, SBSN, PUAS, Equivalent Rate Musyarakah, Equivalent Rate Mudharabah, and Average Margin Murabahah. Using secondary data in the form of a time series from January 2010 to December 2018. The results show that Islamic monetary instruments such as SBIS, SBSN and PUAS are not effective in encouraging the distribution of funds to the MSME sector in Indonesia.

Research Method

This research is research with a quantitative approach to descriptive statistics using secondary data. The quantitative approach is defined as a scientific approach which includes concrete, empirical, objective, structural, rational and systematic rules (Sugiyono, 2015). The descriptive statistics are an attempt to get a clearer picture of the data collected. The econometric method used in this study is Vector Auto Regression (VAR), Vector Error Correction Model (VECM).

The type of data used is secondary data in the form of monthly time series January 2017 to December 2021. Secondary data is data published by organizations that are not processors. The data source taken by the author is in the form of external data sources which are secondary data collected by sources outside the organization (Muhammad, 2017). Data sources were obtained from Indonesian Economic and Banking Statistics (SEKI) through Bank Indonesia, Islamic Banking Statistics and Statistics (SPS) through the Financial Services Authority (OJK). The secondary data used in this study is dataTime Series in a monthly period of five years starting from January 2017 to December 2021. Several variables in this study were obtained through data interpolation from annual to monthly data.

In this case data analysis can be interpreted as a way of carrying out an analysis of the data with the aim of processing the data to answer the problem formulation (Sujarweni, 2018). This study uses a quantitative approach because it uses numerical data. The method used is Vector Auto Regression (VAR) which is one of the time-series and macro-econometric models which are often used in research, especially in the field of economics and Vector Error Correction Model (VECM), which is a derived method from VAR (Basuki, 2017). Vector Auto Regression (VAR) is a model that is a priori to economic theory but is very useful in determining the exogeneity of an economic variable in an economic system where there is interdependence between variables in the economy (Basuki, 2017).

1. Stationary Data Test

   The data stationarity test is performed on each variable used in the model. This step is taken to avoid the problem of lancing regression (spurious regression) because the data used in this model is a time series. Time series data are generally not stationary because they contain unit roots at level. This stationarity test is carried out at the level and first level.
2. Optimum Lag Test

   Setting the optimal lag aims to show how long a variable reacts to other variables and eliminates autocorrelation problems in a VAR system. The lag length test is determined based on the smallest Akaike Information Criterion (AIC) and Schwarz Criterion (SC) criteria. In this study, the VAR model is estimated with different lag levels and then the AIC value is compared. The smallest AIC value is used as a reference for optimal lag.
3. VAR Stability Test

   The VAR stability test is used to see the stability of the VAR system. Stability in the VAR system needs to be considered in determining the lag. VAR stability can be seen from the value of the inverse roots of the polynomial AR characteristics. If all of the roots have a modulus whose absolute value is less than one and lies in the unit circle, then the VAR model is stable so that the resulting IRF and FEVD analysis is considered valid.
4. Cointegration Test

   The cointegration test was carried out to determine whether the variables that are not stationary at the level but stationary at the first difference have cointegration or not.

The cointegration test implies that in this system of equations there is an error correction model which describes a short-term dynamic consistent with the long-term relationship. Cointegration represents a long-term equilibrium relationship. Cointegration test in this study uses the Johansen approach by comparing the trace statistics with a critical value of 5 percent. If the value of the trace statistic is greater than the critical value, then there is cointegration in the system of equations

5. Granger Causality Test

   Granger causality test was conducted to find out and prove the direction of the short-term relationship between variables. In the Granger causality test, if the probability value is less than five percent, it means that the variable has a causal relationship.

6. Impuls Response Function (IRF)

   Impulse Response Function (IRF) analysis is one of the most important analyzes in the VAR/VECM model. Tracing the effect of a shock of one standard deviation experienced by one variable in the system on the values of all variables at this time and for several future periods is called the Impulse Response Function. This IRF analysis tracks the response of endogenous variables in the VAR system due to shocks or changes in the disturbance variables. The given shock is usually one standard deviation of the variable or usually called innovation.

7. Forecast Error Variance Decomposition (FEVD)

   The method that can be used to see how a change in a variable indicated by a change in error variance is affected by other variables is FEVD. The Variance Decomposition Test (FEVD) serves to explain how much the percentage contribution of each shock is in the variables that affect credit and financing to the MSME sector in Indonesia. The time period used in FEVD is 5 years consisting of 60 months.

Based on the data collected and method used in this research, the econometric model is formulated as follows:

$$PYD_t = f(SBIS_t, PUAS_t, PLS_t)$$

Definition:

PYD_t	= MSMEs Islamic Financing
$SBIS_t$	= Islamic Bank Indonesia's certificate
$PUAS_t$	= Islamic Inter-Bank money market
PLS_t	= Profit and Loss Sharing

Result and Discussion

Pre-estimation Tests

The stationarity test is carried out to see the stationarity of the data so that it can be avoided*Lancing regression*or*spurious regression.* So, if each variable is stationary, then the coefficients in the model will be valid. This research detects the stationarity of the data using the *Augmented Dickey Fuller* (ADF).

Table 1 show stationary test carried out at the level and First-Difference. In the four variables above, it can be concluded that all variables are stationary at the *First Difference* namely the variables LNSBIS, PUAS, PLS, and LNPYD. This can be seen in the ADF probability value of all variables showing less than $\alpha = 0.05$, so that all variables have no unit root at *First Difference.*

Table 1. Result of Stationarity test

Variable	Level			First Difference		
	Prob. ADF	t- statistic ADF	p-Value	Prob. ADF	t- statistic ADF	p-Value
LNSBIS	0.1537	-2.3658	-2.8863	**0.0000**	-6.2792	-2.8863
PUAS	0.8142	-0.8034	-2.8861	**0.0000**	-13.191	-2.8861
PLS	0.2040	-2.2098	-2.8863	**0.0000**	-10.389	-2.8865
LNPYD	0.4321	-1.6932	-2.8863	**0.0000**	-5.1236	-2.8863

Determination of the optimum lag is then done to show how long a variable reacts to other variables and eliminates problem of *autocorrelation* in VAR/VECM. The optimum lag is determined by using the smallest value of the criteria *Akaike Information Criterion (AIC)* and *Schwarz Criterion (SC).*

Table 2. Optimum Lag Selection Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	825.4519	NA	4.39E-12	-14.80094	**-14.70329**	**-14.76133**
1	849.5717	46.06658	3.79E-12	-14.94724	-14.45903	-14.74919
2	872.0750	41.35745	3.38E-12	-15.06441	-14.18565	-14.70793
3	879.9159	13.84513	3.92E-12	-14.9174	-13.64807	-14.40247
4	890.1041	17.25580	4.38E-12	-14.81269	-13.15279	-14.13932
5	917.8449	44.98498	3.57E-12	-15.02423	-12.97378	-14.19242
6	9476445	46.17597	2.82E-12	-15.27287	-12.83186	-14.28262
7	9658611	**26.91458***	2.76E-12	-15.31281	-12.48123	-14.16412
8	984.0335	25.53968	**2.72e-12***	**-15.35196**	-12.12981	-14.04483

Lag testing is determined based on criteria *Akaike Information Criterion (AIC)* and *Schwarz Criterion (SC)* the smallest. In the optimum lag test results, shown in the 8th lag.

Table 3. VAR Stability test

Root	Modulus
Model II	
-0.495439	0.495439
0.339502	0.339502
-0.263414	0.263414
-0.082939	0.082939

VAR stability test is used to see the stability of the VAR system. if all the roots have a modulus whose absolute value is less than one and lies in the unit circle, then the VAR model is stable so that the resulting IRF and FEVD analysis is considered valid. From the results of the VAR stability test, it can be concluded that the VAR system is stable because the roots tested have a range of less than one, which ranges from 0.082939-0.495439, so it is concluded that the VAR model formed is stable at its optimal lag.

The cointegration test is used to see if there is a long-term relationship of variables that are stationary at the same degree. This cointegration test is carried out based on the VAR model framework by including components *error correction* to prove the existence of cointegration, which is commonly referred to as *Vector Error Correction.* Cointegration test is done via*Johansen Cointegration Test* with an optimum lag of 8 according to the previous determination.

Table 4. Cointegration Test Result

Hypothesized No. of CE(s)	Trace Statistic	Critical Value	Prob.**	Explanation
None*	91.16475	63.87610	0.0001	Cointegrated
At most 1*	54.70504	42.91525	0.0023	Cointegrated
At most 2	21.30635	25.87211	0.1668	Not Cointegrated
At most 3	8.411037	12.51798	0.2199	Not Cointegrated

The test results above show that there are two cointegration relationships, this is due to *Trace Statistic value* is bigger than *Critical Value.* So that for the next test, will be a long-term test, namely the VECM test *(Vector Error Correction Model).*

VECM Estimation Result

Table 5. VECM Estimation Result

Short-run			
Variable	Coefficient	T-statistic Value	Keterangan
LNPYD(-1)	0.190576	1.94980	Significant
LNSBIS(-1)	0.026386	1.45521	Not Significant
PUAS(-1)	-0.196061	-0.20460	Not Significant
PLS(-1)	-0.247140	-1.03036	Not Significant
Long-run			
LNSBIS(-1)	1.772166	6.24229	Significant
PUAS(-1)	8.064082	1.56296	Not Significant
PLS(-1)	-24.32978	-4.50701	Significant
C	-3.728903	-0.25900	

The results of the VECM estimation in the short term explained that there were no significant variables affecting MSME credit because it had an absolute t-statistic value ≤ t-table (1.645). This happens because this research model is a monetary transmission model so that the variable takes time orlagto react to other variables. In general, the reaction of a variable to other variables occurs in the long run.

In the long-term VECM estimation, it is obtained that the SBIS(-1) and PLS(-1) variables have a significant effect and have a positive relationship to the SBIS(-1) variable, when there is an increase in the SBIS bonus by one percent, it will increase the volume of MSME financing

disbursed by sharia banking by 1.77%. This is contrary to the results of research conducted by Masyitha (2013).30 This is because when Indonesian banks carry out monetary expansion by reducing SBIS bonuses, Islamic banks sell SBIS to Indonesian banks in the context of monetary control and liquidity management.

Meanwhile, the PLS(-1) variable has a significant negative relationship to LNPYD(-1) because it has an absolute t-statistic value ≥ t-table (1.645). This is contrary to the results of research conducted by Masyitha (2013), meaning that if the PLS increases by 1% it will causing a decrease in MSME financing by 24%. When there is an increase in PLS, the income received by Islamic banking will decrease and some of this income is channeled back to the MSME sector so that the volume of MSME financing also decreases. Whereas the PUAS (-1) variable has no significant effect and has a positive relationship to LNPYD (-1) because it has an absolute t-statistic value ≤ t-table (1.645).

IRF

IRF analysis was conducted to determine the effect of Islamic monetary instruments on MSME financing. If the results state a negative trend, this proves that the variable affects the decrease in MSME funding distribution. Meanwhile, if there is a positive trend, it means that this variable affects the increase in MSME fund distribution.

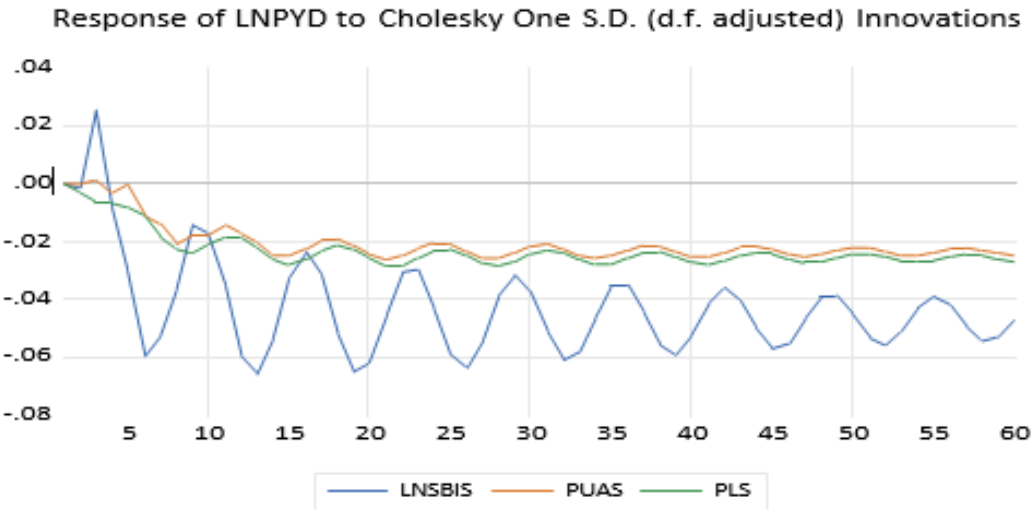


Figure 1. IRF Analysis Result

The results of the IRF test are as follows:

1. The SBIS variable at the beginning of the period and the third period showed a positive trend in MSME financing, while in the second, fourth to 60th period the SBIS variable showed a negative trend in MSME financing.
2. The PUAS variable in periods 1-3 and period 5 shows a positive trend in MSME financing, while in periods 4 and 6 to 60 the PUAS variable shows a negative trend in MSME financing.
3. The PLS variable at the beginning of the period shows a positive trend in MSME financing, while in the 2nd to 60th period the PLS variable shows a negative trend in MSME financing.

The response of MSME financing to SBIS shocks at the beginning of the period and third period was positive because during this period the placement of funds in the SBIS variable tended to decrease so that the placement of funds in MSME financing distribution increased. Whereas in the second period, the fourth to 60 SBIS variables show a negative trend in MSME financing. This is because in that period the placement of funds in the SBIS variable tended to increase so that the placement of funds in the distribution of MSME financing decreased.

The MSME financing response to PUAS yield shocks in periods 1-3 and period 5 showed a positive trend, because during these periods PUAS yields tended to decrease so that the smaller the placement of funds in the PUAS instrument, the larger the portion of placement of funds in MSME financing. Whereas in periods 4 and 6 to 60 the PUAS variable shows a negative trend, this is because PUAS yields tend to increase so that the greater the placement of funds in the PUAS instrument reduces the portion of placement of funds in MSME financing.

The response of MSME financing to PLS shocks at the beginning of the period showed a positive trend because in that period PLS tended to increase so that the greater the profit the bank earned which would have an impact on the placement of funds in the distribution of MSME financing, it increased. But in the 2nd to 60th period the PLS variable shows a negative trend, because in that period the PLS tends to decrease so that the profits obtained by the bank decrease which will have an impact on the placement of funds in the distribution of MSME financing which decreases.

FEVD (Forecast Error Variance Decomposition)

FEVD analysis was carried out to be able to explain the contribution of each variable to the shock it caused to the main endogenous variables observed. FEVD has the objective of explaining how much percentage the contribution of each shock is in the variables that affect MSME financing in Indonesia.

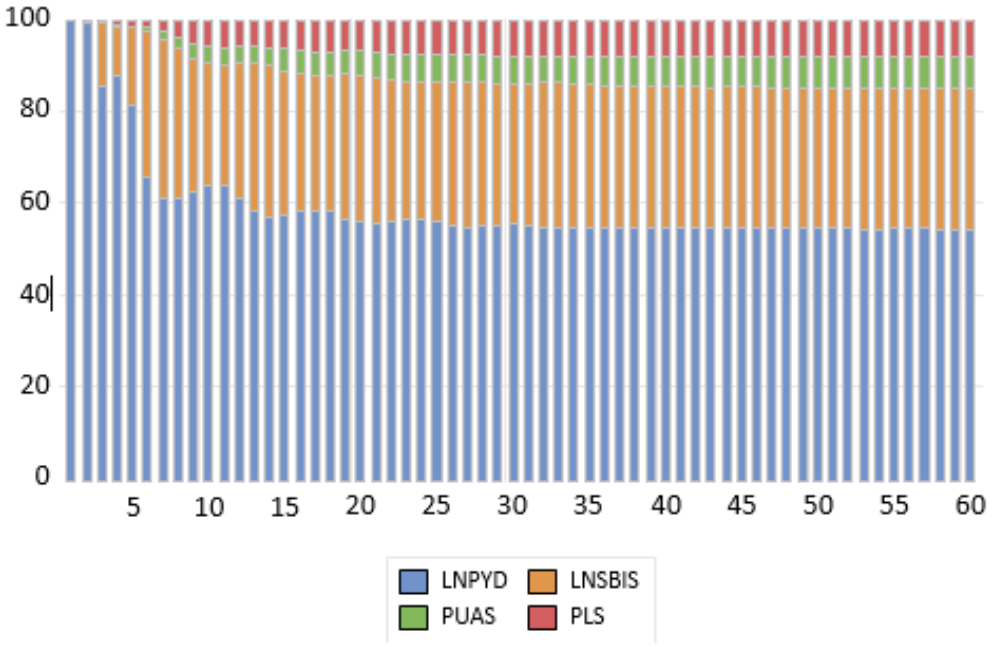


Figure 2. FEVD Analysis Result

From the FEVD results above, it can be identified how much influence the research variables have on MSME financing. In the first period, the UMIM financing variable was significantly influenced by the financing variable itself by 100%. Other variables began to influence the distribution of MSME financing entering the second period with a percentage for SBIS of 0.07%. PUAS is 0.005% and PLS is 0.33%. entering the 60th period, the contribution of each variable has changed to the distribution of MSME financing. The influence of MSME financing on the distribution of financing itself decreased by 54.33%, the SBIS variable increased to 30.60%, the PUAS variable became 6.78%, and PLS became 8.29%. This also gives the conclusion that sharia variables contribute to the MSME variable by 45.67%.

Conclusion

Based on the results of the research conducted, there are several conclusions:

1. The results of the VECM estimation in the short term explained that the SBIS, PUAS and PLS variables had no significant effect and had a positive relationship on the SBIS variable and a negative relationship on the PUAS and PLS variables on LNPYD (-1) because they had an absolute value of t-statistics ≤ t-table (1.645). Whereas in the long term there is one variable that does not significantly affect MSME financing, namely the PUAS variable. The variables that have a significant effect are the SBIS and PLS variables. SBIS has a significant positive effect on MSME financing, while PLS has a significant negative effect on MSME financing.
2. Based on test results Impulse Response Function (IRF) is described as follows:
   a) The SBIS variable at the beginning of the period and the third period showed a positive trend in MSME financing, while in the second, fourth to 60th period the SBIS variable showed a negative trend in MSME financing.
   b) The PUAS variable in periods 1-3 and period 5 shows a positive trend in MSME financing, while in periods 6 to 60 the PUAS variable shows a negative trend in MSME financing.
   c) The PLS variable at the beginning of the period shows a positive trend in MSME financing, while in periods 2 and 4 to 60 the PLS variable shows a negative trend in MSME financing.
3. Based on the results of the FEVD test, it can be concluded that how much influence the research variables have on MSME financing. In the first period, the UMIM financing variable was significantly influenced by the financing variable itself by 100%. Other variables began to influence the distribution of MSME financing entering the second period with a percentage for SBIS of 0.07%. PUAS of 0.005% and PLS of 0.33%. entering the 60th period, the contribution of each variable has changed to the distribution of MSME financing. The influence of MSME financing on the distribution of financing itself decreased by 54.33%, the SBIS variable increased to 30.60%, the PUAS variable became 6.78%, and PLS became 8.29%. This also gives the conclusion that sharia variables contribute to the MSME variables by 45.67%.

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