Monetary Policy Transmission in the Financial Sector in Indonesia

Sinar Andi Putra Munthe, Sanusi Ghazali Pane, Rusiadi

Abstract

This study aims to analyze the monetary policy transmission mechanism in the financial sector in Indonesia using the Vector Autoregressive (VAR) method. The variables used include the BI 7-Day Reverse Repo Rate (B17DRR), Money Supply (JUB), Exchange Rate (NT), Total Bank Credit (TKB), and Credit Interest Rate (SBK) with observation periods according to the secondary data obtained. The results of the stationarity test indicate that all variables are stationary at the second difference level, and the optimal lag is determined at lag 2. The Johansen cointegration test indicates a long-term relationship between variables. Impulse Response Function analysis reveals that monetary policy shocks have a significant influence on financial sector variables in the initial period, but the effect tends to fade in the long term. Meanwhile, the results of the Forecast Error Variance Decomposition show that in the short term, NT movements are more influenced by itself, while in the medium to long term, the largest influence comes from TKB and JUB, with relatively small contributions from B17DRR and SBK. These findings confirm that credit and liquidity channels play a dominant role in the transmission of monetary policy in Indonesia, so strengthening the banking intermediation function and liquidity management is important to increase the effectiveness of monetary policy.

***Keywords**:* Monetary Policy Transmission, Financial Sector, Vector Autoregressive (VAR), Impulse Response Function, Forecast Error Variance Decomposition, Indonesia.

Sinar Andi Putra Munthe
Master of Economics , Universitas Pembangunan Panca Budi, Medan
e-mail: putramun88@gmail.com

Sanusi Ghazali Pane, Rusiadi
e-mail: sanusi.gazali.pane@gmail.com, rusiadi@dosen.pancabudi.ac.id

Introduction

In Indonesia, monetary policy is implemented by Bank Indonesia, with the primary mandate of maintaining the stability of the rupiah, which encompasses price stability and financial system stability. One of the main indicators of price stability is the inflation rate, which is the ultimate goal of monetary policy. Within the inflation targeting framework, Bank Indonesia uses the BI 7-Day Reverse Repo Rate (BI7DRR) as the benchmark interest rate to guide the economy toward controlled inflation. The process of channeling the influence of monetary policy from changes in instruments to achieving the ultimate target is known as the monetary policy transmission mechanism. This mechanism can operate through various channels, including the interest rate channel, credit channel, exchange rate channel, asset price channel, and expectations channel. The financial sector plays a crucial role in this transmission mechanism because it serves as a link between monetary policy and real economic activity. Changes to the BI7DRR will affect lending rates, rupiah exchange rate movements, stock prices, and bank credit volume. Therefore, the effectiveness of monetary policy is largely determined by the financial sector's response to changes in monetary instruments established by Bank Indonesia.

In general, monetary policy influences the circulation of money in the economy, as reflected in developments in the money supply, interest rates, credit, exchange rates, and various other economic and financial variables. Monetary policy even influences the expectations of economic actors in financial markets and various economic activities, as demonstrated by the weakening of currencies worldwide. In the theory of monetary economics and its practice at various central banks, monetary policy transmission has always been an important topic and has attracted the attention of economists and monetary authorities. In the Indonesian context, questions about how the monetary policy transmission mechanism implemented by Bank Indonesia, as the monetary authority, can influence various economic and financial activities also frequently arise in the community. Based on Law No. 23 of 1999, as amended by Law No. 3 of 2004, Bank Indonesia's goal is to achieve and maintain rupiah stability, namely price stability (inflation) and the rupiah exchange rate.(Mujasmara et al., 2024).

In the classical monetary approach, Irving Fisher became a key figure with the formula MV = PT, where M is the money supply, V is the velocity of money circulation, P is the price level, and T is the transaction volume. According to Fisher, an increase in the money supply (M) without an accompanying increase in transaction volume (T) will cause an increase in prices (P), which means inflation. Although this formula seems simple, it provides a strong basis for monetary economists in assessing the importance of controlling the money supply. Fisher's thinking also became the foundation for the quantity theory of money used by monetary economists to this day. In the contemporary context, the role of the central bank is very significant in implementing monetary policy as a tool to control inflation. The central bank is responsible for maintaining the stability of the value of money and price stability through interest rate regulation, open market operations, and controlling minimum reserve requirements (. The implementation of this policy is oriented towards managing the demand for money and controlling price pressures from the aggregate demand side. However, in practice, monetary policy does not always succeed in optimally controlling inflation due to other variables such as inflation expectations, global market conditions, and the complex structure of the domestic economy. Monetary theory serves as a conceptual framework that provides a deep understanding of the relationship between the money supply and changes in the price level.(Sanusi Ghazali, 2025).

This monetary transmission mechanism illustrates Bank Indonesia's actions through changes in monetary instruments and operational targets, which influence various economic and financial variables before ultimately contributing to the ultimate goal of inflation. Monetary

policy transmission occurs through interactions between the central bank, banks, the real sector, and the financial sector. Changes in monetary transmission occur through the interest rate channel, the credit channel, the exchange rate channel, the asset price channel, and the expectations channel, thus influencing inflation. Every change in economic activity will lead to changes in the monetary policy transmission mechanism. Monetary transmission can affect deposit rates and bank credit. If the economy is experiencing a downturn, Bank Indonesia can use an expansionary monetary policy by lowering interest rates to stimulate economic activity, increasing demand for financing from companies and households to banks due to the reduced cost of capital for companies to invest. Conversely, if inflation occurs, Bank Indonesia will respond with a contractionary policy by raising interest rates to slow economic activity disrupted by inflationary pressures.(Muhayatsyah & Kamal, 2023).

Monetary transmission is closely linked to the relationship between various economic and financial variables, which constantly changes in line with the economic development of the country concerned. In a conventional economy and a closed financial system where banks are the sole financial institution, the relationship between the money supply and actual economic activity remains very close. However, with the advancement of the financial sector, the relationship between the money supply and the real sector can loosen. Some funds collected by financial institutions may only circulate within the financial sector and have no direct impact on the real sector. This changing and increasingly loose relationship between economic and financial variables will clearly impact the duration of the monetary policy transmission mechanism. Therefore, the monetary policy transmission mechanism in developing countries like Indonesia plays a crucial role in controlling inflation, economic growth, and financial system stability. Therefore, Bank Indonesia's role in formulating and implementing monetary policy is vital to achieving desired economic goals.(Arianti Nasution et al., 2024)This is because monetary transmission is closely related to the relationship between various economic and financial variables, which are constantly changing in line with the economic development of the country concerned. The monetary policy of the central bank, as the monetary authority, is intended to influence real economic activity and prices through the transmission mechanism. Therefore, the monetary authority must have a clear understanding of the domestic transmission mechanism. The monetary policy transmission mechanism can operate through various channels, such as interest rates, monetary aggregates, credit, exchange rates, asset prices, and expectations. Therefore, understanding monetary policy transmission is key to directing monetary policy to influence the direction of future real economic development and prices.(Rusiadi et al., 2022).

However, the effectiveness of monetary policy transmission in the financial sector is not always optimal. Changes in financial market structure, global market integration, exchange rate volatility, and international interest rate dynamics often influence the patterns of relationships between variables. On the one hand, financial sector liberalization and financial product innovation can increase market efficiency. However, on the other hand, this complexity can also weaken or slow monetary policy transmission. Globally, quantitative easing, interest rate shocks, and geopolitical uncertainty also put pressure on the effectiveness of domestic monetary policy, particularly in developing countries like Indonesia, which boasts relatively open economies.

Literature Review

Monetary policy is a policy that regulates the money market, established by the monetary authority, in this case the central bank, by changing monetary values and interest rates, and its implementation is carried out by the monetary authority and financial institutions. From this definition, it can be concluded that monetary policy is a very important policy in the economy

and an integral part of a set of macroeconomic policies. Therefore, monetary policy significantly influences changes in the internal and external balance of a country's economy.

Types of monetary policy such as:

- Expansionary Monetary Policy: Expansionary policy, also known as easy money policy, regulates the amount of money supplied to the economy. Efforts can include lowering interest rates, purchasing government securities by the central bank, and lowering reserve requirements for banks.
- Contractionary Monetary Policy Contractionary monetary policy, also known as tight money policy, is a policy aimed at reducing the money supply. The primary goal of this contractionary policy is to lower inflation and reduce the money supply in a country's economy. Efforts to achieve this goal include raising interest rates, selling government bonds, and raising reserve requirements for banks.

In monetary policy, there are several instruments in monetary policy, including: Open Market Policy, Discount Policy 3. Reserve Requirement Ratio Policy, Selective Credit Policy and Moral Appeal(Rangkuty et al., 2023).

Monetary policy transmission is a series of actions taken by a country's central bank to manage the money supply, interest rates, and credit availability. The primary goal is to achieve price stability (control inflation) and support balanced economic growth. Central banks use policy tools such as interest rates, reserve requirements, and open market operations to influence the inflation rate and overall economic conditions. Monetary policy is the tool used by central banks to achieve their monetary policy objectives. Some of the main tools involve regulating the money supply, interest rates, and credit availability. As mentioned above, one profession in banking is closely related to its role in the almost entirely continuous money creation process in an economy through the banking system. Given this role, the condition of the banking industry will greatly determine how effectively the central bank's monetary policy transmission can influence various economic and financial activities. In this case, monetary transmission begins with the central bank's actions using monetary instruments, whether open market operations or others, to implement monetary policy and achieve its desired ultimate goals, namely inflation and economic growth. These actions influence economic activity through various monetary policy transmission channels: currency, credit, and interest rates, usually through the banking system.(Mujasmara et al., 2024).

Monetary policy transmission influences economic and financial activity through various channels, such as the interest rate channel, the credit channel, the exchange rate channel, the asset price channel, and the expectations channel. Therefore, understanding monetary policy transmission is key to directing monetary policy to influence the direction of real economic development and future prices (Ascarya, 2012:284). Therefore, monetary policy significantly influences various important elements of economic growth. With the dual monetary system, the monetary policy transmission mechanism has become increasingly developed and complex. Law No. 3 of 2004 stipulates that Bank Indonesia is entrusted with the dual monetary authority, capable of implementing both conventional and sharia monetary policies. Therefore, the issue of the sharia monetary policy transmission mechanism is crucial. In the sharia economic system, what is recognized is not the interest rate system (INT) but rather a profit and loss sharing system. The size of the profit sharing depends on investment and financing activities carried out in the real sector. The results of bank investments and financing in the real sector determine the size of the profit sharing in the monetary sector. This means that the monetary sector is dependent on the real sector.(Dila Fahira et al., 2023).

The monetary policy transmission mechanism essentially describes how the monetary policy pursued by the central bank influences various economic and financial activities so that it can ultimately achieve the final objectives set by BI as the monetary policy maker will use monetary instruments that will ultimately affect the economy and money markets. Changes in monetary policy can take one of three forms: changes in short-term interest rates where the

central bank is willing to provide loans to the banking sector to reduce liquidity shortages in the monetary system (interest rate control); changes in the monetary base in the hope that this will change the money supply, or its growth rate (monetary base control); and changes in the provisions applicable to banks in an effort to influence their credit growth rate (direct control). Monetary instruments that form the basis of BI's policies will influence the economy through commercial banks that will use signals from BI for policy makers in determining the interest rates they will set for the products they sell.(Purba et al., 2024).

The relationship between money supply, interest rates, and exchange rate fluctuations has been widely analyzed through the lens of the Monetary Model of Exchange Rates, which states that an increase in the money supply causes currency depreciation, while higher interest rates attract foreign capital and cause appreciation. Dornbusch introduced the overshooting hypothesis, which argues that in the short run, exchange rates may over-respond to monetary shocks before adjusting to long-run equilibrium.(Adamy et al., nd)Interest rates are a key monetary transmission mechanism in the IS, LM, AD, and AS models. An increase in the money supply will lower real interest rates and the cost of capital and increase business investment.(Novalina & Rusiadi, 2018).

Within the macroeconomic policy framework, the financial sector serves as a transmission tool for monetary policy. Therefore, shocks experienced by the financial sector also influence the effectiveness of monetary policy. Friedman identified several impacts resulting from shocks in financial markets on the transmission of monetary policy. First, the phenomenon of monetization and securitization, in the form of innovations in financial products, causes changes in the definition, scope, and behavior of the money supply. This phenomenon has the potential to create instability in the relationship between prices (inflation) and the money supply, reducing the central bank's ability to control monetary values. Second, the growing development of the financial sector encourages a tendency for decoupling between the monetary and real sectors. Consequently, the causality between monetary variables and various variables in the real sector becomes increasingly complex and difficult to predict. The demand for money function, used as a monetary management tool, exhibits less stable behavior.(Inggrid, 2006)When the financial sector slumps, the national economy also slumps. Likewise, when the economy stagnates, the financial sector is also affected, as the banking intermediation function fails to function normally (Kiryanto, 2007). A healthy and dynamic economy requires a financial system capable of efficiently channeling funds from savers to those with productive investment opportunities.(Indrakusuma, 2020).

Research Methodology

Using time series data, the data analysis method used in this study is Vector Autoregressive, with an assumption testing phase first performed. The Vector Autoregressive method is one method used to project systems with time variables to analyze dynamic impacts. These impacts are disturbance factors present in the variable system. This model is a reliable analytical tool in describing data and forming reliable multivariate forecasting equations. The VAR model is a system of equations that shows each variable as a linear function of a constant and the lag value of the variable itself and the lag value of the other variables in the system of equations. Therefore, the explanatory variables in VAR include the lag values of all independent variables in the system. The advantage of VAR is that it is classified as a simple model. In VAR, we do not need to worry about distinguishing between endogenous and exogenous variables. Estimation is simple. It is easy to study the interrelationships between economic variables, by making all variables endogenous.

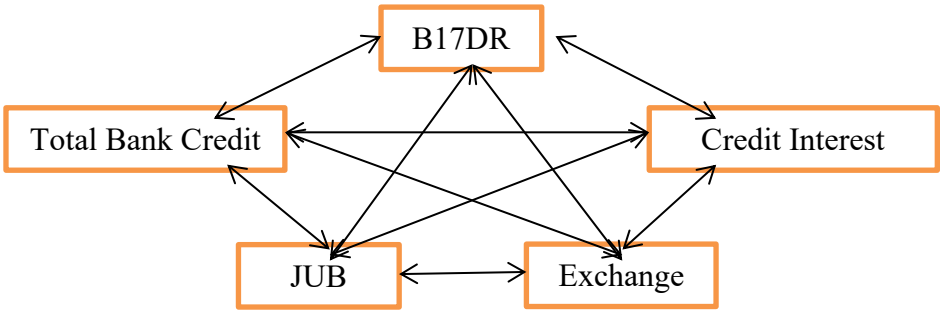

Figure 1. VAR Conceptual Framework

$JUB_t = \beta_{10}B17DRR_{t-p}+\beta_{11}TKB_{t-p}+\beta_{12}JUB_{t-p}+ \beta_{13}SKB_{t-p}+\beta_{14}NT_{t-p}+ e_{t1}$
$B17DRR_t = \beta_{10}B17DRR_{t-p}+\beta_{11}TKB_{t-p}+\beta_{12}JUB_{t-p}+ \beta_{13}SKB_{t-p}+\beta_{14}NT_{t-p}+ e_{t1}$
$EXCHANGE\ RATE_t = \beta_{10}B17DRR_{t-p}+\beta_{11}TKB_{t-p}+\beta_{12}JUB_{t-p}+ \beta_{13}SKB_{t-p}+\beta_{14}NT_{t-p}+ e_{t1}$
$TOTAL\ BANK\ CREDITt = \beta_{10}B17DRR_{t-p}+\beta_{11}TKB_{t-p}+\beta_{12}JUB_{t-p}+ \beta_{13}SKB_{t-p}+\beta_{14}NT_{t-p}+ e_{t1}$
$CREDIT\ INTEREST\ RATEt = \beta_{10}B17DRR_{t-p}+\beta_{11}TKB_{t-p}+\beta_{12}JUB_{t-p}+ \beta_{13}SKB_{t-p}+\beta_{14}NT_{t-p}+ e_{t1}$

Where :

JUB = Amount of Money in Circulation (Percentage)
B17DRR = B17DRR (Percent)
NT = Exchange Rate (Percent)
TKB = Total Bank Credit (Percent)
SBK = Credit Interest Rate (Percent)
et = Random disturbance
p = lag leng.

Results

The results of the assumption test on the research variables show the following results in the table below.

4.1 Stationarity Test

Table 1. Results of the Stationarity Test of the 2nd Level of Difference

Variables	ADF T-Statistic	Probability ADF	Information
B17DRR	-4.122733	0.0081	Stationarity
JUB	-4.504570	0.0047	Stationarity
NT	-4.827189	0.0020	Stationarity
SBK	-3.993150	0.0124	Stationarity
TKB	-4.130070	0.0073	Stationarity

Source: Data processed by Eviews 12

The results show that all variables meet the stationarity requirements in the 2nd Difference, where the ADF T-statistic is smaller than the Critical Value and the ADF probability is also smaller than the significance level of 0.50.

Optimal Lag Level Test.

Table 2. Optimal Lag Level Test Results

Vector Autoregression Estimates LAG 1	
Akaike information criterion	35.23291
Schwarz criterion	36.70328

Number of coefficients	30
Vector Autoregression Estimates LAG 2	
Akaike information criterion	30.89415
Schwarz criterion	33.54992
Number of coefficients	55

Source: Data processed by Eviews 12

The Schwarz Criterion (SC) and Akaike Information Criterion (AIC) are used to determine the optimal lag. This optimal lag has lower AIC and SC values than the other lags. From the lag determination results in Table 2 above, the AIC value at lag 2 (33.54992) is lower than lag 1 (36.70328) which shows that lag 2 is more optimal. Therefore, the analysis can be continued using lag 2. Next, analyze the results of the lag structure stability test as described in the table and figure as follows:

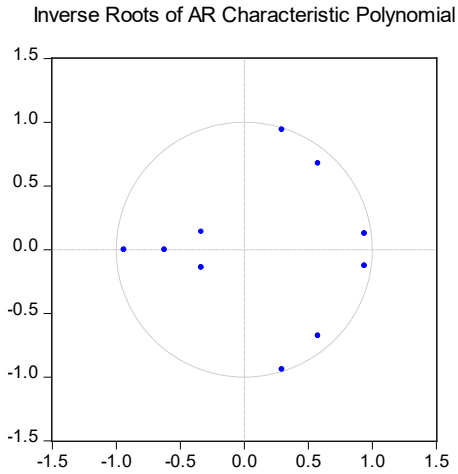

Figure 1. Lag Structure Stability
Source: Data processed by Eviews 12

The results of the VAR stability test shown in Figure 4 show that the points are in a circle, which means they are stable.

4.2 Cointegration Test

Table 4. Cointegration Test Results

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistics	Critical Value	Prob.**
None *	0.996231	160.4246	69.81889	0.0000
At most 1 *	0.870339	71.13111	47.85613	0.0001
At most 2 *	0.707486	38.44582	29.79707	0.0040
At most 3*	0.651052	18.77794	15.49471	0.0154
At most 4	0.113779	1.932624	3.841466	0.1645

Source: Data processed by Eviews 12

The Johansen cointegration test reveals a pattern of relationships between variables. Table 3 above shows four cointegrated equations at a 5% significance level. This demonstrates a long-term relationship between the variables.

4.3 Impluse Response Function Test

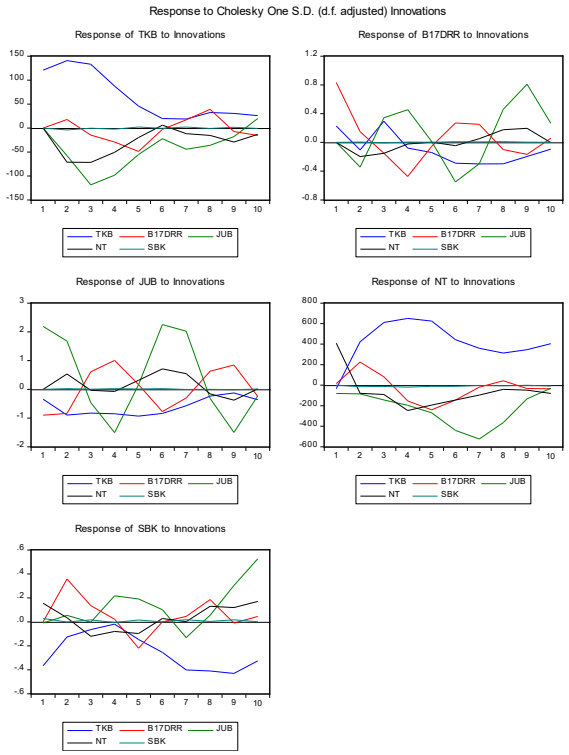

Figure 3. Impulse Response Function

Source: Data processed by Eviews 12

The figure shows the results of an Impulse Response Function analysis, which shows how each variable responds to a shock of one standard deviation from the other variables in the VAR system. In the initial period, which reflects the short term, TKB shows a significant response to shocks from B17DRR and JUB before gradually declining. B17DRR itself exhibits relatively small fluctuations and quickly returns to its equilibrium point, indicating a short-lived shock effect. JUB displays a repetitive, wavy pattern with moderate amplitude, indicating an adjustment cycle before beginning to subside. NT initially reacts quite strongly to shocks, especially from TKB, then its movements gradually taper off as the period progresses. SBK shows a highly fluctuating response at the beginning, then gradually approaches stability. Entering the final period, which reflects the long term, all variables tend to return to their equilibrium or zero line, although some, such as JUB and SBK, still exhibit slight fluctuations with small amplitudes. This pattern indicates that the relationship between the variables is dynamic in the short term, but its effect generally fades and almost disappears in the long term.

4.4 Forecast Error Variance Decomposition Test

Table 5. Forecast Error Variance Decomposition Test Results

Variance Decomposition of NT:						
Period	SE	TKB	B17DRR	JUB	NT	SBK
1	418,8582	0.668047	0.134794	3.630903	95.56626	0.000000
2	647.7148	42.98608	12.26330	3.226018	41.47348	0.051117

3	910.4321	66.80933	7.020672	4.138126	21.98793	0.043941
4	1172,877	71.06614	5.928415	5.286649	17.66599	0.052803
5	1390,871	70.73163	7.202923	7.513819	14.50819	0.043445
6	1538,729	66.11725	6.770627	14.33706	12.73426	0.040805
7	1667,815	60.92830	5.776580	22.08525	11.17496	0.034904
8	1736,733	59.42971	5.390863	24.78565	10.36063	0.033156
9	1776,743	60.57806	5.184631	24.23253	9.973065	0.031713
10	1824,570	62.36107	4.953318	23.00565	9.648227	0.031738

Source: Data processed by Eviews 12

This Variance Decomposition table for NT explains the proportion of NT variation explained by shocks to TKB, B17DRR, JUB, NT itself, and SBK, differentiated by time horizon. In the short term, namely periods 1–2, NT variation almost entirely comes from NT shocks themselves. In the first period, NT itself explains 95.57% of the variation, while the contribution of other variables is still very small, with TKB only 0.67%, B17DRR 0.13%, JUB 3.63%, and SBK contributing nothing at all. Entering the second period, the role of NT itself decreases to 41.47% while the contribution of TKB jumps drastically to 42.99% and B17DRR increases to 12.26%, indicating the beginning of a significant influence from the banking sector and monetary policy. In the medium term, around periods 3–6, the contribution of NT itself continues to decline from 21.99% to 12.73%. TKB became the largest source of variation, ranging from 66.81% in period 3 to 66.12% in period 6. Meanwhile, the influence of B17DRR fluctuated in the range of 5–7%, and JUB began to increase its contribution from 4.14% in period 3 to 14.34% in period 6. SBK continued to contribute very little, less than 0.06% throughout this period. In the long run, periods 7–10, the role of TKB remained dominant but began to decline slowly from 60.93% to 62.36% at the end of the period, while JUB reached its highest portion in periods 8–9 at around 24% before declining slightly in period 10 to 23.01%. The contribution of NT itself continued to decline to 9.65% at the end of the period, indicating that in the long run, NT variation is explained more by shocks from TKB and JUB than by itself. The influence of B17DRR is relatively small but consistent in the range of 4.9–5.8%, and SBK remains insignificant with a contribution of around 0.03%. Overall, this pattern indicates that in the short term, NT is heavily influenced by itself, in the medium term, dominance shifts to TKB, and in the long term, the largest influence comes from the combination of TKB and JUB, while B17DRR and SBK play a relatively small role across the time horizon.

Conclusion

Monetary policy transmission in Indonesia plays a central role in maintaining rupiah stability, controlling inflation, and influencing financial sector activity. Based on VAR estimation results involving the variables B17DRR, JUB, NT, TKB, and SBK, it was found that the relationship between the variables is dynamic with varying responses across the short, medium, and long term. The Impulse Response Function results indicate that monetary policy shocks have a significant impact on financial sector variables, especially in the initial period, but the effect tends to fade over time. Meanwhile, the Variance Decomposition results confirm that in the short term, NT movements are more influenced by the currency itself, while in the medium to long term, the largest influence comes from TKB and JUB, reflecting the important role of bank credit and the money supply in exchange rate stability. The role of B17DRR and SBK remains but is relatively small throughout the period. These findings indicate that the effectiveness of monetary policy in Indonesia is largely determined by the response of the financial sector, particularly through the credit and liquidity channels. Therefore, strengthening

the banking intermediation function and liquidity management are key to strengthening monetary policy transmission in the future.

References

[1] Adamy, L., Nasution, LN, & Efendi, B. (nd). Analyzing the Transmission of Monetary Policy and Exchange Rate Shocks on Trade Balance in Asian Economies : A Panel ARDL Approach. 342–349.

[2] Arianti Nasution, A., Putri Balqis, K., Aulia Zalyanti, C., Sari Harahap, IT, & Batubara, M. (2024). Monetary Policy Transmission Mechanisms in Developing Countries. Islamic Economics and Banking, 9(3), 1984–1998. https://www.doi.org/10.30651/jms.v9i3.23204

[3] Dila Fahira, Sugianto Sugianto, & Muhammad Syahbudi. (2023). The Effect of Monetary Policy Transmission on Economic Growth in North Sumatra. Mutiara: Journal of Research and Scientific Work, 1(6), 409–420. https://doi.org/10.59059/mutiara.v1i6.814

[4] Indrakusuma, DA (2020). Analysis of the Influence of Financial Sector Indicator Development on Indonesia's Economic Growth During 1980-2019. Journal of Economic Development Dynamics, 3(2), 105–116. https://doi.org/10.14710/jdep.3.2.105-116

[5] Inggrid. (2006). Financial Sector and Economic Growth in Indonesia: A Causality Approach in the Multivariate Vector Error Correction Model (VECM). Journal of Management and Entrepreneurship, 8(1), pp. 40-50. http://puslit2.petra.ac.id/ejournal/index.php/man/article/view/16508

[6] Muhayatsyah, A., & Kamal, H. (2023). Analysis of the Influence of Monetary Policy Transmission and Liquidity Performance on the Capital Structure Policy of Islamic Banks in Indonesia. Scientific Journal of Islamic Economics, 9(03), 3847–3857. https://jurnal.stie-aas.ac.id/index.php/jei/article/view/10673

[7] Mujasmara, FD, Talita, RT, & Andriani, MS (2024). Monetary Policy Transmission and the Role of Central Banking in Economic Stability. Journal of Social Science Research, 4(2), 2446–2459.

[8] Novalina, A., &Russiadi, R. (2018). Monetary Policy Transmission : Is Maintaining the Price and Poverty Stability Effective? Traces, 11(1), 78–91. https://doi.org/10.15294/jejak.v11i1.12652

[9] Purba, M.L., Sihotang, J., & Simatupang, F.C. (2024). Monetary Policy Transmission and Its Impact on the Indonesian Economy. Journal of Economic, Management, Accounting and Technology, 7(1), 78–90. https://doi.org/10.32500/jematech.v7i1.5794

[10] Rangkuty, D.M., Yusuf, M., Rusiadi, R., Efendi, B., & Subakti, P. (2023). Analysis of Monetary Indicators on Economic Growth in Indonesia. E-Mabis: Journal of Economics, Management, and Business, 24(2), 113–122. https://doi.org/10.29103/e-mabis.v24i2.1049

[11] Russidi, R., Ade Novalina, Bhaktiar Effendi, & Anita N Hutasoit. (2022). Ardl Panel Model of International Financial System and Monetary Policy of Asia Pacific Economic Cooperation. Proceedings of The International Conference on Economics and Business, 1(1), 83–92. https://doi.org/10.55606/iceb.v1i2.185

[12] Sanusi G., P. (2025). Latest Journal of Applied Economics Latest Journal of Applied Economics. 6(3), 11–19.