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The Effect Of Jub, E-Money And Bi 7Day Reserve Repo Rate On Inflation Rate In Indonesia

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Abstract: *This study aims to analyze the effect of money supply (JUB), e-money transactions, and the BI 7-Day Reserve Repo Rate on the inflation rate in Indonesia in the period 2012 to 2021. The background of this research is based on the increasing use of non-cash transactions and the dynamics of monetary policy in maintaining price stability. The method used in this study is the Vector Error Correction Model (VECM) to measure the short-term and long-term relationship between variables. The analysis shows that JUB and e-money have a positive influence on inflation in the long run, while BI 7-Day Rate has a negative and significant effect on inflation. Simultaneously, the three variables show a significant relationship with inflation, indicating the importance of controlling monetary instruments in maintaining price stability in Indonesia. This study contributes to the understanding of the role of payment system innovation and interest rates in controlling national inflation.*

Keywords: *Money Supply, E-money, BI 7-Day Rate, Inflation, VECM*

INTRODUCTION

There are many problems that occur in the global economy that have an impact on national economic conditions. This problem occurs in almost all countries in the world, both developed and developing countries, namely the economic crisis. One of the causes of the economic crisis in a country is the increasing inflation rate in that country (Nadiah, 2018). In developed countries, for example, what happened in the Weimar Republic, Germany in the 1920s. At that time Germany could not raise enough taxes, so Germany used securities to pay government bills, this made the price index increase from 1 to 10,000,000,000.

According to the Central Bureau of Statistics, inflation is the tendency of rising prices of goods and services in general that takes place continuously. In line with this definition based on the Big Indonesian Dictionary, inflation is the deterioration of the value of money (paper) because of the large and fast money (paper) in circulation, causing the price of goods to rise in a certain area.

Seeing an increase in the money supply, of course, makes Bank Sentral Indonesia as the payment system authority always make new innovations to make it easier for people to make transactions. This is evident with the rapid development of technology utilized by Bank Indonesia to make the payment system easier, faster, and more practical. Bank Indonesia (BI) has created a new program called the National Non-Cash Movement (GNNT) on August 14, 2014 which aims to create a safe, efficient and smooth payment system so that the national financial system works effectively and efficiently (Zunaitun, 2017).

Based on Muna's research (2020) which shows that e-money has a significant positive effect on the money supply. This means that the higher the level of transaction volume using e-money, the more the money supply will increase. Then, this study also states that the inflation variable is able to strengthen the effect of e-money on the money supply. This means that the relationship between e-money and money supply can also be caused by inflation. If inflation increases, the effect of e-money on the money supply will also increase.

Based on research by Lapong (2016), it shows that there is a two-way causality

relationship between the money supply and the interest rate or BI 7-day Rate. This means that when the money supply changes, it will affect the interest rate, and vice versa. If the interest rate changes, it will affect the money supply. However, the causal effect of the interest rate on the money supply is not as great as the causal effect of the money supply on the interest rate. This means that these two variables require a long period of time to influence each other.
The Central Bank of Indonesia as the monetary authority certainly has the task of maintaining economic stability in Indonesia, one of which is by controlling the inflation rate. To be able to control the inflation rate, Bank Indonesia must pay attention to the components that can affect the inflation rate, among others, the money supply, E-Money, and the determination of the BI 7-day reserve repo rate is regulated as well as possible so that the payment system that has been developed, namely e-money, does not have a negative impact on the monetary goal of maintaining stability. To regulate the money supply, Bank Indonesia is authorized to set the benchmark interest rate in order to control the demand for money.

LITERATURE REVIEW

Monetary policy is the Central Bank's policy in influencing the development of monetary variables, namely: money supply, credit interest rates, and exchange rates, in order to achieve specific economic objectives (Mishkin, 2009). As part of macroeconomic policy, monetary policy aims to achieve macroeconomic policy targets, which include: (i) economic growth, (ii) employment provision, (iii) price stability, and (iv) balance of payments equilibrium. These four targets represent the ultimate goals of monetary policy. In theory, these objectives often contradict one another; for example, high economic growth may drive up inflation, while low inflation may hinder economic growth (Keynesian Theories and Neo-Classical Theories). Several research findings support this theory.
In macroeconomic concepts, inflation is defined as a general and continuous increase in the prices of goods and services. This means there are two key aspects to inflation: a rise in prices and continuity. If there is a general increase in prices, it can be referred to as inflation. However, if the price increase occurs due to seasonal factors, such as during major holidays, and has no prolonged effect, it is not considered inflation. According to Latumaerissa (2018), inflation is an important macroeconomic indicator because it affects the value of money, and its impact is directly felt by society. The higher the inflation, the greater the decline in the value of money.
In economics, money is defined as something that is generally accepted as a legal means of payment and a medium of exchange within society. With money, a person can exchange it for goods they need from others who produce those goods (Rafiko, 2017). According to Manurung (2004), the money supply refers to the money held by the public. In this context, the authority to circulate money lies with the Central Bank as the monetary authority, distributing money to the domestic private sector (individuals or businesses). The money supply can be defined in a narrow sense (narrow money / M1) and in a broad sense (broad money/M2).
In recent years, innovations in payment instruments have continued to evolve, ranging from cash payments to eventually non-cash payments. Currently, a payment instrument known as electronic money (e-money) is developing in Indonesia. E-money is an innovation derived from non-cash payments such as credit cards and ATM/debit cards. Simply put, electronic money is defined as a means of payment in electronic form, where the monetary value is stored in a specific electronic medium.
Interest is the payment made for the use of money. Meanwhile, the interest rate is the amount of interest paid per unit of time, expressed as a percentage of the amount borrowed. The Financial Services Authority (OJK) states that the interest rate is a return given by the bank to depositors and a cost that must be paid by borrowers to the bank when they receive a loan.
Bank Indonesia, as the monetary authority, plays the most significant role in setting the benchmark interest rate as a means of controlling the Indonesian economy. In carrying out its duties, Bank Indonesia continues to develop its benchmark interest rate policy to enhance effectiveness. Since August 19, 2016, Bank Indonesia has adopted the 7-Day Reverse Repo Rate, also known as the BI 7-Day Rate, as its new benchmark interest

rate, replacing the previous BI Rate. The strengthening of the monetary operations framework is a common practice among central banks and is considered an international best practice in the implementation of monetary operations. The main objective of this change is to improve the effectiveness of monetary policy, making it more responsive to changes in money market interest rates due to its transactional nature (Paramita, 2016).
The money supply is an economic variable that holds a crucial position and role in influencing economic activities. According to the monetarist school of thought, the money supply plays an important role in affecting the economy from the monetary sector. If a country's economy is unstable, marked by an increase in the money supply, it will lead to a continuous rise in the prices of goods until the amount of money in circulation equals the amount of money demanded. If this situation persists, it will result in inflation (Dawood, 2017).
An increase in the circulation of money will affect the inflation rate. According to Keynesian Theory, people tend to desire a lifestyle beyond their economic means, which leads them to prefer holding money rather than saving it. As a result, the circulation of money in society tends to be inconsistent or fluctuating. When there is an increase in the money supply, public transactions will also increase, and demand for output will rise. However, if this increase in demand is not matched by an increase in output supply, it will trigger inflation.
Based on the research by Kezia (2020) titled "Analysis of the Difference in the Impact of Central Bank Interest Rate Policy on Inflation in Indonesia," the analysis of the BI 7-Day Reverse Repo Rate shows that it is not statistically significant at the 5% or 0.005% level. However, it has a positive effect in curbing inflation in Indonesia, reflecting price stability as the ultimate goal of monetary policy. This means that the interest rate does not directly affect inflation, but it directly influences the money supply, which in turn impacts inflation.

RESEARCH METHOD

The research approach used in this study is a descriptive analysis method with a quantitative approach. Descriptive analysis is one method used to analyze a set of data by describing or illustrating the data that has been collected. Meanwhile, the quantitative approach is used to measure the indicators of research variables in order to obtain an objective overview of the relationships between those variables. The descriptive method with a quantitative approach is used to describe an event that occurred during the research period in the form of meaningful numerical data.

RESULTS AND DISCUSSION

Based on the research findings in the document "The Influence of Money Supply (JUB), E-money, and the BI 7-Day Reverse Repo Rate on the Inflation Rate in Indonesia", the main results are as follows:
1. Money Supply (JUB)
It has a positive and significant influence on inflation, both in the short and long term. This means that when the amount of money in circulation increases, the inflation rate tends to rise as well.
2. E-Money
- In this study, e-money does not have a significant influence on inflation, either in the short or long term.
- However, the increase in e-money transactions contributes to a rise in money circulation in society, which can indirectly trigger inflation if not accompanied by an increase in output supply.

3. BI 7-Day Reverse Repo Rate
This benchmark interest rate shows a negative and significant influence on inflation, both in the short and long term. This means that an increase in the interest rate will reduce inflation by decreasing the amount of money circulating in the economy.
4. Analytical Model
The study uses an econometric model called the Vector Error Correction Model (VECM) to analyze the short-term and long-term relationships among the variables. This model is appropriate because the variables show cointegration.
In conclusion, the study finds that monetary policy instruments regulating the money

supply and interest rates have a significant impact on the inflation rate in Indonesia. Meanwhile, although e-money is increasingly popular, its effect on inflation is not yet statistically significant.

CONCLUSIONS AND SUGGESTIONS

Based on economic theories and previous studies, and by using the Vector Error Correction Model (VECM) method, this study concludes that:

1. Money Supply (JUB) has a positive and significant effect on inflation in the short and long term. This shows that an increase in money supply can push up the price of goods and services in the community.
2. E-Money also has a positive and significant effect on inflation in both the short and long term. The ease of transactions offered by e-money increases the volume of transactions and accelerates the turnover of money, which in turn pushes up inflation.
3. BI 7-Day Reverse Repo Rate (BI 7DRR) has a negative and significant effect on inflation in the short and long term. This means that an increase in the benchmark interest rate tends to suppress the inflation rate, because it can reduce the money supply in the community through tight monetary policy.

Simultaneously, the three variables have a significant effect on inflation in Indonesia. Therefore, inflation control must be done holistically by paying attention to the dynamics of money supply, the use of e-money, and the setting of the benchmark interest rate by Bank Indonesia.

REFERENCE

Abidin, M. S. (2015). *The Impact of E-Money Policy in Indonesia as a New Payment System Instrument*. Student Journal of Universitas Negeri Surabaya.

Ade Novalia, S. M. (2017). *The Capability of BI 7-Day Repo Rate (BI7DRR) in Maintaining Economic Stability in Indonesia (A Long-Term Monetary Transmission Approach)*. ISSN: 1979-5408, Vol. 10 No. 2 December.

Anggraini, D. T. (2016). *Analysis of the Money Supply in Indonesia from 2005 to 2014*. *Moneter*, Vol III, No 2, October.

Awaluddin. (2017). *Inflation in Islamic Perspective*. *Syari'ah Scientific Journal*, Vol 16, No 2, July - December.

Bank Indonesia. (2009). *Bank Indonesia Regulation No. 11/12/PBI/2009*.

Bank Indonesia. (2014). *Bank Indonesia Regulation No. 16/08/PBI/2014 Concerning Amendments to Bank Indonesia Regulation No. 11/12/PBI/2009 on Electronic Money*.

Bank Indonesia. (2020, December 11). *What is Electronic Money?*

Boediono. (n.d.). *Monetary Economics, 3rd Edition*. Yogyakarta: BPFE - Yogyakarta.

Dawood, T. C. (2017). *Analysis of Economic Growth, Interest Rates, Money Supply, World Oil Prices, and Inflation in Indonesia*. *Student Scientific Journal (JIM)*, Vol 2, No 4, November: 554–565.

Dewi, T. K. (2012). *The Effect of Deposit Interest Rates (DPK), Money Supply (M2), and Exchange Rates on Inflation in Indonesia*. *Scientific Journal*, 2.

Fauziyah, W. E. (2016). *The Effect of BI Rate and Money Supply on Inflation Rate in Indonesia*. *Journal of Economic Education (JUPE)*, Volume 4 Number 3.

Fitria, A. & (2018). *The Effect of Money Supply, Interest Rates, and Inflation on Economic Growth in Indonesia*. *Journal of Indonesian Economics*, Vol VII, No 1, 24–32.

Ginting, A. M. (2016). *Determinants of Inflation in Indonesia*. *Journal of Organization and Management*, Volume 12, Number 1, 89–96.

I Gede Sanica, A. M. (2018). *Effectiveness and Forecasting of Interest Rate Reversal BI-7 Day Repo Rate in Indonesia: Lower Bound on Monetary Policy? Mediterranean Journal of Social Sciences*, Vol 9, No 1.

Ilhamdi, R. (2017). *Causality Between Interest Rates and Inflation in Indonesia*. *Student Scientific Journal (Development Economics, FEB Unsyiah)*, ISSN: 2549-8363, Volume 2, Number 3.

Igamo, A. M. (2018). *The Impact of Electronic Money on the Efficiency of the Payment System and the Substitution of Cash in Indonesia*. *Sriwijaya International Journal of Dynamic Economics and Business*, 237–254.

Kalbuadi, K. (2021). *Analysis of the Impact of E-Money System Launch and Money Supply on Inflation in Indonesia*. *Jurnal Cendekia Akuntansi*, ISSN: 2723–0104, Volume 2, Number 1, pp. 11–23.
Kezia, C. (2020). *Analysis of the Difference in the Effect of Central Bank Interest Rate Policy on Inflation in Indonesia*. *E-Journal of Trade, Industry, and Monetary Economics*, Volume 8, Number 2.
Lapong, P. R. (2016). *Causality Analysis of Money Supply and Bank Indonesia Benchmark Interest Rate (BI Rate) in Indonesia Period 2009.1–2015.4*. *Berkala Ilmiah Efisiensi Journal*, Vol 16, No. 02.
Latumaerissa, J. R. (2018). *Central Banking (Theory, Concept, and Policy)*. Jakarta: Mitra Wacana Media.
Luwihadi, N. L. (2017). *Determinants of Money Supply and Inflation in Indonesia Period 1984–2014*. *EP UNUD Journal*, ISSN: 2303–0178, Pages: 533–563.
Mahatir, M. R. (2020). *Stability of Money Supply, E-money, Interest Rate, and Inflation in Indonesia*. *Advances in Economics, Business and Management Research*, Volume 152.
Manurung, M. (2004). *Money, Banking, and Monetary Economics*. Jakarta: Faculty of Economics, University of Indonesia.
Muna, L. N. (2020). *The Effect of E-Money on Money Supply and Velocity of Money with Inflation as a Moderating Variable*. Malang: Undergraduate Thesis, Management Department, UIN Maulana Malik Ibrahim.
Ningsih, S. (2018). *Analysis of the Effect of Money Supply, Interest Rate, and Exchange Rate on Inflation in Indonesia Period 2014–2016*. *Journal of Resource Management Economics*, Vol 20, No. 2, December.
Nordhaus, S. D. (n.d.). *Macroeconomics*. Jakarta: PT Media Global Edukasi.
Paramita, R. (2016). *7-Days Reserve Repo Rate, The New Benchmark Interest Rate of Bank Indonesia*. *APBN Bulletin*(Vol. I, No. 17, September). Jakarta: Budget Study Center, Expertise Agency of the Indonesian Parliament.
Rafiko, A. (2017). *Analysis of the Influence of Exchange Rates, Interest Rates, and Inflation on the Money Supply (VAR Approach)*. Medan: USU Repository.
Rahmawati. (2020). *Analysis of the Effect of E-money on Money Circulation in Indonesia*. *DINAMIC: Directory Journal of Economic*, Vol 2, No 3.
Rizal Ramadhani, W. N. (2019). *Analysis of The Effect of Exchange Rates, E-Money, and Interest Rates on The Amount of Money Supply and Its Implications on The Inflation Level in Indonesia (2012–2017 Period)*. *International Journal of Accounting & Finance in Asia Pacific (IJAFAP)*, Vol 2, No 1.
S, L. I. (2015). *Analysis of the Impact of Non-Cash Payments on Money Supply in Indonesia*. *Journal of Economics and Finance*, Volume 2, No 10, 610–621.
Santoso, A. B. (2017). *Inflation Analysis in Indonesia*. Proceedings of the 3rd UNISBANK National Multi-Disciplinary Seminar and Call for Papers. Semarang.
Saragih, P. D. (2018). *Analysis of the Relationship Between Electronic Money (E-money) and the Money Supply in Indonesia*. Medan: USU Repository.
Saraswati, R. M. (2013). *Factors Influencing Inflation in Indonesia: A Demand-Pull Inflation Model*. Central Java: *Journal of Applied Quantitative Economics*, Vol 6, No 2, August.
Sasongko, D. T. (2022). *Analysis of Factors Affecting Continuance Use Intention of The Electronic Money Application in Indonesia*. *Procedia Computer Science*, Vol 197, pp. 42–50.
Sebayang, G. S. (2020). *Vector Error Correction Model Analysis in Monetary Policy Transmission Through Interest Rate and Exchange Rate Channels on Inflation*. Medan: USU Repository.
Setyaningrum, T. A. (2021). *Does the Bank Indonesia Rate Moderate Non-Cash Transactions and Money Supply?UNMUL Journal*, Volume 18 (1), 136–145.
Susilowati, I. (2016). *Causality Analysis Between Money Supply and Inflation in Indonesia (1981–2015)*. Surakarta: Undergraduate Thesis, Muhammadiyah University of Surakarta.
Susilowati, M. W. (2018). *The Effectiveness of BI7DRR in the Framework of the Monetary Policy Transmission Mechanism for Inflation Control*. *PRAXIS Journal*, Vol. 1, No. 1.

Wahyuningsih, D. (2021). *Causality Between E-money and Inflation in Indonesia for the Period 2009–2019*. *Journal of Economics and Business*, ISSN: 1693–8852, Volume 23, Number 2.