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MONETARY INDICATORS OF THE STABILITY OF PRICES

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Abstract. *This study aims to analyze the contributions of the variable interactions of monetary policy in the stability of goods and services prices. Where is the monetarypolicy variable (inflation, kurs, consumer price index, gross domestic products, the money supply, and interest rates). Research in conducted in the country of Indonesia and uses secondary data or time series from 2008 to 2021. The data analysis model in this study is Simultaneous Model. Simultaneous equations to analyze the relation between independent and variable variables found in the research country. Simultaneous analysis of equations on statistical test common equation 1 suggeststhat variable interest rates, money distribution, exchange rates and consumer priceindexes have significant adverse effects on the inflation. Whereas in the same equation2, it suggests that gross domestic product variables have a positive relationship that is significant to the ihk. And inflation has a negative relationship significantlyinsignificant to consumer price index. For this reason, the researcher hopes that the monetary authority, namely Bank Indonesia, can improve monetary stability and maintain the BI rate in regulating the money supply so that it can suppress theinflation rate as an effort to stabilize the prices.*

Keywords: *Exchange rate, Inflation, Monetary, Prices.*

INTRODUCTION

Economic stability is a benchmark for the development of a country's economy. However, the issue of financial stability is also a moral issue, especially for developing countries. Almost every set and creating country deals with security and economic development issues. One issue that receives special attention in each country is the inflation rate. Indonesia is a developing country whose financial life relies heavily on a framework related to money and the world economy.

More appropriate economic growth is expected using per capita payment development requiring an increase in GDP or national income. Total national output is

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not limited by utilizing elements of job creation, capital (public reserve funds, taxes, government credits, unemployment jobs, expansion, and foreign capital), fixed assets, and innovation.

The change in information made from the consumer price index is a significant macroeconomic indicator that outlines the inflation rate. It can illustrate an example of public utilization because this consumer price index estimates changes in the typical weighted cost of labor and products consumed by the family (household) or society in a certain period. The value of this consumer price index shows the average change in the price paid by consumers (community) of a specific group of goods and services.

Monetary policy is a regulation aimed at achieving inner balance in the country's economy (high economic growth, cost dependence, balanced turnover of events, and external equilibrium). To achieve macroeconomic goals. Economic stabilization can be foreseen by open-door business, cost solidity, and a fair balance of global payments. Assuming that the health of financial movements is compromised, money-related strategies can be used to rebuild (adjustment measures). The economic area will initially feel the impact of money-related arrangements, which are then transferred to the original site. Monetary reliability makes costs strong. A stable economy implies low or reasonable spending for the local area. After all, if the economy is unstable, expenditures on the regions will be high. Complicating what speculation will relate to.

The table and chart above explain the inflation, GDP, JUB, SB, CPI, and Exchange Rate in Indonesia for the 2008-2021 period. The highest inflation rate since 2008-2020 was located in 2008, which was 11.06% because, at that time, a global crisis hit the world and had a destructive impact on the economy in Indonesia. The lowest fell in 2020, 1.68%, and again increased in 2021 by 1.87%. The GDP rate also increased in 2010 by 6.22% and in 2021 by 7.70%. The Interest Rate can be assumed that Indonesia in 2009 decreased by 6.50% from 9.25% the previous year. The CPI increase in 2020 was 105.68 rupiah and was the lowest in the last year. The highest exchange rate in 2018 was 14236.94 US$, and the lowest in 2011 was 8770.43 US$, followed by 2010 cesarean 9090.43 US$ (WorldBank, 2022).

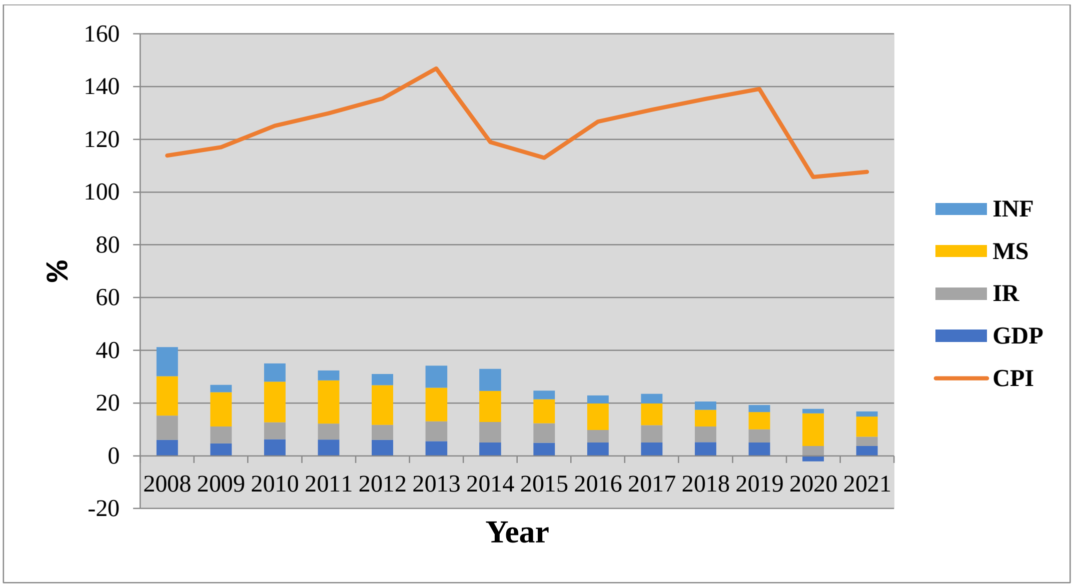

Figure 1. The Monetary Indicators of Indonesia
Source: World Bank, 2022

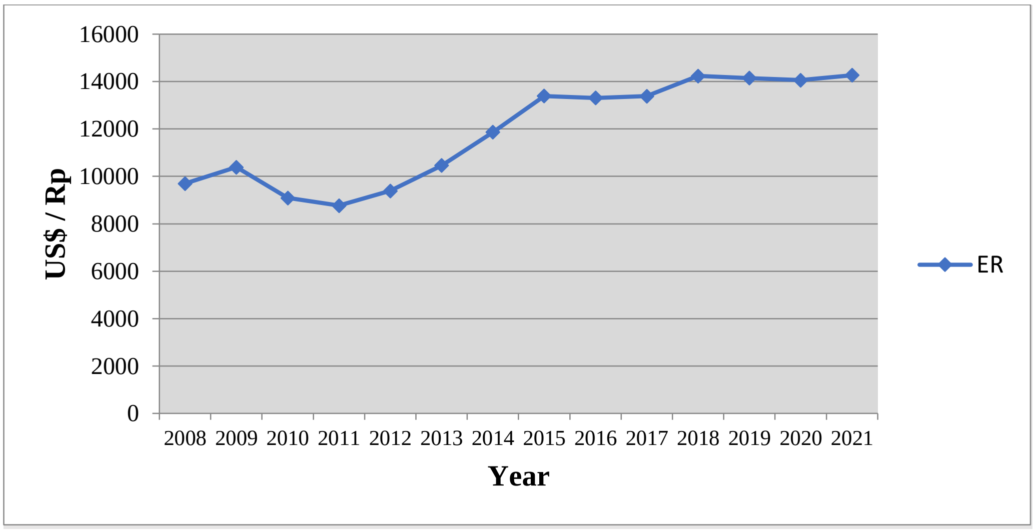

Figure 2. The Exchange Rate of Indonesia
Source: World Bank, 2022

Based on the chart above, there are various fluctuations in Indonesia's money supply development. The increase in 2008 occurred due to rising inflation due to the global economic crisis, thus making people more consumptive in buying goods or services (Mankiw, 2006) states that countries with high money growth will have high inflation rates as well, but conversely if countries with low growth rates will also have low inflation rates.

A factor affecting inflation is the exchange rate. The exchange rate is a significant large-scale variable in the economy because the exchange rate is used to measure the level of a country's economy. Exchange rate instability will affect international investment and trade (Mishkin, 2017). Research shows (Manuela Langi Theodores, 2014) that a decrease in the value of a country's money against another country's monetary standards will drive up the increased cost of carrying merchandise, either unrefined components or semi-finished goods used for the production cycle. The exploration (Larasati, 2017), states that fluctuations in exchange rates affect the inflation rate.

LITERATURE REVIEW

Inflation is also closely related to the Consumer Price Index (CPI) because if the change in CPI is called inflation, assuming the difference in CPI is called deflation of goods and services. Changes in CPI are expected to measure changes in family living costs (Aji and Mukir, 2020). This adjustment of family costs is related to the individual's salary level. Assuming someone with a low salary usually spends more of the budget on their basic needs, this will spur checking the payment number. So that the level of expansion can be known by utilizing CPI, and expanding CPI will increase costs.

The effect of inflation on interest rates has become a topic of discussion among entrepreneurs, banks, shareholders, and other related parties. Interest is the exit fee for borrowing money. Inflation and interest rates have an inverse relationship where when inflation increases, and interest rates will decrease. There is a direct relationship between JUB growth and general prices or inflation. If inflation occurs, it is due to the growth of JUB. Inflation, wherever and whenever it happens, is a monetary phenomenon.

The high and tenacious rise in costs affects economic activity and individual success. As Sukarno (2008) points out, consistent costs will make a helpful exercise unhelpful. So owners of capital like to involve their money for speculative purposes. Rising costs also harm trading. Price increases prices make domestic products unable to compete in the world market. Then, at that time, commodities will be reduced. After all, the higher cost of household goods due to expansion makes the import of products cheaper.

The inflation rate has a significant effect on the rupiah exchange rate. This follows the theory of purchasing power Parity, which is the expectation of changes in the exchange rate due to differences in inflation rates.

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RESEARCH METHOD

The data analysis method used in this study is a simultaneous equation model. The simultaneous equation where two conditions distinguish synchronous conditions in this study uses the Two Stage Least Square (TSLS) approach with the reason for determining the degree of relationship and impact that occurs on the equation model. The TSLS technique is a strategy usually involved in assessing concurrent conditions. Techniques are used when the condition model is too repetitive (Widarjono, 2009).

The identification test for this research as below:

Table 1. Identification test

Equation	K-k	m-1	Results	Identification
I	4-2	3-1	2 = 2	Exact identified
II	4-2	1-1	2 > 0	Over identified

The equation I:

$$INF_t = \alpha_0 + \beta_1 IR_t + \beta_2 MS_t + \beta_3 ER_t + \beta_4 CPI_t + e_1 \quad (1)$$

The equation II:

$$CPI_t = \alpha_1 + \beta_5 GDP_t + \beta_6 INFt + e_2 \quad (2)$$

where:

INF = inflation (%)

IR = interest rate (%)

MS = money supply (%)

CPI = consumer price index (%)

ER = exchange rate (US$/Rp)

α = constant

β = coefficient

t = time

e = error term

FINDINGS AND DUSCUSSION

Indonesia is a developing country with a high average income distribution level, but in its actual state, each of these countries also has challenges maintaining economic stability. Inflation in Indonesia varies from year to year. In 2008 the high inflation rate was 11.06%; in this year, there was a global crisis, and in 2009 inflation fell by 2.78%. In 2013, it increased again, which was the highest inflation since the 2008 crisis caused by fuel prices. In 2020 Indonesia's inflation rate was 1.68%, the lowest, and in 2021 it rose again by 1.87%. The decline in GDP was quite drastic in 2020 by -2.03%, where all countries experienced a decrease in GDP until all touched the minus number. In 2008 it was 6.01%, and in 2009 it was 4.63%, a drop from the previous year. And in 2021, it rose again by 3.69%. In 2008 the interest rate was 9.25%, and in 2012 there was a decrease from 5.75% to the previous year of 6.00%. Then in 2013, it rose again to 7.50%. Then it decreased in 2016 to 4.75%, and in 2020 it fell to 3.75% the previous year by 5.00%. And in 2021, it was smaller than the last year by 3.50%. In Indonesia, the exchange rate weakened in 2008 by 9698.96 US$, and in 2011 it was cut by 8770.43 US$. But in 2021, the exchange rate is 14269.00 US$. The money supply in Indonesia from 2008 to 2021 fluctuated. In Indonesia, it decreased from 14.92% to 12.95% from the previous year in 2009. In 2011 it experienced an increase of 16.43% from the last year of 15.40%. In 2020, it increased by 12.40% from the previous year of 6.54%. And in 2021, it experienced a decrease from the last year of 7.70%. The CPI in Indonesia from 2008 to 2021 tends to be stable. It did not experience a drastic increase or decrease. Only in 2015 it experienced a rise of 112.99 rupiahs.

1) Normality test

In this study, the Jarque-Fallow test was used to test the data's normality. The criterion used is that if the probability value of the Jarque-Fallow (JB) test > alpha 0.05, then the information is said to be expected. The table shows that the probability value is 0.8586 > 0.05, so the normality assumption has been met.

2) Autocorrelation test

Based on the results of df is degrees of freedom for the (approximate) chi-square the distribution above can be seen that all lags movement indicators from time to time, there is no autocorrelation effect in data movement, where the Q-stat and Adj Q-stat values all exceed 0.05 or 0.10 so that it is proven that none in the data has an effect autocorrelation.

3) Simultan Equation Modeling

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Based on the output results of structural equations, it can be known that there are two equations, here are each explanation in two equations. And the result of simultan equation model estimate as follow.

The equation I:

$$INF_t = 266.5150 + 2.662653\ IR_t + 4.898705\ MS_t + 0.008273\ ER_t + 0.806305\ CPI_t + e_1 \quad (3)$$

The equation II:

$$CPI_t = 111.811 + 4.190\ GDP_t - 1.501\ INFt + e_2 \quad (4)$$

Discussions

1) Simultaneous Analysis of Interest Rates, Money Supply, Exchange Rate, and Consumer Price Index against Inflation in Indonesia

Based on the variable data analysis, Interest Rate has a positive relationship with an insignificant effect on INF. If interest rates increase, it will worship inflation in Indonesia. This research is different from the research of Marketo (2014), which states that the SBI interest rate does not have a significant effect on the Inflation rate. This is due to the temporary rise and fall of inflation and is only caused by certain situations and conditions, such as the fasting month, Eid al-Fitr, and the increase in the Consumer Price Index.

The Money Supply variable has a positive relationship that has an insignificant effect on the INF. This means that if the money supply increases, it will increase inflation. This research is different from Hesti's (2021), which states that too much money supply can increase the price of goods in general (inflation). Conversely, economic activity will recede if the Money Supply is too tiny.

Exchange Rate variables have a positive relationship that has an insignificant effect on INF. If this exchange rate increases, then it will increase the INF. This research is in line with the research analysis, which states that it has a positive and insignificant effect on the Inflation Rate in Indonesia (Theodores Manuela Langi, 2014) states that if the rupiah exchange rate depreciates against the US Dollar, then Inflation that occurs increases.

The Consumer Price Index variable has a positive relationship with an insignificant effect on the INF. This Consumer Price Index increases so that it will increase Inflation.

This research is not in line with research (Maryani, 2011), stating that Inflation has a significant effect on the composite stock price index so that if Inflation rises, the stock price will also rise.

2) Simultaneous Analysis of Interest Rates, Money Supply, and Inflation of Exchange Rates in Indonesia

The GDP variable has a positive relationship with a significant effect on the CPI. This is the interest rate increase, which will reduce the consumer price index. This research is in line with research (Hismendi, 2013) states that GDP significantly affects JCI.

Variable Inflation has a negative relationship that has an insignificant effect on CPI. This inflation increases by the amount that will reduce the Consumer Price Index. This research is by research (Gudono, 2007) states that Inflation has no impact at all on stock returns. It can be explained well that the inflation rate in 2007-2011 did not affect stock returns or prices.

CONCLUSION AND RECOMMENDATION

In equation I, the Variable Interest Rate has a positive and insignificant relationship to the INF. The Money Supply variable has a positive and little connection to the INF. Exchange Rate variables have a positive and insignificant relationship to the INF. And the Consumer Price Index variable also has a positive and insignificant relationship with the INF in Indonesia. Equation II of Gross Domestic Product has a negative and significant relationship to the CPI. The INF variable has an insignificant negative connection to the CPI in Indonesia.

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