

ANALYSIS OF THE EFFECT OF INFLATION, INTEREST RATE, THE MONEY SUPPLY ON RUPIAH EXCHANGE RATE PERIOD 1996-2014


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Abstract

The data source is from Bank Indonesia (BI), the result of this research shows that the domestic inflation has a significant positive influence to rupiah exchange rate toward American Dollar, and cash rate ratio has a negative influence to Rupiah exchange rate with American Dollar, while overseas inflation, domestic interest rate, overseas interest rate they do not have significant influence toward Rupiah exchange rate with American Dollar. From the determination coefficient result (R^2) show that the subject which has been researched can explain 93,11 percent toward Rupiah exchange rate while the rest 3,89 percent can be explained by other subject out of model.

Key words: Rupiah Exchange Rate, Domestic Inflation, Overseas Inflation, Interest Rate, and Cash Rate Ratio.

INTRODUCTION

lobal economy paves a country's economy to be more opened (openness). An open economy within various amounts of International trading activities. The Export and import in Balance of Payment (BOP) is the component of international trade. The determination of foreign exchange rates has a major impact on the costs and profits of international trade. International trade involves one state with another and tightens relationship among the global states. Therefore, interaction with the foreign countries has become inevitable for countries, including Indonesia. In order to accelerate transaction of international trade, the use of money in an open economy is determined according to international currency trade. This can lead to the risk of changes in currency exchange rates due to the uncertainty of the exchange rate itself. The rate exchange can be used to measure the economic stability of a nation. The value of a stable currency shows good economic growth and stability of a country. The changes of exchange rate have direct effect on developments in domestic prices of goods and services.

Exchange rate frequently changes. Changes can be formed in currency appreciation and depreciation. Currency appreciation is an increase in the value of one currency in relation to another currency (Berlianta, 2005:9). While. Currency depreciation according to Berlianta (2005:8) is an decrease in the value of one currency in relation to another currency. The global currency used as comparison in currency exchange is the United

States dollar (US Dollar) because the United States dollar is one of the strongest currencies and is the reference currency for most developing countries including Indonesia. The appreciation of Rupiah toward US dollar is an increase of Rupiah against US dollar. Rupiah appreciation throws out more profitable charges of Indonesian goods for other countries. Meanwhile, the depreciation of Rupiah against the US dollar means a decrease in the price of US dollar against Rupiah. The depreciation of the national currency makes the prices of domestic goods cheaper for foreigners. The United States is the dominant trading partner in Indonesia, so when the rupiah against the US dollar is unstable, it will disrupt trade which can cause economic loss because the trade is valued in dollars.

The characteristics of Indonesia as a small and open economy, adhere to a free foreign exchange system and added with the application of a free floating exchange rate system since 1997, have made the exchange rate movements in the market very vulnerable to the influence of economic and non-economic factors. For example, the growth in the value of the rupiah against the US dollar in the pre-crisis era in Indonesia and other Asian regions was still relatively stable compared to the pre-crisis period. Since this crisis, the US dollar exchange rate aroused significantly.

With the implementation of the (free floating exchange rate system) in Indonesia, the rating of Rupiah exchange rate against currencies, particularly United States dollar, is determined by the market. Since the time the current exchange rate falls or fluctuates, it is determined by market forces. The exchange rate system is slow to crawl, where the country makes a few changes to its currency periodically in order to move towards a certain value. The main advantage of this system is that the country can measure its exchange rate settlement over a longer period when compared to the late exchange rate system.

According to Frenkel (1984), there are several factors that influence exchange rates. Based on the theory of exchange rates through a monetary approach, Frenkel (1984) divides the theory of exchange rates into two categories, namely the flexible price monetary model and the sticky price or overshooting monetary model. According to the theory of the monetary approach, there are several factors that influence the exchange rate, namely the price level, relative, interest rates, real national income, and money supply. In table 1 below, data on several macroeconomic variables in Indonesia are presented which are also the factors that influence Rupiah exchange rate against the US dollar 1996-2014.

Table 1: Inclination of IDR exchange rate against US dollar, domestic inflation, foreign inflation, domestic interest rates, foreign interest rates and the money supply 1996-2014

Year	Kurs (Rp)	DI (%)	FI (%)	DIR (%)	FIR (%)	NMS (UU\$)
1996	2.383	8.0	2.90	14.13	8.27	121.121
1997	4.650	6.2	2.30	30.52	8.44	76.482
1998	8.025	58.4	1.50	41.24	8.36	71.948

1999	7.085	20.5	2.20	24.90	8.10	91.207
2000	9.595	3.7	3.40	12.05	9.27	77.856
2001	10.400	11.5	1.60	16.59	6.79	81.159
2002	8.940	11.9	2.40	12.93	4.67	98.870
2003	8.447	6.6	1.90	8.31	4.13	113.140
2004	9.290	6.2	3.30	7.43	4.38	111.252
2005	9.830	10.5	2.20	12.75	6.19	122.356
2006	9.020	13.1	3.20	9.75	7.98	153.270
2007	9.419	6.4	2.90	8.00	8.02	175.142
2008	10.950	9.8	2.70	18.82	4.88	173.136
2009	9.400	4.8	2.80	6.59	3.25	227.807
2010	8.991	5.1	1.40	6.60	3.25	274.853
2011	9.333	5.4	3.00	6.50	3.25	308.315
2012	9.793	4.3	1.70	5.75	3.25	337.742
2013	12.173	6.4	1.20	7.50	3.25	306.449
2014	12.388	6.4	1.30	7.75	3.25	336.885

Source: Bank of Indonesia, 2014 (processed)

The table above shows Indonesia's macroeconomic conditions after the global economic crisis. From the data on exchange rates in 1996 amounted to 2,383 and continued to increase in 2001 to 10,400, however in 2002 the exchange rate declined again to 8,940, it is known that the movement of the exchange rate against the dollar fluctuates. This is a problem because the exchange rate movements undergo significant changes throughout the year of observation. In 2008 the exchange rate against the dollar strengthened by 10,950, but from 2008 to 2011 the exchange rate declined and increased again in 2013 to 2014, this condition is quite concerning and this condition is interesting to study, because it is very important to know the factors that affect changes in the exchange rate of the rupiah against the dollar. The amount of money in circulation (M2) in Indonesia in 1996 was 121,121 but decreased from 1997 to 2008; in 2009 it increased again to 227,807, where the money supply (M2) in Indonesia in 2014 increased to 336,885.

However, the view from table 1, an increase in the money supply was not accompanied by a decrease in interest rates. Domestic interest rates since 1996 amounted to 14.13 and continued to increase until 1997 to 1999, but decreased from 2000 to 2014, this is because the interest rate variable has an ambiguous coefficient of relationship to the exchange rate. First, when the increase in domestic interest rates prompted financial institutions to increase their offerings on the money market. At the same time, the higher interest rate will reduce the desire for people to hold onto money. As a result there will be excess money (excess money balance) in the domestic money market. This will result in depreciation of the domestic currency. On the other hand, the second effect can be that an increase in the domestic interest rate will attract capital flows into the country. This is because an increase in interest rates that considered more profitable for investors to move funding into the country. The existence of capital inflows will result in appreciation of the domestic currency. (Kholidin: 2002).

Henceforth, from table 1 it can be seen that domestic interest rate income after the global economic crisis, from 1996 to 2014 experienced fluctuating fluctuations but not so big. The condition of the Indonesian economy tends to experience a slowdown in growth. According to Krugman (1994), a decrease in real output leads to a decrease in the demand for capital, which causes interest rates to decline, assuming *Ceteris paribus*. When interest rates decrease, the domestic currency will depreciate. In fact, the price increases to create interest rates on the assumption of *Ceteris paribus* (price levels and money supply are fixed or negligible). An increase in real output causes excess demand for money. The result of excess demand for money will push interest rates up so that the domestic currency will appreciate. This means that domestic interest rates have a negative effect on the exchange rate (exchange rate).

Several previous researchers have seen several things related to the review of this research review. Insukindro (1992: 468) examines that the variable income, interest rates, inflation, and Gross Domestic Product (GDP) and the Money Supply (M2), and indeed there is a relationship between variables. According to Katsimbris and Miller (1995: 55), M2 in the United States affects M2 in other countries, especially countries that use the free floating exchange rate system. Furthermore, Tucker et al. (1991) stated that the relationship between the amount of money given and the exchange rate Rupiah is positive, while the relationship between income and interest rates on the exchange rate is negative. Similar to previous research based on Howrey (1994) where the amount of money in circulation and interest rates has a positive effect on exchange rates. Research is deemed necessary because changes in market exchange rates are difficult to predict in the exchange rate system and free and low exchange rates contain social costs which ultimately will affect the level of community welfare and affect the life of the national economy.

RESEARCH METHOD

This research discusses the analysis of the effect of domestic inflation, foreign inflation, domestic interest rates, foreign interest rates, and the money supply with the rupiah exchange rate against the US dollar. In the period 1996 to 2014. The data used in this study is secondary in the form of periodic time series, namely the observation period from 1996 to 2014. The data source used for this study was obtained from Bank Indonesia. Collecting data in this study is using the documentation method, namely by recording and copying written data related to research problems from both sources of documents / books, newspapers, magazines, the internet and others. The data collected is in the form of data on Rupiah exchange rate, inflation, interest rates, and the money supply. The analysis model used in this study refers to the basic model of multiple linear regression equations with the Engle-Granger Error Correction Model (ECM-EG) method in estimating the short-term relationship between the variables of domestic inflation, foreign inflation, domestic interest rates, and foreign interest rates. Country, the money supply and the trade balance with IDR exchange rate against US dollar.

RESULT AND DISCUSSION

Rupiah Exchange Rate against US Dollar

The exchange rate is an important indicator affecting economic stability. An exchange rate plays an important role in every decision making in international trade, because exchange rates allows us to translate prices from various countries into the same language. (Krugman, 1994) From 2007 to the present, the prevailing exchange rate system in Indonesia has been a free-floating exchange rate system as a substitute for a controlled floating exchange rate system. The following is the development of the rupiah exchange rate against the US dollar during the 1996 second quarter to 2014 first quarter.

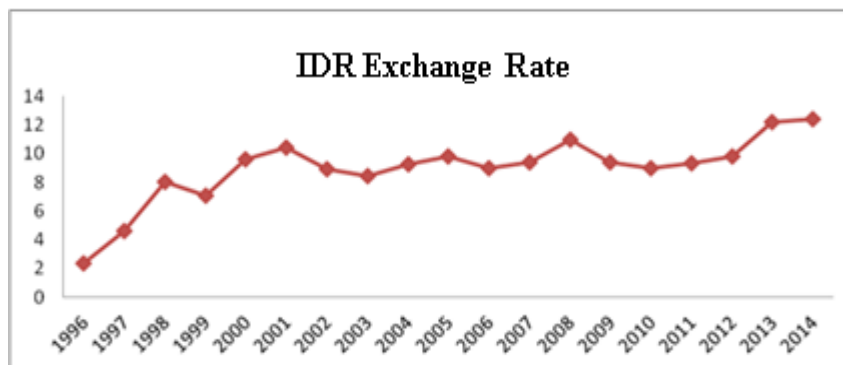


Figure 1: The Inclination of IDR Exchange Rate Against US Dollar 1996 – 2014

Source: Bank of Indonesia, 2014

The picture above, explains that the rise of Rupiah exchange rate against the US dollar during the period 1996 to 2014. The Indonesian economy is quite vulnerable to shocks in the global economic system. Every time a world economic and financial crisis occurs, it is followed by fluctuations in the rupiah exchange rate, which in addition to having a direct impact on the APBN (*Budget State*) also results in an increase in outstanding government debt. The exchange rate condition in 1996 was 2,383 until it continued to increase until 2001 it reached 10,400, however in 2002 the exchange rate fell to 8,940 again due to global sentiment, then the rupiah strengthened again in 2008 to 10,950.

In 2009, Rupiah decreased again, bringing the Rupiah to a level of 9,400 per USD. This is actually a consequence of the policy of the monetary authority to implement a free floating exchange rate in response to the global financial crisis, so that Indonesia is one of the most vulnerable countries with risks caused by exchange rate fluctuations. In addition, the weakening of the rupiah exchange rate was also caused by the widening deficit in Indonesia's trade and payments balance. The decline in commodity prices caused exports to decline while imports of fuel increased. The economic improvement in US also put pressure on the rupiah exchange rate. However, fluctuations in the rupiah exchange rate against US dollar are expected to subside soon, following the intervention carried out by BI. Meanwhile throughout 2010, based on Figure 1 above, the position of Rupiah continued to fluctuate until in 2011 the rupiah exchange rate did not increase until 2012, until 2013. Based on the report on the Indonesian economy from Bank Indonesia, pressure on the rupiah was influenced by external factors, namely concerns

over the normalization of the fed's policies, geopolitical dynamics, and the global economic slowdown.

Meanwhile, from internal factors, the weakening of the rupiah was influenced by the behavior of investors who were waiting for the formation of a new cabinet and future government work programs. Pressure on the rupiah weakened in line with the broad appreciation of the US dollar. The rupiah depreciated by an average of 3.9% to the level of Rp. 12,173 per US dollar. The US economy continued to grow solid against the rupiah in 2014, in line with the continued strengthening of the US dollar as a result of the ECB implementing monetary easing policies that were followed by a number of countries. Rupiah has increased on average to the level of Rp. 12,388 per US dollar. Bank Indonesia views that the exchange rate movement supports the improvement of the current account deficit, both through a decrease in imports, especially consumer goods, and an increase in the competitiveness of exports, especially manufacturing. (Bank Indonesia: 2016).

The Rice of inflation rate in Indonesia-the United States during 1996 to 2014 is presented in Figure 2 as follows:

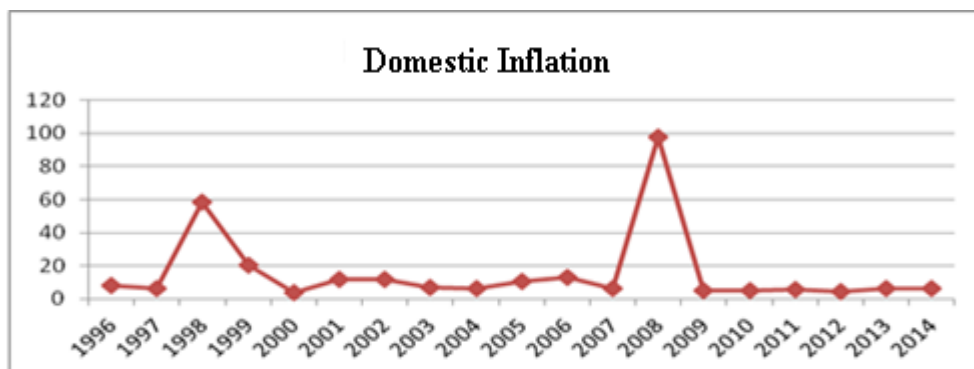


Figure 2: Indonesia's Inflation in 1996 - 2014

Source: Bank of Indonesia, 2014 – Present

For the conditions in Indonesia, from the picture above, it can be seen that the inflation condition from 1996 was 8.0 and in 1997 it was 6.2. The high inflation in 1998 was inseparable from the influence of external and internal factors (domestic factors). From the external side, the increase in inflation is in line with rising global inflation, especially in emerging markets, as the impact of increased economic growth and administered commodity prices relatively did not exert pressure on inflationary hikes. The pressure from rising inflation arose mainly due to disruption in the smooth supply of foodstuffs, which were affected by weather anomalies. In 1999 inflation decreased to 20.5 and in 2000 there was a sharp decline to 3.7 slowly but surely the condition of inflation again increased to 11.5 until 2014 remained at 6.4 position, this development was mainly due to the impact of the government's policy of increasing subsidized fuel prices at the end of June 2013 The increase in subsidized fuel prices pushed up inflation in fixed administered prices. Administered prices inflation was mainly from increases in electricity rates (TTL). The increase in inflation was also caused by external factors,

namely the weakening of the exchange rate and the increase in global commodity prices, especially non-food commodities.

Foreign Inflation

The inclination of the inflation rate in the United States from 1996 to 2014 is presented as follows:

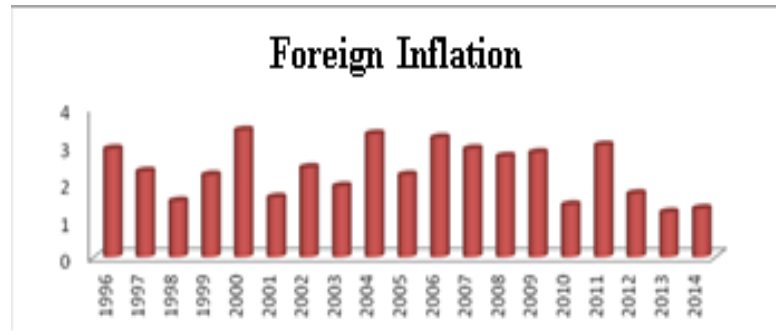


Figure 3: The Rise of Foreign Inflation in 1996-2014

Source: Bank of Indonesia, 2014 – Present

The figure above shows the graph of the inflation rate in the United States in 1996 which was 2.90 until 2000, it increased to 3.40. However, since 2001 it has shown a downward trend until 2010. In 2011, foreign inflation rose by 3.00, but in 2012 it fell from 3% to 1.7% and continued to be 1.2%, its peak in 2013 until 2014, inflation only reached 1.30% (Bank of Indonesia).

Domestic Interest Rates

In general, when interest rates are low, more funds will flow, resulting in increased economic growth. Likewise, when interest rates are high, the little funds flowing will result in low economic growth (Sundjaja and Barlian, 2003: 57). Changes in relative interest rates affect investment in foreign securities, which in turn will affect the supply and demand for foreign exchange. This will also affect currency exchange rates. The perfect relationship between relative interest rates and exchange rates between two countries is explained by the International Fisher Effect (IFE). Berlianta (2005: 20) argues that the International Fisher Effect theory shows that the movement of the currency value of one country compared to another is caused by differences in nominal interest rates in the two countries. The implication of the International Fisher Effect is that people cannot enjoy higher profits just by investing in a country that has a high nominal interest rate because the value of the country's currency with a high interest rate will be depreciated by the difference between the nominal interest and the country that has a lower nominal interest rate.

The difference in interest rates in Indonesia and in the United States per quarter in the fifth period 1996-2014 is presented in the following graph.

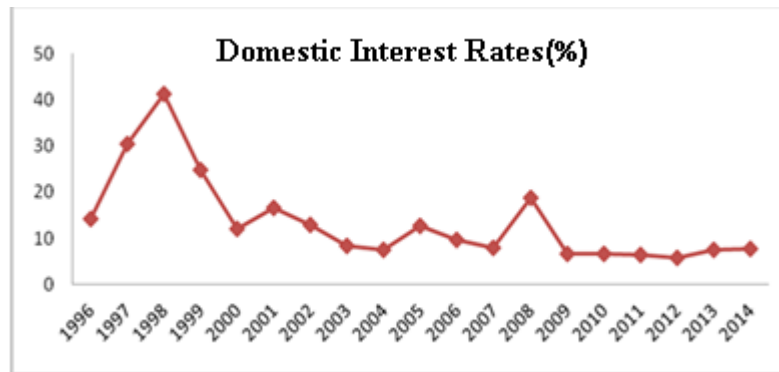


Figure 4: Development of Domestic Interest Rates 1996 - 2014

Source: Bank of Indonesia, 2014 – Present

The Indonesian interest rate in 1996 was 14.13 and increased in 1997 by 41.24 in 1998, however from 1999 to 2002 the domestic interest rate also decreased to 12.93. From 2003 to 2005 the interest rate decreased to 12.75 to At the end of 2014, there was a continuous decline, this was due to the need for funds specifically for savings funds, namely how much funding was needed.

Foreign Interest Rates

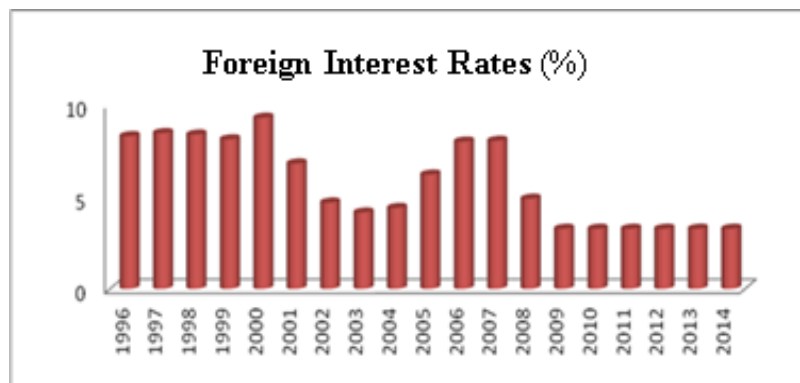


Figure 5: Rise in Foreign Interest Rates 1996 - 2014

Source: Bank of Indonesia, 2014 – Present

In general, the figure shows that the trend of real interest rates in Indonesia and the United States shows the opposite direction. When the real interest rate in Indonesia increases, in the United States the real interest rate decreases. In Indonesia, the increase in the nominal interest rate is intended to anchor inflation expectations and ensure that inflationary pressure after the subsidized fuel hike remains under control. This can be seen in the number of foreign interest rates since 1996 amounting to 8.27 to 1999, which has remained in the same number at 8.10%. This policy is also consistent with progress in managing the current account deficit in a healthier direction. The widening of the interest rate corridor for monetary operations is intended to maintain adequate liquidity and promote financial market deepening. In 2000, the foreign interest rate increased by 9.27%, but from 2001 to 2014 it continued to fluctuate (Bank Indonesia).

Number of Money Supply

The movement of the difference in the Indonesian-American money supply (M2) and the rupiah exchange rate against the dollar can be seen in Figure 6 below:

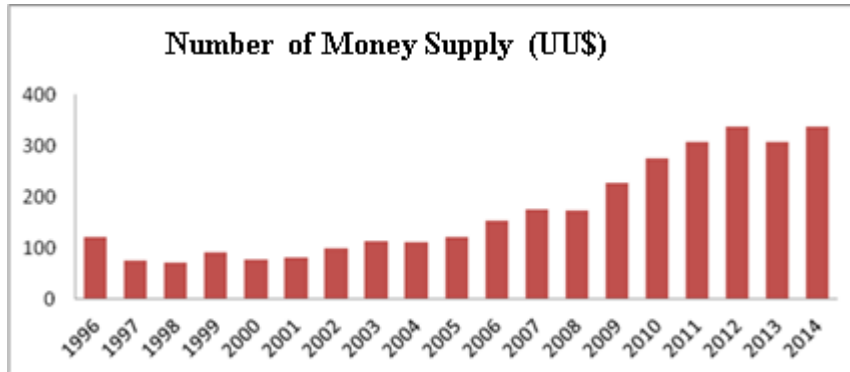


Figure 6: Development of Money Supply 1996 - 2014

Source: Bank of Indonesia, 2014 – Present

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This study begins by conducting a stationary test of the variables used in the study. It is important to do in the use of the ECM method, that all the variables used are not stationary at the level. The results of the non-stationary test of all variables in this study can be seen in table 2 below:

Table 2: Unit Root Test Results at the Level

No	Variable	Level	PP Value	Prob. PP	Conclusion
1	LNE	Level	1.569182	0.9658	No Stasioner
2	LNID	Level	-1.930349	0.0535	No Stasioner
3	LNILN	Level	-1.021740	0.2634	No Stasioner
4	LNSBD	Level	-2.046903	0.0423	No Stasioner
5	LNSBLN	Level	-1.306620	0.1688	No Stasioner

6	LNJUB	Level	1.378528	0.9516	No Stasioner
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Source: Views 8.0 (processed)

Based on table 2 above, none of the variables are stationary at the level. After the unit root test results at the level are obtained and to find out whether the data is not stationary, then the next step is to carry out the data stationary test to determine whether the data is stationary at the first difference or second difference level.

Table 3: Unit Root Test Results on First Difference

No	Variable	Level	PP Value	Prob. PP	Conclusion
1	D(LNE)	<i>First Difference</i>	-4.186799	0.0003	Stasioner
2	D(LNID)	<i>First Difference</i>	-9.677382	0.0000	Stasioner
3	D(LNILN)	<i>First Difference</i>	-7.689071	0.0000	Stasioner
4	D(LNSBD)	<i>First Difference</i>	-5.473119	0.0000	Stasioner
5	D(LNSBLN)	<i>First Difference</i>	-3.636580	0.0012	Stasioner
6	D(LNJUB)	<i>First Difference</i>	-4.119161	0.0004	Stasioner

Source: The view of 8.0 (Proceed)

Based on the results of the unit root test in table 3 it shows that all the variables are stationary in first differences. This can be seen from the probability obtained is smaller than $\alpha = 0.05$.

Co-integration Test Results

Engle-Granger (EG) co- integration. From the residual value of the multiple linear regression equation, then the Augmented Dickey-Fuller (ADF) stationary test was performed. The basis for decision making is if the statistical value is greater than the critical value, the observed variables will not be co- integrated. The estimation results obtained statistical ADF value = -5.104774 > critical value $\alpha = 5\%$ (-3.959148) and the probability value 0.0012 < $\alpha = 0.05$.

Table 4: Variation Co-integration Test Results

Null Hypothesis: ECT has a unit root

Exogenous: Constant

Lag Length: 3 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.104774	0.0012
Test critical values:		
1% level	-3.959148	
5% level	-3.081002	
10% level	-2.681330	

*MacKinnon (1996) one-sided p-values.

Source: Views 8.0 (processed)

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Source: Views 8.0 Co-integration Test Results

The results of the Research Model Estimation test

Table 6: Research Model Estimation Test Results

Dependent Variable: D(LNE)

Method: Least Squares

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.156419	0.021178	7.385829	0.0000
D(LNID)	0.095191	0.029820	3.192206	0.0086
D(LNILN)	-0.022625	0.045475	-0.497524	0.6286
D(LNJUB)	-1.173971	0.170675	-6.878407	0.0000
D(LNSBD)	-0.109407	0.060493	-1.808590	0.0979
D(LNSBLN)	0.043252	0.091925	0.470521	0.6472
ECT(-1)	-0.081780	0.096653	-0.846125	0.4155
R-squared	0.931154	Mean dependent var		0.091576
Adjusted R-squared	0.893601	S.D. dependent var		0.224214
S.E. of regression	0.073136	Akaike info criterion		-2.107691
Sum squared resid	0.058838	Schwarz criterion		-1.761435
Log likelihood	25.96922	Hannan-Quinn criter.		-2.059947
F-statistic	24.79610	Durbin-Watson stat		1.160395
Prob(F-statistic)	0.000009			

Based on the output of the estimation test results of the research model in table 5, it can be represented in the following equation:

$$D(LNE)=0.156419 + 0.095191*D(LNID)- 0.022625*D(LNILN) - 1.173971*D(LNJUB) - 0.109407*D(LNSBD) + 0.043252 *D(LNSBLN) - 0.081780*ECT(-1)$$

The estimation results of the ECM model in table 5 show that the value of the speed of adjustment (unbalance correlation coefficient) ECT (Error Correction Term) has a negative coefficient value and is not statistically significant statistically with an ECT probability value of 0.4155 <0.05. Thus, the ECM model used in the study is valid (right) to be selected as an empirical model. The ECT coefficient value of -0.081780 indicates that there is a difference in the actual exchange rate (exchange rate) and the balance value of -0.081780 which will be adjusted.

Based on the results in table 5 above, it can also be said that in the short term the domestic inflation variable (ID) has a significant effect on the rupiah exchange rate (E) adjusts for domestic inflation (ID), foreign inflation (ILN), and domestic interest rates (SDB). , foreign interest rates (SBLN), and the money supply with one lag or in other words, the ECT coefficient of -0.081780 indicates that there is a difference in the exchange rate of the rupiah with the balance value of only around -0.081780 which will be adjusted. From the above equation shows the coefficient estimation results of the ECM equation which show foreign inflation (ILN) and the money supply (JUB) have a negative sign and are statistically significant.

Result of Partial Hypothesis testing (test)

The partial test results can be seen in the estimates obtained through the t test with a significant level of $\alpha = 5$ percent. In the short term, the statistic and probability values for the domestic inflation variable state = 3.192206 (probe = 0.0086) indicate that the domestic inflation variable has a positive and significant effect on the rupiah exchange rate against the US dollar.

In the short term, the variable rate of foreign inflation with a value of tstat = -0.497525 and prob = 0.6286 indicates that the variable foreign inflation rate has a negative and insignificant effect on the rupiah exchange rate against the US dollar.

Domestic interest rate variable with state value = -1.808590 and probe value = 0.0979 indicates that in the short term, the domestic interest rate variable has a negative and insignificant effect on the rupiah exchange rate against the US dollar.

The foreign interest rate variable with a state value = 0.470521 and a probe value = 0.6472 indicates that in the short term, the foreign interest rate variable has a positive and insignificant effect on the rupiah exchange rate against the US dollar.

The money supply variable with state = -6.878407 and probe = 0.0000 indicates that in the short term, the money supply variable has a negative and significant effect on the rupiah exchange rate against the US dollar.

Test Results Together (F test)

In the short term, the estimation results can be seen that the statistical F value of 24.79610 with a statistical probability of 0.000009 is smaller than $\alpha = 0.05$ which indicates that together (simultaneous test) the domestic inflation variable, the money supply, has a significant effect. Against the rupiah exchange rate against the US dollar.

Estimated Accuracy Test Results

Based on the estimation results, the coefficient of determination (R-Square) in the short-term model is 0.931154, which means that 93.11% of the variation in changes in the variable exchange rate of the rupiah against the US dollar can be explained by the variable domestic inflation, foreign inflation, domestic interest rates, foreign interest rates, and the money supply. While the remaining 3.89% is explained by variables outside the model (which are not researched).

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

1. The estimation results of the coefficient of determination in the short term, the variable of the rupiah exchange rate against the US dollar can be explained by the variables of domestic inflation, foreign inflation, domestic interest rates, foreign interest rates, and the money supply.
2. From the estimation results obtained, the domestic inflation variable, the money supply has a positive and significant effect on the rupiah exchange rate against the US dollar, while foreign inflation, foreign interest rates, and domestic interest rates have a negative and significant effect on the rupiah exchange rate against US Dollar in the short term.
3. The largest coefficient of the rupiah exchange rate variables against the US dollar is the domestic inflation variable followed by foreign inflation, domestic interest rates, foreign interest rates, and money supply.

Suggestion

Based on the results of the above conclusions, the authors make the following suggestions:

1. A policy to keep inflation low in the long term through monetary tightening to reduce the money supply and this will cause the inflation rate to decline. The policy to reduce the inflation rate can be done by looking at the causes of the inflation.
2. This monetary tightening will also increase interest rates which will result in a strengthening of the rupiah exchange rate due to an increase in foreign capital inflows.
3. The government should make efforts to keep the exchange rate under control. This effort must be supported by strengthening the foreign exchange reserves located first by increasing the trade balance (surplus).

4. Future researchers who wish to carry out the same type of research should be carried out by improving the stages of this method or by combining it with other methods.

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