



## ANALYSIS OF FACTORS AFFECTING THE RUPIAH EXCHANGE RATE AGAINST THE US DOLLAR

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### Abstract

Exchange rates or exchange rates are very important economic indicators because exchange rate movements have a broad influence on the economic aspects of a country. Based on the formulation of the problem and the study of the theory that has been stated previously, the research hypothesis can be formulated as Partially foreign exchange reserves, interest rates, inflation and balance of payments affect the rupiah exchange rate against the US dollar 2005-2016. Simultaneously foreign exchange reserves, interest rates, inflation and balance of payments affect the rupiah exchange rate against the US dollar 2005-2016. Partial Test Results (t-test) independent variables Foreign Exchange Reserves (X1) have a significance of  $0,000 < 0,05$  and  $t_{count} (4,999) > t_{table} (2,015)$ . This means that the Foreign Exchange Reserves (X1) partially has a significant effect on the Exchange Rate of the Rupiah against the US dollar. Thus H1 is accepted and H0 is rejected. The results of the Partial Test (t-test) of the independent variable Interest Rate (X2) have a significance of  $0.047 < 0.05$  and  $t_{count} (2.044) > t_{table} (2.015)$ . This means that the Interest Rate variable (X2) partially has a significant effect on the value of the Rupiah against the US dollar. Thus H1 is accepted and H0 is rejected.

**Keyword:** Factors affecting, Rupiah exchange rate, Against The Us Dollar



## **A. Introduction**

### **Background to the Problem**

Exchange rates or exchange rates are very important economic indicators because exchange rate movements have a broad influence on the economic aspects of a country. Currently the development of the economic system in a more open direction between countries. Exchange rates play a vital role in the level of trade in a country, which is the most critical for the majority of the free market economy in the world. An open economy is the occurrence of international trade between countries in the world. The difference in currencies used in countries that import or export will cause a difference in currency exchange rates. The difference in the exchange rate of a country's currency (exchange rate) in principle is determined by the amount of demand and supply of the currency (Krugman: 2005). The importance of the value of the order as one of the economic indicators makes it interesting to discuss and see changes or fluctuations that can be influenced by various factors.

### **Problem Formulation**

Based on the background and problem identification as described above, the researcher can formulate the problem as follows:

1. Is partially foreign exchange reserves, interest rates, inflation and balance of payments affecting the rupiah against the US dollar.
2. Are foreign exchange reserves, interest rates, inflation and balance of payments simultaneously affecting the rupiah exchange rate against the US dollar.

### **Research Objectives**

Based on the formulation of the problem above, the objectives of this study are:

1. To find out whether partially foreign exchange reserves, interest rates, inflation and balance of payments affect the rupiah exchange rate against the US dollar.
2. To find out whether foreign exchange reserves, interest rates, inflation and balance of payments are sound



## **Benefits of Research**

1. For the Development of Science Output or the results of this study are expected to be able to reveal the factors that affect the rupiah exchange rate against the American dollar. This research is expected to also be used as a scientific study material so that it can add further knowledge and reference to researcher.

## **B. Literature Review**

### **Previous Research**

Nurul Hakim, Irene Rini Demi Pangestuti 2013. In her research journal entitled The Effect of Gross Domestic Product, Amount of Money Supply, Inflation, Current Account, Financial Accounts, and World Oil Prices Against the Exchange Rate of Rupiah Per United States Dollar 2002-2012. This study aims to examine the effect of Gross Domestic Product, Amount of Money Supply, Inflation, Current Account, Financial Accounts, and World Oil Prices Against the Exchange Rate of Rupiah Per United States Dollar 2002-2012. From the regression test results the Rupiah exchange rate per US dollar =  $0.18 - 0.000000028 - 0.00007013 \text{ JUB} - 0.000002637 \text{ inflation} - 0.00000570 \text{ current account} - 0.00000518 \text{ financial account} + 0.00000962 \text{ oil}$ . From the significance test it is known that the variable money supply (JUB), financial account (FA), and world oil prices partially affect the rupiah exchange rate per US dollar.

### **Theoretical basis**

#### **Definition of Exchange Rates**

Exchange rate is the number of units or units of a particular currency needed to obtain or buy one unit or unit of another type of currency. According to Samuelson (1995; 668) the definition of exchange is "The price of one unit of foreign currency is a term of domestic currency is determined, and the price is called the foreign exchange rates. "

Whereas according to Sawaldjo Puspoprano (2004; 212) the definition of exchange rates is "The price at which a country's currency is exchanged with another country's currency is called the exchange rate (exchange rate)."



From the above definitions we can conclude briefly that the exchange rate is the value of a currency compared to other currencies. For example the value of the rupiah against the US Dollar.

The Indonesian government usually plays a role in determining the exchange rate to reach a level that is conducive to the business world. Credit, especially the rupiah exchange rate per dollar is very closely related and influences the flow of goods and services and capital from inside and outside Indonesia.

### **Flower books**

According to Kasmir, (2002; 58) bank interest rates can be interpreted as reciprocal services provided by banks based on conventional principles to customers who buy or sell their products.

Sadono Sukirno (2006; 49) states that interest rates are interest which are expressed as a percentage of capital.

In daily banking activities there are 2 kinds of interest given to customers, namely:

#### **1. Interest on Deposits**

Interest is given as stimulation or remuneration for customers who save their money in the bank. Deposit interest is the price that must be paid to the customer. For example: demand deposits, savings interest, deposit interest.

### **Factors Affecting Interest Rates**

As explained above, to determine the size of the deposit and loan interest rates is strongly influenced by both. This means that both interest and loans influence each other besides the influence of other factors

The main factors that influence the size of the interest rate setting are:

#### **1. Funding needs**

If the bank lacks funds, while the loan application increases, then what is done by the bank so that the funds are quickly met by increasing deposit rates. An increase in deposit interest will automatically increase loan interest. However, if there are many deposits while the application is a little, the deposit interest will decrease.



## **Types of Inflation.**

### **Review of the severity of an inflation.**

When viewed from the scale of the severity or failure of the inflation, it can be seen as follows:

1. Mild inflation with an inflation scale of <10 percent / year.
2. Moderate inflation with an inflation scale of 10-30 percent / year.
3. Heavy inflation with an inflation scale of 30-100 percent / year.
4. Hyperinflation with an inflation scale of > 100 percent / year.

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## **Conceptual Framework**

The movement of the Indonesian rupiah exchange rate against the United States dollar from year to year continues to fluctuate. The fluctuations in the rupiah against the US dollar were clearly seen since Indonesia decided to implement a floating exchange rate system in 1997, where the exchange rate was determined by the mechanism of demand and supply in the foreign exchange market, but the government could influence exchange rates through market intervention, if the exchange rate up or down beyond the specified limit.

Based on the literature review and the results of previous studies, the framework proposed by the researcher is as follows

Figure 2.1 Conceptual Framework

## **Hypothesis**

Based on the formulation of the problem and the study of the theory that has been stated previously, the research hypothesis can be formulated as follows:



H1: Partially foreign exchange reserves, interest rates, inflation and balance of payments

affect the rupiah exchange rate against the US dollar 2005-2016.

H2: Simultaneously foreign exchange reserves, interest rates, inflation and balance of payments affect the rupiah exchange rate against the US dollar 2005-2016.

## **C. Research Methods**

### **Types and Nature of Research**

The type of research used is quantitative research, namely research that reveals the size or smallness of a variable expressed in numbers by collecting data which is supporting data on the influence of the variables concerned then analyzing using analysis tools that are in accordance with variables. variable in the study.

### **Place and time of Research**

This research was conducted at the Bank Indonesia Central Bureau of Statistics through the internet with the site [www.bps.co.id](http://www.bps.co.id). The time of this research was conducted from August to December 2018.

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### **Research Population and Samples**

#### **Population**

According to Erlina (2011; 51) the population is a group of entities that can change people, events or objects that have certain characteristics, which are within a region and fulfill certain conditions related to research problems.

The population used in this study is foreign exchange reserves, interest rates, inflation, balance of payments and the rupiah exchange rate documented in the statistics center and bank Indonesia.



## **Samples**

Samples are part of the number and characteristics possessed by the population (Sugiyono, 2017; 81). The sample is a portion of the population taken for research purposes. With the sample, the error rate will be minimized. The research sample is taken by saturated sampling, which is a sampling technique if all members of the population are used as samples. The sample in this study was 48 in quarterly form taken from annual data. The criteria determined by this study are as follows:

1. Rupiah exchange rate data during the period 2005-2016.
2. Data on foreign exchange reserves during the period 2005-2016.
3. Data on interest rates for the period 2005-2016.
4. Inflation data for the period 2005-2016.
5. Balance of payments data for the period 2005-2016.

## **Types and Data Sources**

The type of data used in this study is secondary data in the form of time series sourced from the Central Sumatra Provincial Statistics Agency during the period of 2005-2016 through: [http // sumut.BPS.go.id](http://sumut.BPS.go.id) and Bi sites and various other relevant sources such as journals, internet, bulletins, books, articles and research results that are related or related to the research conducted.

## **D. Research Result and Discussion**

### **Research Results**

#### **Descriptive Analysis**

This study aims to determine and analyze the effect of Foreign Exchange Reserves (X1), Interest Rates (X2), Inflation (X3) and Balance of Payments (X4) at the Rupiah exchange rate against the US Dollar in the period 2005-2016. Data in this study are annual interpolated using the Eviews application so that it becomes data in the form of a quarter. In this study use the interpolation formula as follows:

$$Y_{t1} = 1/4 \{Y_t - 4.5 / 12 (Y_t - Y_{t-1})\}$$

$$Y_{t2} = 1/4 \{Y_t - 1.5 / 12 (Y_t - Y_{t-1})\}$$

$$Y_{t3} = 1/4 \{Y_t + 1.5 / 12 (Y_t - Y_{t-1})\}$$

$$Y_{t4} = 1/4 \{Y_t + 4.5 / 12 (Y_t - Y_{t-1})\}$$

Analysis of Multiple Linear Regression



The analytical method used is multiple linear regression analysis. Multiple linear regression analysis is a regression analysis that has more than one independent variable.

**Tabel 4.1 Analisis Regresi Linier Berganda**

Model	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.903	.556		1.625	.111
C.Devisa	.054	.011	.903	4.999	.000
S.Bunga	.465	.227	.566	2.044	.047
Inflasi	-.076	.086	-.175	-.886	.380
N.Pembayara	-	.000	-.352	-	.004
n	5.512E-5			3.073	

Dependent Variable: Kurs

$$Y = 0.903 + 0.054(X_1) + 0.465(X_2) - 0.076(X_3) - 5.512(X_4) + e$$

## E. Conclusion and Recommendations

### Conclusions

Based on the results of research and discussion described in the previous chapter, the following conclusions from the results of the research obtained:

1. Partial Test Results (t-test) independent variables Foreign Exchange Reserves (X1) have a significance of 0,000 <0,05 and tcount (4,999) > ttable (2,015). This means that the Foreign Exchange Reserves (X1) partially has a significant effect on the Exchange Rate of the Rupiah against the US dollar. Thus H1 is accepted and H0 is rejected.
- 2 The results of the Partial Test (t-test) of the independent variable Interest Rate (X2) have a significance of 0.047 <0.05 and tcount (2.044) > t table (2.015). This means that the Interest Rate variable (X2) partially has a





significant effect on the value of the Rupiah against the US dollar. Thus H1 is accepted and H0 is rejected.

### **Suggestion**

Based on the limitations of the study, the writing proposes several suggestions as follows:

1. For further research, if you use the same variables, you should measure variables using other measurement methods.

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