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The Influence of Interest Rates, Inflation, Exchange Rates and Exports on Indonesia's Foreign Exchange Reserves

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ABSTRACT

Inconsistencies between changes in foreign exchange reserves and interest rates, inflation, export value, and the Rupiah exchange rate versus the US Dollar were revealed by this research. The aim is to determine how Indonesia's foreign exchange reserves are affected by interest rates, inflation, exchange rates and exports. This research uses descriptive quantitative methods with an explanation strategy. The research was conducted using secondary data from Bank Indonesia and the Indonesian Central Statistics Agency for the period 2005–2021, with a sample of 11 data taken using the selective selection method. Through IBM SPSS version 23, multiple linear regression was used to analyze the data. The findings show that while exports have a sizable positive impact on foreign currency reserves, interest rates have a significant negative impact. However, there is little impact on foreign exchange reserves from inflation and the exchange rate. In conclusion, these factors together have a big impact on Indonesia's foreign exchange reserves: interest rates, inflation, exchange rates, and exports.

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INTRODUCTION

The Indonesian economic system implements an open system that aims to expand economic networks and facilitate international trade between countries. International trade involves transactions such as exports, imports and investments, which aim to improve the welfare of society. To meet various needs, countries engage in international trade to meet unmet demand (Diphayana, 2019). This requires exports and imports, which in turn require foreign exchange reserves for international payments.

International trade contributes to increasing a country's foreign exchange reserves by generating income from commodity exports to other countries. These foreign exchange reserves include foreign currency owned by a country and managed by its central bank (Bank Indonesia, 2020). These reserves are important for international transactions and should cover at least three months of imports. Factors such as inflation, the value of the Rupiah against the Dollar, imports and exports affect a country's foreign exchange reserves (Kuswantoro, 2017). Amid a global crisis such as the COVID-19 pandemic, maintaining and increasing Indonesia's foreign exchange reserves is important to prevent economic problems due to insufficient reserves.

LITERATURE REVIEW

International Trade

International trade is the exchange of goods and services between countries carried out based on mutual agreements. It involves individuals, companies, and governments in cross-border transactions. The aim is to take advantage of the comparative advantages that different countries have. The international trade approach involves transactions between individuals, between individuals and governments, and between governments and governments. Despite its benefits such as obtaining goods that cannot be produced efficiently, international trade also faces challenges such as tensions between countries, fluctuations in currency exchange rates, and protectionist policies. Technological developments and digitalization also have an impact on international trade through online trading platforms and e-commerce (Setiawan & Lestari, 2016).

Interest Rate

An interest rate is an interest rate expressed as a percentage over a certain period. Factors such as the demand and supply of money influence interest rates. Credit interest rates are influenced by savings interest rates and factors such as funding requirements, profit targets, collateral quality, and government policies. Interest rates also have an impact on a country's foreign exchange reserves. The role of interest rates in banking includes the activities of collecting and distributing funds. Factors such as company reputation, competition, and relationships with customers also influence the setting of interest rates (Suwarno et al., 2021)

Inflation

Inflation is a general and sustained increase in the prices of goods and services. This can be caused by an increase in demand that exceeds supply, an increase in production costs that is not offset by productivity, or factors such as war or political instability. Inflation has positive and negative impacts, such as affecting people's purchasing power, distribution of goods, and economic growth. To deal with inflation, government supervision, wise fiscal policy, and market stability are very important (Pratiwi et al., 2018).

Exchange Rate

The value of a currency is the relative price of a currency to another currency. This affects the purchasing power and prices of goods traded between countries. Changes in exchange rates can have a significant impact on a country's economy. A stable exchange rate is important for business activities and the economy as a whole. Exchange rate fluctuations can affect the competitiveness of a country's exports and imports (Saputra & Dharmadiaksa, 2016).

Export

Exports are efforts to sell commodities to other countries with payment in foreign currency. An important factor in exports is the country's ability to compete in foreign markets. Exports have an important role in the economy by expanding markets, creating new demand, and facilitating development (State, 2019).

Foreign Exchange Reserves

Foreign exchange reserves are foreign exchange assets that can be used to finance balance sheet imbalances. Foreign exchange reserves are important in maintaining the economic and financial stability of a country. The greater the foreign exchange reserves, the stronger the value of the country's currency (Juliansyah et al, 2020).

The Influence of Interest Rates on Indonesia's Foreign Exchange Reserves

Interest rates have an influence on foreign exchange reserves. Changes in interest rates can affect demand and supply in the money market. A decrease in interest rates can encourage investment and export growth, which in turn can increase foreign exchange reserves (Masitha & Pangidoan, 2020).

The Effect of Inflation on Indonesia's Foreign Exchange Reserves

Inflation can affect foreign exchange reserves. If inflation increases, the purchasing power of money decreases, and foreign transactions become more expensive. This could have an impact on the need for greater foreign exchange reserves to pay for imports (Restanti, 2020).

The Influence of Exchange Value on Indonesia's Foreign Exchange Reserves

Currency exchange rates also affect foreign exchange reserves. A low exchange rate can affect exports and imports, which ultimately affects foreign exchange reserves (Rahmawati & Soesilowati, 2022).

The Influence of Exports on Indonesia's Foreign Exchange Reserves

Exports have a positive influence on the country's foreign exchange earnings. Increased exports mean more foreign exchange coming into the country. Increased exports can strengthen foreign exchange reserves (Fortuna et al., 2021).

Other Factors that Influence the Development of Exports and Foreign Exchange Reserves

Apart from interest rates, inflation, exchange rates, and export funds, other factors such as government policies, foreign market conditions, and international trade policies can also influence the development of a country's exports and foreign exchange reserves.

The importance of foreign exchange reserves in maintaining a country's economic and financial stability makes factors such as interest issues, inflation, exchange rates, and exports a major concern in government policy in maintaining and increasing foreign exchange reserves. Appropriate policies in managing these factors can have a positive impact on the development of a country's exports and foreign exchange reserves.

Hypothesis

1. It is suspected that there is an influence of interest rates on Indonesia's foreign exchange reserves
2. It is suspected that there is an influence of inflation on Indonesia's foreign exchange reserves
3. It is suspected that there is an influence of exchange rates on Indonesia's foreign exchange reserves
4. It is suspected that there is an influence of exports on Indonesia's foreign exchange reserves

METHODOLOGY

The research technique combines an explanatory research approach with quantitative descriptive methods. The aim of this research is to examine how Indonesia's foreign exchange reserves are influenced by interest rates, inflation, exchange rates and exports. A quantitative approach was chosen for this research because calculations relating to the influence of independent factors on independent variables will be carried out using data in the form of numbers.

This study covers data from 2005 to 2021 and was conducted throughout Indonesia. Interest rates, inflation, exchange rates and exports which have an impact on Indonesia's foreign exchange reserves are the research population. Purposive sampling, i.e. selecting samples based on certain criteria, is the

sampling approach used. Data on interest rates, inflation, exchange rates and exports during the research year were used as samples.

Secondary data from the publications of BadaniPusatiStatistik (BPS) and Economic Statistics and Bank Indonesia Finance (SEKI) were used in this research. The IBM SPSS version 25 tool was used to carry out multiple linear regression analysis on the data.

The independent variables in the multiple linear regression analysis include interest rates, inflation, exchange rates, and exports, while the dependent variable is Indonesia's foreign exchange reserves. Each independent variable regression coefficient was determined for this study, and its significance was checked using the t-test. The simultaneous and substantial influence of independent factors on the dependent variable is also tested using the iF test.

Classic assumption tests will also be carried out during the analysis stage, including normality tests to check data distribution, multicollinearity tests to find correlations between independent variables, heteroscedasticity tests to check the uniformity of residual variance, and autocorrelation tests to check the correlation between confounding errors in the current period and previously.

After all tests are completed, the hypothesis is tested by evaluating the coefficient of determination (R2) to measure the model's capacity to account for variations in the dependent variable and the F-test and t-test to assess the significance of the influence of the independent variable. The variables act simultaneously and separately on the dependent variable.

By using this technique, it is hoped that the study can provide more in-depth knowledge about the impact of interest rates, inflation, currency exchange rates, and exports on Indonesia's foreign exchange reserves within a certain period.

RESULTS

Development of Indonesia's Foreign Exchange Reserves

Foreign exchange reserves are foreign exchange payment instruments that include gold, foreign currency, and foreign exchange receivable funds, expressed in US dollars, and sourced from Bank Indonesia. Data on Indonesia's foreign exchange reserves from 2005 to 2021, measured in Million US$, are recorded in Table 1 compiled by the Central Statistics Agency (BPS).

Table 1. Development of Indonesia's foreign exchange reserves for 2005-2021

Year	Position of foreign exchange reserves (Juta US$)	Development (%)
2005	34.724	
2006	42.586	22.64
2007	56.920	33.66
2008	51.639	-9.28
2009	66.105	28.01
2010	96.207	45.54
2011	110.12	14.46
2012	112.78	2.41
2013	99.38	-11.88
2014	111.86	12.55

Year	Position of foreign exchange reserves (Juta US$)	Development (%)
2015	105.93	-5.30
2016	116.362	9.85
2017	130.196	11.89
2018	120.654	-7.33
2019	129.183	7.07
2020	135.897	5.20
2021	144.905	6.63

Source: Research Analysis (2023)

The development of Indonesia's foreign exchange reserves from 2005 to 2019, which can be seen in Table 1, experienced significant fluctuations. Peak growth occurred in 2010 with an increase of 45.54% from the previous year, reflecting the positive performance of the external sector and the potential of the Indonesian economy. This has an impact on the stability and upward trend in the rupiah exchange rate, driven by strong foreign capital flows and a solid economic foundation.

However, in 2013, the lowest foreign exchange reserve position was recorded at -11.88%, triggered by the global economic slowdown, falling commodity prices and reduced capital inflows into the country. These factors were triggered by the global economic slowdown and decreasing demand for Indonesian exports due to slowing growth rates in various countries.

Development of Indonesian SukuiBungai

Interest rate is the interest rate for a certain amount of time expressed as a percentage. The Central Statistics Agency (BPS) has presented interest rate information in Table 2 which is calculated using the BI Rate set by Bank Indonesia. This interest rate information shows the average monthly interest rate in effect from 2005 to 2021.

Table 2. Development of Indonesian Interest Rates 2005-2021

Year	Interest rate	Development (%)
2005	12,75	
2006	9,75	-3,00
2007	8	-1,75
2008	9,25	1,25
2009	6,5	-2,75
2010	6,5	0,00
2011	6	-0,50
2012	5,75	-0,25
2013	7,5	1,75
2014	7,75	0,25
2015	7,5	-0,25
2016	4,75	-2,75
2017	4,25	-0,50
2018	6	1,75
2019	5	-1,00
2020	3,75	-1,25
2021	3,5	-0,25

Source: Research Analysis (2023)

Table 2 shows fluctuations in the development of interest rates from 2005 to 2021. The peak of growth occurred in 2018 with an increase of 1.75% from the previous year, which may have been triggered by the government borrowing. In contrast, the bottom occurred in 2006 with a decline of -3.00%, possibly due to slowing global demand.

Development of Indonesian Inflation

Inflation is a continuous increase in prices, but price levels that are considered high do not always indicate inflation. The inflation variable in this study refers to the percentage increase in the consumer price index from year to year, measured in percent. Information about Indonesian inflation from 2005 to 2021 can be found in Table 3., published by Bank Indonesia.

Table 3. Development of Indonesian Inflation 2005-2021

Year	Inflation	Development
	(%)	**(%)**
2005	17.11	
2006	6.6	-10,51
2007	6.59	-0,01
2008	11.06	4,47
2009	2.78	-8,28
2010	6.96	4,18
2011	3.79	-3,17
2012	4.3	0,51
2013	8.38	4,08
2014	8.36	-0,02
2015	3.35	-5,01
2016	3.02	-0,33
2017	3.61	0,59
2018	3.13	-0,48
2019	2.72	-0,41
2020	1.68	-1,04
2021	1.87	0,19

Source: Research Analysis (2023)

Table 3 shows fluctuations in inflation developments from 2005 to 2021. The peak inflation rate reached 4.08% in 2012-2013, triggered by an increase in world oil prices which had an impact on the costs of producing and distributing goods. In contrast, the lowest value occurred in 2006 with a percentage of -10.51%, due to a surplus of goods and strengthening of the Rupiah to Dollar exchange rate, which indicated the need for an increase in interest rates to suppress inflation and regulate money circulation.

Development of the Indonesian Exchange Rate

Table 4. reflects information on the exchange rate of the Rupiah (Rp) against the United States Dollar (USD) from BankaIndonesia for the 2005-2021 period, measuring changes in currency prices in units of rupiah per US dollar. The exchange rate describes the price of a country's currency against a foreign

currency, such as the USD exchange rate which shows the selling price of rupiah against US dollars in rupiah units.

Table 4. Development of Indonesian Exchange Rates 2005-2021

Year	Exchange rate (Rp)	Development (%)
2005	9.830	
2006	9.020	-8.24
2007	9.419	4.42
2008	10.950	16.25
2009	9.400	-14.16
2010	8.991	-4.35
2011	9.068	0.86
2012	9.670	6.64
2013	12.189	26.05
2014	12.44	2,06
2015	13.795	10,89
2016	13.436	-2.60
2017	13.548	0.83
2018	14.481	6.89
2019	13.901	-4.01
2020	14.105	1.47
2021	14.269	1.16

Source: Research Analysis (2023)

Table 4. reflects fluctuations in the development of the exchange rate of the Rupiah against the United States Dollar (USD) from 2005 to 2019. The highest exchange rate movement occurred in 2013 with a depreciation of 26.05%, caused by the high current account deficit and import needs, as well as the negative influence of the stimulus reduction plan from the US Central Bank which resulted in the withdrawal of foreign funds from developing countries, including Indonesia. In contrast, the lowest exchange rate was recorded in 2009 with a decline of -14.16%, triggered by an increase in foreign exchange supply, foreign capital inflow, current account surplus, and positive sentiment on global financial markets.

Development of Indonesian Exports

Table 5 depicts information about exports, which are sales of goods abroad with a payment system and quality agreed upon by the exporter and importer. This data is measured in Million USD and covers the value of Oil and Gas and Non-Oil and Gas exports from 2005 to 2021.

Table 5. Development of Indonesian Exports in 2005-2021

Year	Export Value (Million US$)	Development (%)
2005	85.659	
2006	100.798	17.67
2007	114.101	13.20
2008	137.020	20.09
2009	116.510	-14.97
2010	157.779	35.42

Year	Export Value (Million US$)	Development (%)
2011	203.496	28.98
2012	190.020	-6.62
2013	182.551	-3.93
2014	175.980	-3.60
2015	150.393	-14.54
2016	145.134	-3.50
2017	168.828	16.33
2018	180.012	6.62
2019	167.683	-6.85
2020	163.191	-2.68
2021	231.609	41.92

Source: Research Analysis (2023)

Table 5 depicts fluctuations in the development of Indonesia's exports from 2005 to 2019. In 2021, there was a depreciation in exports of 41.92% compared to the previous year, which was caused by a decrease in exports of commodities such as animal fats and oils, mineral fuels and metal ores. In contrast, in 2009, there was the lowest decline in exports of -14.97% due to the impact of the global financial crisis which reduced international market demand.

Data Analysis Results

The classic assumption test was carried out to ensure that the regression model used met the good requirements. The normality test uses a normal plot graph to check the distribution of variables, showing that the residuals are normally distributed.

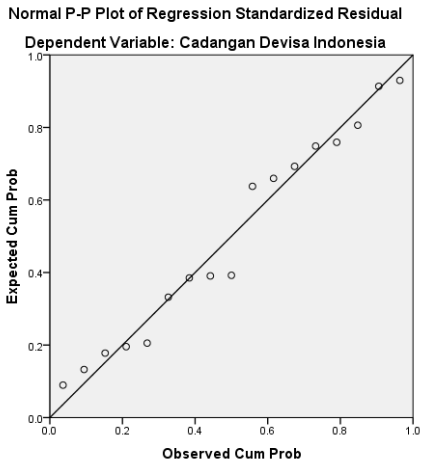

Figure 1. Plot graphic results

Source: Research Analysis (2023)

The multicollinearity test was carried out with the VIFi value in the book. and shows that the iVIF of all variables is below 10, indicating that there are no symptoms of multicollinearity.

Table 6. Multicollinearity Test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Interest rate	.124	8.065
	Inflation	.186	5.388
	Exchange rate	.773	1.294
	Export	.456	2.193

a. Dependent Variable: Indonesia's foreign exchange reserves

Source: Research Analysis (2023)

The heteroscedasticity test uses a scatter plot between residuals and fits which shows a random distribution of points without a special pattern, indicating that there is no heteroscedasticity in the model.

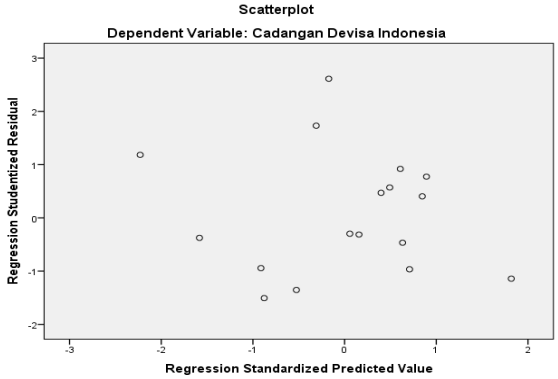

Figure 2. Scatterplot graph
Source: Research Analysis (2023)

To find out whether there is a relationship between confounding errors in the early and late periods, the autocorrelation test uses a run test. The test results provide a significance value (Asymp. Sig.) greater than 0.05, this indicates that the regression equation does not include autocorrelation.

Table 7. Autocorrelation Test

Runs Test

	Unstandardized Residual
Test Value[a]	-3620.79765
Cases < Test Value	8
Cases >= Test Value	9
Total Cases	17
Number of Runs	6
Z	-1.494
Asymp. Sig. (2-tailed)	.135

a. Median

Source: Research Analysis (2023)

The research theory is then tested statistically. To investigate the impact of two or more independent variables on the dependent variable, multiple linear regression analysis is used. Table 8 presents the calculation results using multiple

linear regression analysis. presents the regression equation as follows: X1 + 608.005 X2 + 0.524 X3 + 0.403

Table 8. Results of Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	87635.976	41908.043		2.091	.058		
	SUKUBUNGA	-9288.715	3963.496	-.639	-2.344	.037	.124	8.065
	INFLASI	608.005	1929.951	.070	.315	.758	.186	5.388
	NILAITUKAR	.524	1.131	.051	.463	.651	.773	1.294
	EKSPOR	.403	.135	.424	2.981	.011	.456	2.193

a. Dependent Variable: CADANGANDEVISA

Source: Research Analysis (2023)

The interpretation of the regression model can be described as follows:

1. The fixed value of 87635.976 indicates that if factors such as Interest Rates (X1), Inflation (X2), Exchange Rates (X3), and Exports (X4) are maintained at the same level, then Indonesia's Foreign Exchange Reserves will experience an increase amounting to 87635.976.

2. From the regression coefficient for the Interest Rate variable (X2) of -9288.715, it can be concluded that there is a negative influence on Foreign Exchange Reserves (Y). This means, that if interest rates increase by 1%, Indonesia's foreign exchange reserves will decrease by 9288,715.

3. Next, the regression coefficient for the Inflation variable (X2) has a value of 608.005, which indicates a positive influence on Foreign Exchange Reserves (Y). In other words, if the inflation rate increases by 1%, Indonesia's foreign exchange reserves will increase by 608,005.

4. The result of the regression coefficient for the Exchange Rate variable (X3) is 0.524, which illustrates the positive influence on Foreign Exchange Reserves (Y). If the exchange rate increases by 1%, Indonesia's foreign exchange reserves will increase by 0.524.

5. Lastly, the regression coefficient for the Export variable (X4) has a value of 0.403, indicating a positive influence on Foreign Exchange Reserves (Y). Therefore, if the export level increases by 1%, Indonesia's foreign exchange reserves will increase by 0.403.

Thus, analysis using a multiple linear regression model shows that interest rates, inflation, exchange rates and exports have different impacts on Indonesia's foreign exchange reserves. These findings provide a further understanding of the factors that influence Foreign Exchange Reserves.

Hypothesis Testing

TestiCoefficientiDeterminationi (R2)

In the Coefficient of Determination Test (R2), an analysis is carried out to measure how big the relationship is between the variables in the multiple linear regression model. This is obtained through the coefficient of determination (R2), which indicates how well the independent variables explain variations in the dependent variable.

Table 9. Coefficient of Determination (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.943[a]	.889	.853	13244.806	.792

a. Predictors: (Constant), EKSPOR, NILAITUKAR, INFLASI, SUKUBUNGA

b. Dependent Variable: CADANGANDEVISA

Source: Research Analysis (2023)

Table 9 presents the results of this research analysis. "Coefficient of Determination (R2)". The coefficient of determination of the multiple linear regression model derived is 0.889. Regarding the volatility of Indonesia's foreign exchange reserves, this figure shows that Interest Rates, Inflation, Exchange Rates and Exports together can account for around 88% of the variation. In other words, the variables in this model can explain most of the volatility of foreign exchange reserves.

Volatilitas cadangan devisa Indonesia sebesar 12% sisanya tidak dapat dijelaskan oleh variabel-variabel dalam model ini dan kemungkinan dipengaruhi oleh variabel tambahan yang tidak diperhitungkan. Meskipun nilainya cukup besar, penting untuk diingat bahwa nilai R2 mewakili seberapa banyak variabilitas dalam variabel dependen dapat dijelaskan oleh variabel independen dalam model regresi ini daripada mencerminkan kausalitas secara absolut.

F Test

A study using the F test was carried out to assess whether the independent factors together had a significant influence on the dependent variable. The F test tests whether there is a significant difference between the actual regression model and the regression model with only constant variables.

Table 10. F Test Calculation Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.694E+10	4	4236219354	24.148	.000[b]
	Residual	2105098687	12	175424890.6		
	Total	1.905E+10	16			

a. Dependent Variable: CADANGANDEVISA

b. Predictors: (Constant), EKSPOR, NILAITUKAR, INFLASI, SUKUBUNGA

Source: Research Analysis (2023)

The results of the F test calculation are given in Table 10. "F Test Calculation Results". This testing process is carried out by proposing a null hypothesis (H0) and an alternative hypothesis (H1):

1. H0: The regression coefficients (β1, β2, β3, β4) of the independent variables (X1,
2. H1: At least one regression coefficient (β) of the independent variables (X1,

This result is less than the significance threshold (α) set at 0.05, with the F-test significance value of 0.000. The result is that the independent factors (interest rates, inflation, exchange rates and exports) together have a large influence on the dependent variable, namely Indonesia's foreign exchange reserves, so the null hypothesis (H0) is rejected. In other words, a regression model that considers these factors can adequately explain fluctuations in Indonesia's foreign exchange holdings.

T Test

Partial significance testing of the variables Interest Rates, Inflation, Exchange Rates and Exports on Indonesia's Foreign Exchange Reserves was carried out using the t-test.

Tabel 1. Results analysis Uji t

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	87635.976	41908.043		2.091	.058		
	SUKUBUNGA	-9288.715	3963.496	-.639	-2.344	.037	.124	8.065
	INFLASI	608.005	1929.951	.070	.315	.758	.186	5.388
	NILAITUKAR	.524	1.131	.051	.463	.651	.773	1.294
	EKSPOR	.403	.135	.424	2.981	.011	.456	2.193

a. Dependent Variable: CADANGANDEVISA

Source: Processed Secondary Data, 2023

The results of this test are displayed in Table 11 "T Test Analysis Results". The purpose of this test is to assess whether each independent variable has a significant influence on the dependent variable when the other variables are considered constant.

Decision-making from the test results is carried out by comparing the calculated values with the t-table, as well as considering the probability value (p-value). Based on the results of this comparison, each independent variable was analyzed:

1. Interest Rate (X1): In the regression calculation, the t-count is -2.344 and a probability value of 0.037. The t-calculated value is smaller than the t-table (−2.344 < 1.78229), and the probability value is smaller than alpha (0.037 < 0.05). This indicates that the interest rate variable has a negative and significant influence on Indonesia's foreign exchange reserves.

2. Inflation (X2): In the regression calculation, a t-count of 0.315 and a probability value of 0.758 were obtained. The t-calculated value is smaller than the t-table (0.315 < 1.78229), but the probability value is greater than alpha (0.758 > 0.05). This implies that the inflation variable has a positive but not significant influence on Indonesia's foreign exchange reserves.

3. Exchange Rate (X3): In the regression calculation, a t-count of 0.463 and a probability value of 0.651 were obtained. The t-calculated value is smaller than the t-table (0.463 < 1.78229), and the probability value is greater than alpha (0.651 > 0.05). This shows that the Exchange Rate variable has a positive but not significant influence on Indonesia's foreign exchange reserves.

4. Exports (X4): In the regression calculation, a t-count of 2.981 and a probability value of 0.011 were obtained. The t-calculated value is greater than the t-table (2.981 > 1.78229), and the probability value is smaller than alpha (0.011 < 0.05). This indicates that the Export variable has a positive and significant influence on Indonesia's foreign exchange reserves.

Based on the results of this research, the conclusion is that exports, interest rate inflation and exchange rates have a partial influence on Indonesia's foreign exchange reserves. Interest rates have a significant impact and tend to be negative, while the Export Factor has a real and positive impact. Although the impact of variables that influence the exchange rate and inflation has a positive effect, its contribution to Indonesia's foreign exchange reserves is very limited.

DISCUSSION

The Influence of Interest Rates on Indonesia's Foreign Exchange Reserves

The results of the analysis show that interest rates have a negative and significant influence on Indonesia's foreign exchange reserves. A calculated value that is smaller than the table and a probability value that is less than 0.05 indicates that changes in interest rates have a significant impact on changes in foreign exchange reserves. In theory, interest rates affect investment and aggregate income. Rising interest rates tend to reduce investment and hurt income, which in turn can affect foreign exchange reserves.

The Effect of Inflation on Indonesia's Foreign Exchange Reserves

The analysis shows that inflation has a positive but not significant influence on Indonesia's foreign exchange reserves. It was found that changes in inflation did not have a significant impact on changes in foreign exchange reserves. This can be explained by an increase in inflation which can affect economic activity negatively, encourage more spending on purchasing foreign goods and services, and result in a trade balance deficit and reduce foreign exchange reserves.

The Influence of Exchange Value on Indonesia's Foreign Exchange Reserves

The results of the analysis show that the value of the assets has a positive but not significant influence on Indonesia's foreign exchange reserves. Even though the t_calculation value is smaller than the table, the probability value is greater than 0.05, indicating that changes in the exchange rate do not have a significant impact on changes in foreign exchange reserves. Exchange rate stability is important for the economy and its influence on foreign exchange reserves is more complex, involving aspects of international trade and investment.

The Influence of Exports on Indonesia's Foreign Exchange Reserves

Analysis shows that exports have a positive and significant influence on Indonesia's foreign exchange reserves. The calculated value which is greater than the tabulated value and the probability value which is less than 0.05 indicates that changes in exports have a significant impact on changes in foreign exchange reserves. An increase in exports will increase foreign exchange income, which in turn will increase foreign exchange reserves. Exports have an important role in maintaining funds and increasing a country's foreign exchange reserves.

From the results of the analysis, interest rates, inflation, exchange rates, and export funds have different influences on Indonesia's foreign exchange reserves. Interest rates have a negative and significant influence, inflation has a positive but not significant influence, the exchange rate has a positive but not significant influence, and exports have a positive and significant influence. These findings provide important insights for economic policy-making aimed at maintaining and increasing Indonesia's foreign exchange reserves.

CONCLUSION AND RECOMMENDATIONS

Based on the results of the analysis carried out, it can be concluded as follows:

1. Interest rates have a negative and significant influence on Indonesia's foreign exchange reserves.
2. Inflation has a positive and insignificant influence on Indonesia's foreign exchange reserves.
3. The exchange rate has a positive and insignificant influence on Indonesia's foreign exchange reserves.
4. Exports have a positive and significant influence on Indonesia's foreign exchange reserves.

FURTHER STUDY

For future research, it is recommended to examine in more detail how the interaction between interest rates, inflation, exchange rates, and exports can have a holistic impact on Indonesia's foreign exchange reserves. Are there more complex correlation patterns or synergistic effects that have not been revealed?

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