

THE EFFECT OF EXCHANGE RATES AND INTEREST RATES ON THE DEVELOPMENT OF THE INDONESIAN CAPITAL MARKET

Dhenok Darwanti^{1*}, Evi Okli Lailani^{2*}, Ahmad Farabi^{3*}

^{1,2}Institut Teknologi dan Bisnis Swadharma, Indonesia

³ Sekolah Tinggi Ilmu Ekonomi Ganesha, Indonesia

Email: ¹dhenok_darwanti@Swadharma.ac.id, ²lct.evi@gmail.com, ³ahmad@stieganisha.ac.id

***) Corresponding Author**

Abstract

Received: 12 November 2025

Revised: 20 November 2025

Accepted: 30 November 2025

Published online:

This study aims to analyze the effect of the exchange rate and interest rates on the development of the Indonesian capital market, both partially and simultaneously. The study employs a quantitative research approach using secondary time-series data obtained from official financial and economic sources. Data analysis is conducted through descriptive statistical analysis and multiple linear regression techniques to examine the relationship between macroeconomic variables and capital market development. The empirical results indicate that the exchange rate and interest rates simultaneously have a significant effect on the development of the Indonesian capital market. Partially, the rupiah exchange rate against the US dollar has a significant and positive effect, indicating that exchange rate movements play an important role in influencing capital market performance. In contrast, interest rates show a significant and negative effect on capital market development, suggesting that higher interest rates tend to reduce investment activity in the capital market. Furthermore, the Adjusted R^2 value of 0.7944 demonstrates that 79.44 percent of the variation in the development of the Indonesian capital market can be explained by changes in the exchange rate and interest rates, while the remaining 20.56 percent is influenced by other factors not included in the model. These findings emphasize the importance of maintaining macroeconomic stability, particularly exchange rate management and interest rate policies, to support sustainable growth and strengthen the performance of the Indonesian capital market.

Keywords:

Exchange Rate, Interest Rate, Capital Market

INTRODUCTION

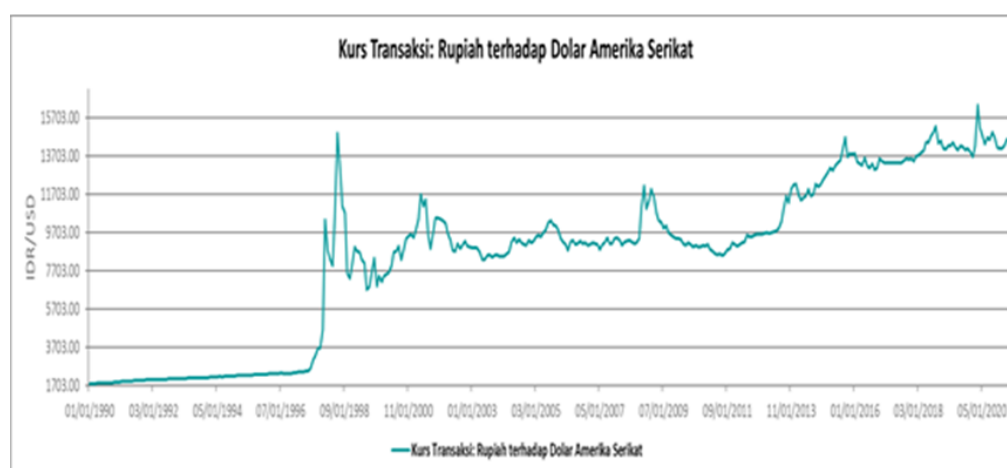
The development of the capital market as an investment instrument plays an increasingly important role in supporting both economic and financial functions. Economically, the capital market facilitates the mobilization of funds from surplus units to deficit units, enabling corporations to raise long-term capital for productive activities. Financially, it provides investors with alternative investment instruments that allow efficient portfolio diversification and return optimization. In Indonesia, the capital market has evolved since its establishment in 1912 and has continued to develop through institutional reforms, culminating in the formation of the Indonesia Stock Exchange (IDX). Currently, trading activities on the IDX operate under an order-driven market (ODM) mechanism and a continuous auction system (CAS), which enable transparent price discovery through bid and ask interactions among market participants.

As an intermediary institution, the capital market supports efficient fund allocation by directing investment toward productive sectors that offer higher expected returns. This efficiency is based on the assumption that securities with higher returns reflect stronger firm performance and economic prospects, thereby contributing to sustainable economic growth. Consequently, the performance and development of the capital market are highly sensitive to changes in macroeconomic conditions that influence investor expectations and investment decisions.

One of the key macroeconomic variables affecting capital market performance is the exchange rate. The exchange rate represents the price of one country's currency in terms of another and serves as an important indicator of economic stability. According to Ekananda (2019), exchange rates reflect the relative value of currencies and are influenced by fundamental macroeconomic factors such as inflation, economic growth, and trade balances. Fluctuations in the rupiah exchange rate can significantly affect foreign capital inflows, investor confidence, and overall market dynamics. Given the dominant role of the US dollar in the global monetary system, movements in the rupiah–US dollar exchange rate have substantial implications for Indonesia's capital market performance. Therefore, considering the strategic role of the capital market and the sensitivity of investment decisions to macroeconomic conditions, this study focuses on examining the influence of the exchange rate and interest rates on the development of the Indonesian capital market.

This differs from the US dollar. Since 1971, the US dollar has been used to replace gold as the basis of the global monetary system. Consequently, all international trade transactions are conducted in the US dollar, which means that every US economic policy will impact not only the US but also the economies of other countries worldwide. In the graph of fluctuations in the rupiah exchange rate against the dollar in 1990-2020 in Indonesia, the following movements can be seen:

Figure 1. Graph of the Rise and Fall of the Rupiah Exchange Rate against the Dollar, 1990–2020



Source: Bank Indonesia (processed)

Figure 1 shows an increase in foreign currency exchange rates against the Rupiah, particularly during the 1998 monetary crisis, when the US dollar experienced significant fluctuations against the Rupiah, from a range of Rp3,000-Rp3,500 to Rp16,800. This trend aligns with the increasing foreign investment in the Indonesian capital market each year.

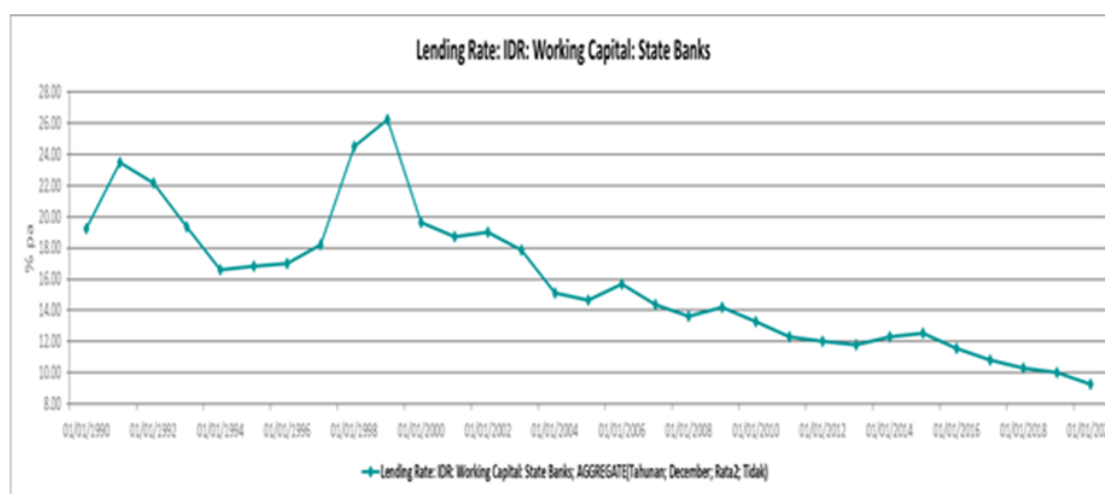
The US dollar exchange rate against the Rupiah began to decline from 1999 to 8,950, showing an upward trend until 2007, reaching 9,419. In 2008, a decline began due to the global financial crisis, particularly in the United States, stemming from housing defaults. In 2009, the exchange rate began to rise, reaching 14,102 in 2019. However, in 2020, a slight decline occurred due to the COVID-19 pandemic, reaching 13,662.

Several studies on the influence of foreign exchange rates on capital market development include Sichongwee's (2016, p. 114) study on the impact of currency exchange rates on the Zambian capital market. The study, conducted by Adebawale and Akosile (2018, p. 247), found that interest rates negatively impact the capital market, while foreign exchange rates positively impact the Nigerian capital market. This is consistent with research by Obura and Anyango (2016, p. 27), which found that both interest rates and foreign exchange positively impact the capital market.

High interest rates can lead to lower stock prices. Conversely, low interest rates can lead to higher stock prices. This is because investors are likely to purchase shares to obtain greater returns from interest rates than from deposits. Furthermore, lower interest rates will lower borrowing costs, which encourages businesses to increase their investment spending. The trend of low interest rates will provide banks with greater incentives to lend to businesses and households, encouraging them to spend more.

Figure 2 shows the following movement in Bank Indonesia's interest rates from 1990 to 2020:

**Figure 2. Bank Indonesia Interest Rate Chart
1990–2020**



Source: Bank Indonesia (processed)

Dhenok. The Effect Of Exchange Rates And Interest Rates On The Development Of The Indonesian Capital Market

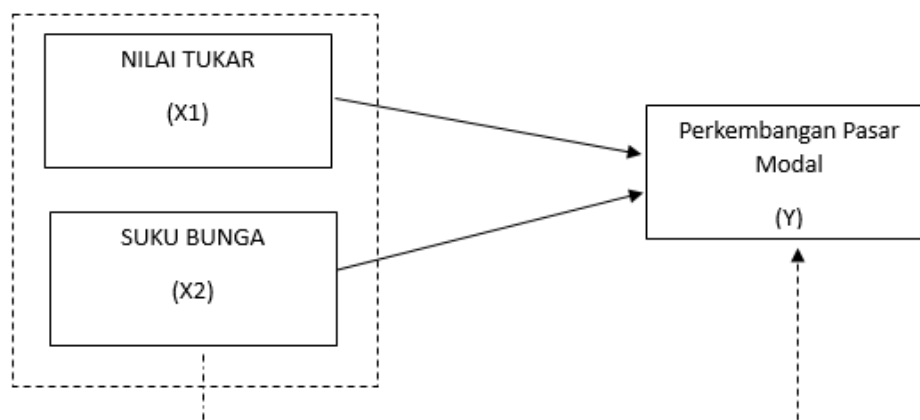
The graph above shows that Bank Indonesia's lending interest rate averages 15.89% per year. Over the years, Bank Indonesia's lending interest rate has been on a downward trend. This can be seen since January 2020, when the BI benchmark interest rate decreased by 150 basis points. If interest rates increase, bond yields will decrease, although the actual impact of interest rates on stocks is not directly felt.

According to Adiningsih et al. (2011, p. 155), the rupiah exchange rate is the value of the rupiah against other currencies. Therefore, the rupiah exchange rate is the value of a currency translated into another country's currency. For example, the rupiah exchange rate against the US dollar, the rupiah exchange rate against the yen, and others. This exchange rate is one of the parameters influencing activity in the stock and money markets, as investors typically become more cautious when making investments. A weakening rupiah exchange rate against foreign currencies, especially the US dollar, negatively impacts the economy and capital markets. According to Sadono Sukirno (2015:397), the exchange rate, often referred to as the exchange rate, is the exchange rate against another exchange rate. The exchange rate is one of the main costs in open economic activity, given its significant influence on the current transaction balance and several other macroeconomic variables.

Interest rates are divided into nominal and real. Nominal interest rates are interest rates that take into account the inflation rate (reflecting the increase in savings). Real interest rates are interest rates that have taken into account the inflation rate (reflecting the increase or decrease in the purchasing power of savings). Real interest rates are nominal interest rates minus the inflation rate (Mankiw, 2011, p. 530). The real interest rate, which is usually used as a reference, is the risk-free rate (in Indonesia's case, the Bank Indonesia Certificate) minus inflation. According to Boediono (2014, p. 76), interest rates are the cost of using loanable funds. Interest rates serve as an indicator for determining whether to invest or save. According to Sunariyah (2013, p. 80), the definition of interest rate is the cost of borrowing. Interest rate is defined as a percentage of the principal per unit of time.

To further examine the relationship between the Rupiah exchange rate and interest rates on capital market development, the researcher's framework can be seen in the research model below:

Figure 3
Thinking Framework



Information :

X1 : Exchange Rate

X2: Interest Rate

Y: Capital Market Development

METHODS

Methods In this study, the researcher used descriptive and verification methods. According to Sugiyono (2017, p. 44), descriptive research is a research process that examines the value of one or more independent variables, without comparing or correlating them with other variables, and then analyzes them to reach a conclusion. Furthermore, the verification method refers to research conducted on a specific population or sample with the aim of testing a hypothesis.

Data was collected from various sources related to the research. Secondary data was obtained from books, the internet, journals, and other sources. Library research techniques were used in data collection. This research used quantitative data because it is measurable and numerical. The data used in this research was secondary data, in the form of published semester reports or those compiled by relevant parties. Data collection was conducted using time series data (30 years) from 1990 to 2020. The data sources for this research relate to the research theme, namely the Indonesia Stock Exchange (IDX), the World Bank, Bank Indonesia (BI), and the Central Statistics Agency (BPS). The method chosen for data analysis must align with the research pattern of the variables being studied. According to Sinambela (2021, pp. 115-117), the primary goal of descriptive research is to produce an accurate picture of the phenomenon being studied, describe the processes that occur, and provide important information about the variables. One type of descriptive research is correlation studies, which aim to answer the extent of the relationship between the variables being studied. The analysis techniques used in this research include:

Descriptive Statistics

Ghozali (2016: 19) states that descriptive statistics describe data based on its mean or average value, minimum value, maximum value, and standard deviation. This analysis technique provides information about the research data and is not intended to test hypotheses.

Regression Analysis

Sugiyono (2017: 275) states that multiple linear regression analysis is used by researchers to determine how the dependent variable will fluctuate in the future if two or more independent variables act as predictors. In this study, multiple linear regression analysis was used to determine the magnitude of the relationship and influence of the independent variables (X1 and X2) on the dependent variable (Y). To obtain more focused results, the author used SPSS software. The model used is as follows:

Multiple linear regression model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:

Y = Capital Market Development

β_1 = Coefficient of X1

β_2 = Coefficient of X2

Dhenok. The Effect Of Exchange Rates And Interest Rates On The Development Of The Indonesian Capital Market

X1 = Exchange Rate

X2 = Interest Rate

e = Confounding Variable

RESULT AND DISCUSSION

Descriptive Statistical Analysis

Exchange Rate

According to Bank Indonesia (BI) data, the rupiah exchange rate against the US dollar was analyzed using 62 (sixty-two) research samples over a 30-year period, from 1990 to 2020, using semiannual data for each year. The research data on the rupiah exchange rate against the US dollar from 1990 to 2020 averaged Rp. 8,550.66 per USD. The highest rupiah exchange rate against the dollar was recorded at Rp. 14,900 per USD in the first semester of 1998, and the lowest rupiah exchange rate against the dollar was recorded at Rp. 1,832 per USD in the first semester of 1990. It can be seen that the rupiah exchange rate against the US dollar continued to increase throughout 1990-2020. This value increased significantly in the first semester of 1998, reaching Rp14,900 per USD, up from Rp4,650 per USD in 1997. This was due to the 1998 monetary crisis in Indonesia. The monetary crisis at that time was triggered by the swelling figure of private foreign debt, which put severe pressure on the Indonesian economy.

Interest Rates

Based on data from Bank Indonesia, interest rates during the 30-year study period, 1990-2020, with 62 (sixty-two) semester data samples. The research data for the Interest Rate Level during 1990-2020 had an average value of 17.01%. The highest interest rate was recorded at 34.75% in the second semester of 1998, and the lowest interest rate was recorded at 9.15% in the second semester of 2020. The graph above shows that the BI interest rate decreased throughout 1990-2020. The highest interest rate was recorded at 34.75% in the second semester of 1998 due to the monetary crisis, which caused deposit interest rates in 1998 to soar to 60% and 70%, making deposit interest rates exceed loan interest rates. At that time, Bank Indonesia implemented a high interest rate policy until the money market reached 70% in order to overcome inflation. However, this was different in the second semester of 2020, where the lowest interest rate was recorded at only 9.15%. In 2020, Bank Indonesia cut the base interest rate in response to the monetary authority's response to the economic conditions caused by the Covid-19 outbreak. Bank Indonesia (BI) recorded five interest rate cuts, or 125 basis points (bps) during 2020. According to Bank Indonesia, this low interest rate will continue as long as inflation shows no signs of increasing.

CLASSICAL ASSUMPTION TEST

This test is used to assess data quality in multiple regression testing. Several classical assumption tests that need to be performed are:

Multicollinearity Test

Multicollinearity testing aims to determine whether the independent variables are related to each other. Multicollinearity symptoms are only possible in multiple linear regression models.

Multicollinearity detection is carried out using the Matrix Correlation test. Based on the test results, the multicollinearity test results were obtained, including:

Table 1
Correlation Matrix Multicollinearity Test

	Exchane Rate	Interest Rate
Interest Rate	1	-0.52804
Exchane Rate	0.236004	1

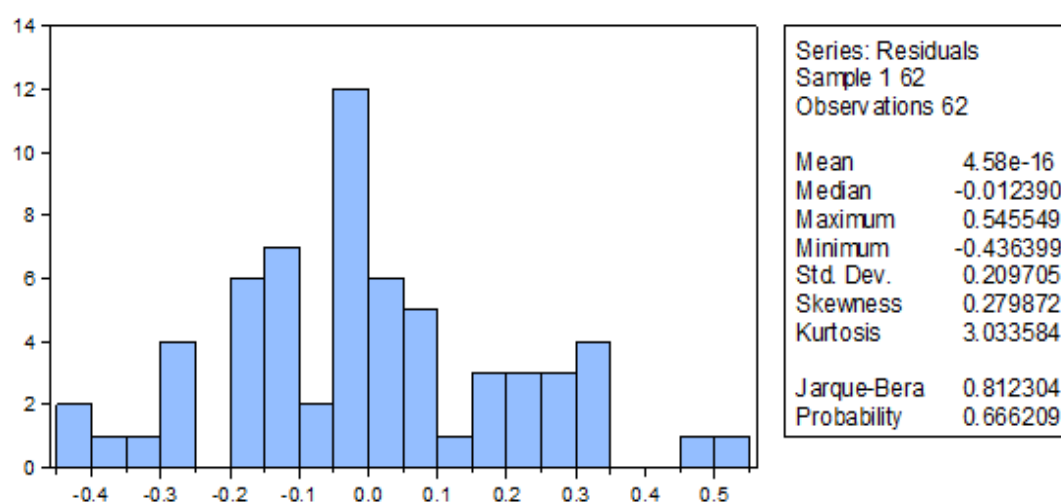
Source: Processes

According to Gujarati (2013: 54), the correlation test results in Table 4.3 indicate that no variables have correlation values exceeding 0.8. These results indicate that the regression model does not have multicollinearity issues, meaning several variables are free from multicollinearity issues.

Normality Test

The normality test is conducted to determine the normal distribution of the dependent and independent variables in a regression model. As we all know, the t-test and f-test require that the data be normally distributed. If this requirement is not met, the test results will be invalid in small samples. A good regression model should have a normal or nearly normal distribution. Furthermore, the JB Test (Jarques-Berra test) is used in this normality test. Based on the test results, the normality test results obtained include:

Figure 1. Normality Test



Source: Processes

Based on the results of the Jarque Bera histogram test in Figure 4.8, it is known that the model equation's probability value, 0.666209, is greater than 0.05, and the Jarque Bera value is 0.812304. Therefore, the data can be declared normally distributed and free from normality issues.

Heteroscedasticity Test

This test is used to determine whether there are deviations from the heteroscedasticity test requirements, namely differences in the variation of the error confounding factor for all

observations in the regression model. The mandatory requirement for this test is the absence of heteroscedasticity.

The method used to test for heteroscedasticity is the White Heteroscedasticity Test. The results of the White Heteroscedasticity Test are as follows:

Table 2. Heteroscedasticity Test
(White Method)

Heteroskedasticity Test : White			
F-statistic	2.240209	Prob. F(5,56)	0.0628
Obs*R-squared	10.33414	Prob.Chi-Square(5)	0.0663
Scaled Explained SS	8.572333	Prob.Chi-Square(5)	0.1274

Source: Process

According to the test results in Table 2, it shows that the Chi-Squared probability value of 0.1194 exceeds 0.05, so it can be assumed that the regression model is free from the heteroscedasticity phenomenon.

MULTIPLE REGRESSION ANALYSIS

The influence of exchange rates and interest rates, both simultaneously and partially, on Capital Market Development. The results of multiple linear regression revealed a causal relationship between the independent and dependent variables, including:

The multiple linear regression model is:

$$Y = 1.901072 + 0.426223X_1 + 1.455789X_2$$

Where:

Y = Capital Market Development

β_1 = Coefficient of X_1

β_2 = Coefficient of X_2

X_1 = Exchange Rate

X_2 = Interest Rate

e = Confounding Variable

The interpretations that can be concluded from the above function are:

1. The constant value is 1.901072, which means that according to statistical calculations, if all variables, ceteris paribus, have constant values, the value of Capital Market Development is 1.901072.
2. The regression coefficient $b_1 = 0.426223$, indicating that the elasticity of the Rupiah to US Dollar exchange rate with respect to the development of the Indonesian capital market is $E = 0.426223$. A value of $E < 1$ indicates that an increase in the Rupiah to US Dollar exchange rate is inelastic to the development of the Indonesian capital market.
3. The regression coefficient $b_2 = 1.455789$, indicating that the elasticity of the Interest Rate to the development of the Indonesian capital market is $E = 1.455789$. A value of $E > 1$ indicates that an increase in the Interest Rate is elastic to the development of the Indonesian capital market.

DISCUSSION

F-statistic test

Used to determine the relationship between independent variables that simultaneously influence the dependent variable, explaining the results of the regression calculation with a significance value of $0.0000 < 0.05$, indicating a significant influence, where the independent variables jointly influence the dependent variable. The calculation results obtained a significance value of $0.0000 < 0.05$, indicating a significant effect, indicating that the exchange rate and interest rate variables simultaneously have a significant effect on the development of the Indonesian capital market.

t-Test

The Effect of the Exchange Rate on the Development of the Indonesian Capital Market
The t-test was conducted by examining the significance level, or α , where in this study the α level used was 5% or 0.05. Considering the effect of the Rupiah exchange rate against the US dollar on the development of the Indonesian capital market, it can be concluded that the Rupiah exchange rate against the US dollar has a significant and positive effect on the development of the Indonesian capital market. In economics, the term "significant" means that the hypothesis of a positive Rupiah exchange rate against the US dollar can be convincingly and meaningfully proven to influence the development of the Indonesian capital market. A positive meaning implies that an increase in the Rupiah exchange rate against the US dollar is also followed by an increase in the development of the Indonesian capital market.

Partial Test of the Effect of Interest Rates on the Development of the Indonesian Capital Market

The t-test was conducted by examining the significance level, or α , where in this study the α level used was 5% or 0.05. Therefore, it can be concluded that the effect of interest rates on the development of the Indonesian capital market, based on the calculations obtained in the multiple linear regression table, statistically shows that the significance of the interest rate on the development of the Indonesian capital market is less than α ($0.0000 < 0.05$). Therefore, it can be concluded that the interest rate variable has a significant and negative effect on the development of the Indonesian capital market. In economics, the term "significant" means that interest rates can be convincingly and meaningfully proven to influence the development of the Indonesian capital market. A negative term implies that an increase in interest rates is accompanied by a decrease in the development of the Indonesian capital market.

The Exchange Rate and Interest Rate significantly influence the Development of the Indonesian Capital Market.

The regression results of these two independent variables on the Development of the Indonesian Capital Market are: Adjusted R Squared = 0.794491, indicating that the Exchange Rate simultaneously significantly influences the Development of the Indonesian Capital Market, proxied by the Development of the Indonesian Capital Market, amounting to 79.44 percent. The remaining 20.55 percent is influenced by factors outside the studied model.

CONCLUSION

Based on the statistical analysis of semiannual time series data from 1990 to 2020, this study concludes that both the Rupiah exchange rate and interest rates are significant factors influencing the development of the Indonesian capital market. The findings indicate that, simultaneously, these two variables account for 79.44 percent of the capital market's development, with the remaining 20.55 percent attributed to other factors not examined in this model. Partially, the Rupiah exchange rate exerts a significant positive influence, a relationship driven by the

concurrent influx of foreign investment which impacts currency volatility. Conversely, interest rates demonstrate a significant negative effect, as higher rates tend to divert investor capital towards deposits rather than capital market instruments. To address these dynamics, it is suggested that Bank Indonesia consider implementing a calibrated monetary policy to manage exchange rate stability. This involves setting a competitive yet prudent benchmark interest rate (BI Rate) to strengthen the Rupiah without triggering excessive inflationary pressure by constricting the money supply. Furthermore, future research is recommended to explore additional variables beyond exchange and interest rates to gain a more comprehensive understanding of the forces shaping the capital market's development.

REFERENCES

- Adiningsih, sri et al. 2011. Perangkat Analisis dan Teknik Analisis di Pasar Modal Indonesia : PT. Bursa Efek Jakarta.
- Adebowale, E. A., & Akosile, A. I. (2018). Interest rate, foreign exchange rate, and stock market development in Nigeria. *Binus Business Review*, 9(3), 247-253.
- Boediono. 2014. *Ekonomi Internasional - Pengantar Ilmu Ekonomi* No. 3. Yogyakarta: BPFE-Yogyakarta
- Ekananda, Mahyus (2019). *Manajemen Investasi*. Jakarta : Erlangga. ISBN : 978-602-434-618-8.
- Ghozali, Imam. 2016. *Aplikasi Analisis Multivariate dengan Program IBM SPSS 23*. Edisi 8. Semarang: Badan Penerbit Universitas Dipenogoro.
- Mankiw, N.Gregory. 2011. *Pengantar Ekonomi Makro*. Jakarta:Erlangga
- Obura, J. M., & Anyango, C. (2016). Moderating effect of interest rates on relationship between foreign exchange rate fluctuation and performance of Nairobi securities exchange market. *Universal Journal of Accounting and Finance*, 4(2), 27-34
- Sadono Sukirno. 2015. *Makroekonomi: Teori Pengantar*. Jakarta : PT Raja Grafindo Pustaka.
- Sichoongwe, K. (2016). Effects of exchange rate volatility on the stock market: The Zambian experience. *Journal of Economics and Sustainable Development*, 7(4).
- Sinambela, Lijan Poltak dan Sartono. 2021. *Metodologi Penelitian Kuantitatif : Teoretik dan Praktik*. Depok : PT Raja Grafindo Persada
- Sugiyono. 2017. *Statistika Untuk Penelitian*. Bandung : CV ALFABETA. Sukirno
- Sunariyah. 2013. *Pengantar Pengetahuan Pasar Modal (Edisi 6)*. Penerbit : UPP STIM YKPN, Yogyakarta.