



Impact of Inflation and the Rupiah Exchange Rate on Stock Returns in Indonesia: Evidence from Monthly Data (2020–2024)

Aurel Dafina Rezka Firdaus^{1*)}; Suhono²⁾; Liya Megawati³⁾

^{1,2)} *Department of Management, Faculty of Economic and Business, Universitas Singaperbangsa Karawang*

*Correspondent Author: 2210631020102@student.unsika.ac.id

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ABSTRACT

Purpose: This study examines the effect of inflation and the rupiah exchange rate on stock returns in the Indonesian stock market during the period January 2020 to December 2024. **Methodology:** This study employed a quantitative explanatory design using monthly secondary data obtained from Bank Indonesia (BI) and the Central Statistics Agency (BPS). The data were analysed using multiple linear regression with SPSS version 26. **Results:** The results indicate that inflation and the rupiah exchange rate do not have a significant effect on stock returns, either partially or simultaneously. The coefficient of determination (R^2) of 0.055 shows that inflation and the exchange rate explain only 5.5% of the variation in stock returns, while the remaining 94.5% is explained by other factors outside the model. **Findings:** These findings suggest that stock return movements in Indonesia during the post-COVID-19 period are driven primarily by variables beyond inflation and exchange rate dynamics. **Novelty & Originality:** This study offers novelty by examining the post-pandemic period (2020–2024), a unique economic recovery phase rarely explored in prior research on macroeconomic determinants of stock returns in Indonesia. **Conclusions:** The study concludes that investors should consider other macroeconomic and firm-specific factors beyond inflation and exchange rates. **Type of Paper:** This paper is an empirical research paper.

INTRODUCTION

From a macroeconomic perspective, inflation and the rupiah exchange rate are widely recognised as important indicators that influence investment decisions and stock return movements. Inflation reflects a continuous increase in the general price level, which may reduce purchasing power and increase business costs, thereby affecting corporate performance and investors' real returns (Ghani et al., 2023). Empirically, inflation does not always weaken the rupiah exchange rate, indicating that the transmission of inflation to financial markets may vary across periods and economic conditions (Algifari & Rohman, 2022).

The exchange rate is also considered one of the most important macroeconomic indicators because it reflects the balance of foreign currency demand and supply and plays a central role in both domestic and international economic activities (Manurung, 2021). Changes in the rupiah exchange rate may influence firms' revenues, production costs, and international competitiveness,

particularly for companies that are exposed to import and export activities, which in turn may affect stock return performance (Manurung, 2021).

Empirical evidence in Indonesia, however, shows inconsistent results regarding the relationship between inflation, exchange rates, and stock returns. Several studies report that inflation and exchange rates do not have a significant effect on stock returns, indicating that stock market movements may be driven by other factors beyond macroeconomic indicators (Fellicia & Widjaja, 2023). In contrast, other studies find that inflation and exchange rate movements have a significant and negative effect on stock returns in certain sectors, suggesting that the impact of macroeconomic variables may depend on market conditions and industry characteristics (Suharyanto & Zaki, 2021). These mixed findings demonstrate that the relationship between inflation, exchange rates, and stock returns in Indonesia remains empirically inconclusive.

Furthermore, the period 2020–2024 represents a critical phase for the Indonesian capital market because it reflects the post-COVID-19 economic environment characterised by heightened uncertainty, fluctuations in inflation, and volatility in the rupiah exchange rate. The economic recovery process and changes in monetary and fiscal policy during this period may alter the behaviour of investors and the transmission of macroeconomic variables to stock returns. However, empirical evidence focusing specifically on the Indonesian stock market during the post-pandemic period remains limited, thereby strengthening the relevance of this study.

METHOD

Analysis Method

This study employed a quantitative explanatory research design to examine the effect of inflation and the rupiah exchange rate on stock returns in the Indonesian capital market. The study used monthly secondary data for the period January 2020 to December 2024 obtained from Bank Indonesia and Badan Pusat Statistik, as well as stock price data from the Indonesia Stock Exchange.

The research design treats inflation (X_1) and the rupiah exchange rate (X_2) as independent variables, and stock return (Y) as the dependent variable. The observation units consist of all monthly time periods within the study horizon. Therefore, this study applies a census approach of time-series observations, in which all available monthly data from January 2020 to December 2024 are included, rather than selecting a sample.

The inflation variable is measured using the monthly national inflation rate published by the Badan Pusat Statistik, which is based on changes in the Consumer Price Index. The rupiah exchange rate is measured using the monthly average rupiah-US dollar exchange rate published by Bank Indonesia. Stock return is calculated using monthly closing stock prices and is measured as:

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Where R_t represents stock return in period t , P_t is the closing price in period t , and P_{t-1} is the closing price in the previous period.

Data collection was conducted using a documentation technique by compiling published macroeconomic and market data from the respective official institutions. The data were analysed using multiple linear regression with the following model:

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

Where Y denotes stock return, X_1 denotes inflation, and X_2 denotes the rupiah exchange rate.

Prior to hypothesis testing, classical assumption tests were conducted, consisting of the normality test (Kolmogorov-Smirnov test), multicollinearity test (tolerance and variance inflation

factor), heteroscedasticity test (Glejser test), and autocorrelation test (Durbin–Watson statistic). Hypothesis testing was subsequently performed using the partial t-test, simultaneous F-test, and the coefficient of determination (R^2). All statistical analyses were carried out using SPSS version 26.

RESULTS AND DISCUSSION

RESULTS

Descriptive Statistics

A summary of the characteristics of each variable in this study is presented through descriptive statistics, including the minimum, maximum, mean, and standard deviation, as shown in Table 1.

Table 1. Descriptive Statistics Results

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
Inflation	60	1.32	5.95	2.7582	1.33075
Rupiah Exchange Rate	60	4.14	4.21	4.1748	.01953
Stock Returns	60	-.25	.22	.0073	.08340

Source: Processed Data, 2025

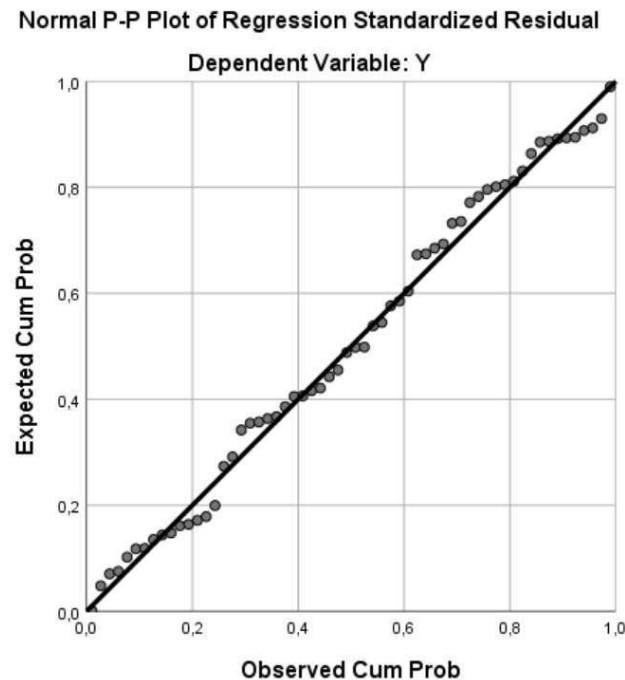
Based on Table 1, this study used 60 data observations. The inflation variable, which describes the general rate of increase in the prices of goods and services in the economy, had a minimum value of 1.32 and a maximum value of 5.95, with an average value of 2.7582 and a standard deviation of 1.33075. This average value indicates that during the observation period, the inflation rate was in a relatively moderate range, while the standard deviation value, which is smaller than the average value, indicates that inflation fluctuations between periods were still within reasonable limits.

The rupiah exchange rate variable, which represents the movement of the rupiah against foreign currencies, has a minimum value of 4.14 and a maximum value of 4.21, with an average value of 4.1748 and a standard deviation of 0.01953. The small standard deviation value indicates that the movement of the rupiah exchange rate during the research period was relatively stable and did not experience significant fluctuations. Theoretically, changes in exchange rates can affect company performance, especially companies that have import, export, or foreign currency obligations.

Meanwhile, the stock return variable, which reflects the level of profit earned by investors from changes in stock prices over a certain period, has a minimum value of -0.25 and a maximum value of 0.22, with an average value of 0.0073 and a standard deviation of 0.08340. The average stock return value, which is close to zero, indicates that, in general, the level of stock profits during the observation period was relatively low. The existence of a negative minimum value indicates that investors experienced losses in some periods, while the positive maximum value indicates the opportunity for profits in certain periods. A standard deviation value that is greater than the average value indicates that stock returns have a relatively high level of fluctuation compared to the macroeconomic variables used in this study.

Normality Test

Figure 1. Normality Test Results



Source: Processed Data, 2025

Based on the Normal P-P Plot of Regression Standardized Residuals, it can be seen that the residual points are scattered around and follow the direction of the diagonal line. This indicates that the distribution of residuals in the regression model approximates a normal distribution. Thus, it can be concluded that the assumption of normality in the regression model has been met.

Multicollinearity Test

Tabel 2. Multicollinearity Test Results

Independent Variable	Tolerance	VIF	Cut-off Criteria	Conclusion
Inflation (X1)	.919	1.088	Tolerance > 0,10 dan VIF < 10	Tidak terjadi multikolinearitas
Rupiah exchange rate (X2)	.919	1.088	Tolerance > 0,10 dan VIF < 10	Tidak terjadi multikolinearitas

Source: Processed Data, 2025

Based on the test results, the tolerance values for the inflation variable (X1) and the rupiah exchange rate (X2) are 0.919 and 1.088, respectively. A tolerance value greater than 0.10 and a VIF value less than 10 indicate that there is no multicollinearity in the regression model. Thus, it can be concluded that the inflation variable and the rupiah exchange rate are not strongly correlated and are suitable for use in the regression model.

Heteroscedasticity Test

Tabel 3. Heteroscedasticity Results

Independent Variabel	Coefficient	T-Statistic	Sig.
Inflation	-.007	-1.479	.145
Rupiah exchange rate	.140	.421	.675

Dependent Variabel : ABS_RES

Source: Processed Data, 2025

The regression model is considered to have no heteroscedasticity if the significance value of each independent variable is greater than 0.05. Based on the test results, the significance value of

the inflation variable (X1) is 0.145 and the rupiah exchange rate (X2) is 0.675, both of which are greater than 0.05. Thus, it can be concluded that the regression model in this study does not exhibit heteroscedasticity.

Autocorrelation Test

Tabel 4. Autocorrelation Test Results

Model	Durbin-Watson	Cut-off Criteria	Conclusion
1	1.734	$0 \leq DW \leq 4$; $DW \approx 2$ indicates no autocorrelation	No autocorrelation

Source: Processed Data, 2025

The autocorrelation test in this study uses the Durbin-Watson (DW) statistic, which has a value range between 0 and 4. A DW value close to 2 indicates no autocorrelation, a value close to 0 indicates positive autocorrelation, while a value close to 4 indicates negative autocorrelation. Based on the test results, a Durbin-Watson value of 1.734 was obtained. This value is between 0 and 4 and relatively close to 2, so it can be concluded that the regression model in this study does not indicate the presence of autocorrelation.

Multiple Linear Regression

Table 5. Multiple Linear Regression Results

Variabel	Coefficient	T-Statistic	Sig.
Constant	2.387	1.832	.072
Inflation	.008	.453	.652
Rupiah exchange rate	.573	-1.828	.073

Source: Processed Data, 2025

Based on the regression results, the estimated regression equation is $\text{Stock Return} = 4.374 + 0.004(\text{Inflation}) - 1.048(\text{Rupiah exchange rate}) + e$.

As shown in the regression results table, the inflation variable has a regression coefficient of 0.004 with a significance value of 0.652. This indicates that inflation has a positive but statistically insignificant effect on stock returns ($\beta = 0.004$; $p = 0.652$). Meanwhile, the rupiah exchange rate variable has a regression coefficient of -1.048 with a significance value of 0.073, indicating that the rupiah exchange rate has a negative but statistically insignificant effect on stock returns at the 5% significance level ($\beta = -1.048$; $p = 0.073$).

Furthermore, the results of the t-test show that both inflation and the rupiah exchange rate do not have a significant effect on stock returns, as the significance values of each variable are greater than 0.05. These results indicate that variations in inflation and the rupiah exchange rate are not able to explain changes in stock returns significantly within the research model.

F Test

Table 6. F test results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.023	2	.011	1.674	.197
Residual	.388	57	.007		
Total	.410	59			

Source: Processed Data, 2025

The results of the analysis listed in the ANOVA table show a calculated F value of 1.674 and a significance level (Sig.) of 0.197, indicating that the independent variables do not collectively have a significant effect on stock returns.

Coefficient Determination test**Table 7. Coefficient Determination test results**

Test	Value
R	.236
R Square	.055
Adjusted R Square	.022
Std. Error of the estimate	.0825

Source: Processed Data, 2025

In the table above, R-square is 0.055, which indicates that variables X1 and X2 simultaneously explain 5.5% of the variation in variable Y. Ninety-four point five percent of this variation is caused by external variables not included in this study's estimation model.

DISCUSSION

The empirical results show that inflation has a positive but statistically insignificant effect on stock returns. This finding indicates that changes in the inflation rate during the observation period were not strong enough to influence investors' trading decisions in the Indonesian stock market. From a theoretical perspective, inflation may affect stock returns through its impact on production costs, purchasing power, and corporate profitability. However, the insignificant result suggests that investors tend to perceive inflation as anticipated macroeconomic information and have already incorporated it into their expectations. Moreover, during the 2020–2024 period, inflation in Indonesia was relatively controlled and did not experience extreme fluctuations, which reduced its ability to explain variations in stock returns. Consequently, inflation did not become a dominant signal for short-term portfolio reallocation. This result is consistent with the findings of (Permaysinta & Sawitri, 2021), but contradicts the results reported by (Silaban, 2020).

The rupiah exchange rate is found to have a negative but insignificant effect on stock returns. This indicates that a depreciation of the rupiah tends to be followed by a decline in stock returns; however, the relationship is not statistically strong. Theoretically, a weakening exchange rate can increase production costs for firms that rely on imported inputs and foreign currency liabilities, which may reduce corporate profitability and subsequently lower stock returns. Nevertheless, the insignificant effect obtained in this study implies that exchange rate movements do not uniformly affect all listed companies. The impact of exchange rate fluctuations largely depends on firm-specific characteristics, such as the degree of export and import exposure, hedging policies, and financial structure. In addition, investors appear to place greater emphasis on company fundamentals, industry prospects, and overall market sentiment rather than relying solely on movements in the rupiah exchange rate. This finding is in line with the results reported by (Silaban, 2020).

Furthermore, the joint effect of inflation and the rupiah exchange rate on stock returns is also found to be insignificant. This result is reflected in the relatively low coefficient of determination (R^2) of 5.5 percent, indicating that inflation and the rupiah exchange rate explain only a small proportion of the variation in stock returns during the study period. This low explanatory power suggests that stock return movements in the Indonesian market between 2020 and 2024 were driven primarily by other factors not included in the model, such as firm-specific performance indicators, market sentiment, global financial conditions, and policy-related news. The post-pandemic economic environment, which was characterised by high uncertainty and rapid changes in investor behaviour, may also have weakened the direct transmission of macroeconomic variables to stock returns. Therefore, although inflation and exchange rates remain important

macroeconomic indicators, their role in explaining short-term stock return dynamics during the observed period appears to be limited.

CONCLUSION

This study finds that inflation and the rupiah exchange rate do not have a significant effect on stock returns in Indonesia, either partially or simultaneously, during the 2020–2024 period. Inflation shows a positive but insignificant relationship with stock returns, while the rupiah exchange rate shows a negative but insignificant relationship. These results indicate that movements in stock returns during the observed period cannot be sufficiently explained by inflation and exchange rate dynamics alone.

From a theoretical perspective, this study contributes to the capital market literature by providing empirical evidence that the transmission of macroeconomic variables, particularly inflation and exchange rates, to stock returns is weak in the post-pandemic period. This finding suggests that the explanatory power of macroeconomic indicators is conditional on market conditions and investor behaviour. Specifically, the results indicate that the role of inflation and exchange rates in influencing stock returns may be indirect and mediated by other factors, such as firm performance, industry structure, and market sentiment, rather than operating as direct determinants of stock return movements.

From a practical perspective, the findings imply that investors and market analysts in Indonesia should not rely solely on inflation and rupiah exchange rate indicators when formulating investment strategies. Instead, investment decisions should be supported by a more comprehensive analysis that incorporates firm-level financial performance, industry outlook, and prevailing market conditions, especially in periods characterised by economic recovery and uncertainty such as the post-COVID-19 era.

This study has several limitations. First, the analysis only includes two macroeconomic variables, namely inflation and the rupiah exchange rate, which limits the ability of the model to capture broader macro-financial interactions. Second, the relatively low coefficient of determination indicates that a large proportion of stock return variation remains unexplained. Third, this study uses an aggregate market approach and does not distinguish between sectors or firm characteristics that may respond differently to macroeconomic changes.

Future research is therefore recommended to incorporate additional explanatory variables, such as interest rates, market risk indicators, firm-specific financial ratios (e.g., profitability, leverage, and liquidity), and sectoral characteristics. Further studies may also extend the observation period to include both pre-pandemic and post-pandemic phases and apply alternative empirical approaches, such as panel data or sector-based models, to provide a more comprehensive understanding of the determinants of stock returns in the Indonesian capital market.

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