*Journal Digmensie Management and Public Sector* | *ISSN: 2709-6211*

*https://hdpublication.com/index.php/jdmps* | Volume 5, Issue 1, 2024 page 013-020

# The Impact of Interest Rates, Exchange Rates and Inflation on Stock Returns on the LQ45 Index Listed on the Indonesian Stock Exchange

Maulia Fahnayu[1], Dedi Hariyanto[1], Heni Safitri[1]

[1]University of Muhammadiyah Pontianak

**Corresponding Author:* Maulia Fahnayu
*E-mail*: mauliafahnayu906@gmail.com

Received: January 13, 2024 Revised: February 5, 2024 Accepted: February 25, 2024

## Abstract

The research conducted aims to determine the significant influence of interest rates, exchange rates, and inflation on stock returns. The research sample used is companies that are consistently listed on the Indonesia Stock Exchange for the 2021-2023 period, totaling 30 companies. Sample determination using purposive sampling method. The data analysis technique used is multiple linear regression. The results of the study partially found that interest rates have a significant negative effect on stock returns, exchange rates have no significant effect, and inflation has a significant effect on stock returns. The results simultaneously show that together the independent variables have a significant effect on the dependent variable.

**Keywords:** Interest Rate, Exchange Rate, Inflation, Return

## Introduction

Investment is the activity of placing funds or other valuable assets in instruments that are exclusive for a certain period of time. According to Wefi (2020), in other words, investment is a commitment to sacrifice current consumption with the aim of increasing consumption in the future. Of the various types of capital market instruments, stocks are investment instruments that are widely chosen by investors because stocks are able to provide attractive returns (Weigand, 2014). For investors to channel the Company's funds to meet long-term fund needs. According to Wefi (2020), (Isnaini, Hariyanto, & Ferdian, 2023)Capital markets are individuals or other organizations and institutions that are willing to set aside their excess funds to carry out income-generating activities through the capital market.

According to Hidayat, Setyadi & Azis (2017), the size of risk in the capital market is strongly influenced by state conditions in the economic, political and social fields as well as conditions within the company which can also affect the rise and fall of stocks. According to Fadilah & Jalaludin (2019), in theory there are two aspects inherent in an investment, namely the required return and the risk of not achieving the required return, the greater the *expected return*, the greater the risk that will be accepted.

*Return* is a reward for the investor's courage in bearing the risk, as well as the time commitment of the funds that have been spent by the investor (Zulfikar, 2016). *Return* can motivate and

*DOI: https://doi.org/10.48173/jdmps.v5i1.255*
 

attract investors to invest (Suriyani & Sudiartha, 2018). Currently, IDX has index classifications, namely Main Index, Sectoral Index, Thematic Index, and Factor Index. The LQ45 Index can be used to measure the performance of the stock market on the IDX specifically, where investors can focus on investing in leading stocks using the LQ45 Index (Hidayat, Setyadi, & Azis, 2017).

According to Halimatussa'diah &; Putra (2021) Stock prices are always fluctuating. According to Tandelilin (2017) Macroeconomic factors that affect investment in a country are interest rates, exchange rates, and inflation. When the economy improves, there is still a decline in company performance and vice versa. Macroeconomic conditions become uncertain and have an impact on capital market conditions in Indonesia (Abnaina & Swandari, 2022). According to Hamzah &; Sudiarto (2014), interest rates are policies that reflect the monetary policy stance set by BI and announced to the public. Changes in interest rates will affect financial markets and capital markets. Another macroeconomic factor that affects stock *returns* is exchange rates. According to Wardianda &; R Octaviani (2014), the exchange rate is the rupiah exchange rate against the US dollar based on the middle rate of the rupiah against the US dollar.

If there is an increase in people's purchasing power, it will be followed by an increase in income obtained by issuers (Christianingrum & Syafri, 2019). Thus, the dividends distributed to shareholders will be greater followed by an increase *return* received by shareholders. According to Arjunita (2016) Inflation is a factor that affects a stock for investors who want to invest. Based on the description above, researchers are interested in conducting research with the aim of seeing the effect of interest rates, exchange rates, inflation on *stock returns* on the LQ45 index listed on the Indonesia Stock Exchange.

## Methods

This type of research is associative/relationship research. According to Siregar (2019), associative research is research that aims to determine the relationship between two or more variables. With this research, a theory will be built that can function to explain, predict, and control a symptom in research. The data of this study used secondary data. In the form of closing prices with LQ45 Index issuers published by IDX through www.idx.co.id website, while the second is from BI 7-Day Reverse Repo Rate, exchange rate (middle rate) and inflation report (CPI) published by BI through www.bi.go.id website. The population used is all LQ45 Index issuers listed on the IDX for the 2021–2023 period, totaling 62 companies that have been listed on the LQ45 Index. According to Sugiyono (2017), ampelous Sis part of the number and characteristics possessed by the population. The sampling technique in this study used the purposive sampling method, there were 30 companies listed on the LQ45 Index consecutively during this study period. The independent variables used are Interest Rate (X1), Exchange Rate (X2), Inflation (X3). The dependent variable is Stock Return (Y).

## Results and Discussion

### Test Classical Assumptions

The normality test is a test used to determine the normal distribution of data in good variables used in this study (Sujarweni, 2015). If the significance is greater than 0.05 then the data is normally distributed. If the significance is less than 0.05 then the data is not normally distributed.

Normality testing is performed using the SPSS for Windows program, as illustrated below:

Table 1. Normality Test Results

| One-Sample Kolmogorov-Smirnov Test | | |
|---|---|---|
| | | Unstandardized Residual |
| N | | 90 |
| Normal Parameters[a, b] | Mean | ,0000000 |
| | Std. Deviation | 1686,01348794 |
| Most Extreme Differences | Absolute | ,091 |
| | Positive | ,089 |
| | Negative | -,091 |
| Test Statistics | | ,091 |
| Asymp. Sig. (2-tailed) | | .064c |
| a. Test distribution is Normal. | | |
| b. Calculated from data. | | |
| c. Lilliefors Significance Correction. | | |

Source: Processed data, 2024

From the results of the normality test using Kolmogorov Smirnov is 0.064 and the significance is 0.05. It can be summed up with 0.064 > 0.05, this indicates that the residual data are normally distributed.

Table 2. Multicholinerity Test Results

| Coefficientsa | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Type | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -3942,526 | 6394,206 | | -,617 | ,539 | | |
| | X1 (Interest Rate) | -17,158 | 2,635 | -,667 | -6,511 | ,000 | ,731 | 1,369 |
| | X2 (Exchange Rate) | ,558 | ,443 | ,113 | 1,261 | ,211 | ,953 | 1,049 |
| | X3 (Inflation) | 5,404 | 1,800 | ,314 | 3,002 | ,004 | ,703 | 1,422 |
| a. Dependent Variable: Return | | | | | | | | |

Source: Processed Data,2024

The multicollinearity test tests the regression model whether there is a correlation between independent variables (Bela, Suryadi, & Safitri, 2019). Based on the results of the SPSS output shows that the independent variables have a Tolerance value of > 0.10. The calculation of the Variance Inflation Facctor (VIF) value also shows the same thing, independent variables have a VIF value of < 10. It can be concluded that this regression model does not have a multicollinearity problem.

Table 3. Autocorrelation Test Results

| Model Summary[b] | | | | | |
|---|---|---|---|---|---|
| Type | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | ,201a | ,040 | ,007 | 1715,16862 | 1,986 |
| a. Predictors: (Constant), Interest Rates, Exchange Rates, Inflation | | | | | |
| b. Dependent Variable: Return | | | | | |

Source: Processed data, 2024

It can be seen in the table above that Durbin Watson's result of 1.986 is greater than Du, which is 1.762 and smaller than (4 - Du) 4 - 1.762 = 2.238. It was concluded that with 1,589 < 1,986 < 2,238. As a basis for decision making in the Durbin Watson test, it can be concluded that there are no problems or symptoms of autocorrelation.

Table 4. Heterokedacity Test Results

| Coefficientsa | | | | | | |
|---|---|---|---|---|---|---|
| Type | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 40819,594 | 70820,907 | | ,576 | ,566 |
| | Interest | 8,630 | 10,346 | ,754 | ,834 | ,407 |
| | Exchange rate | -3,038 | 5,305 | -,931 | -,573 | ,568 |
| | Inflation | 5,287 | 10,842 | ,505 | ,488 | ,627 |
| a. Dependent Variable: ABRESID | | | | | | |

Source: Processed data, 2024

It can be seen in the table above that the probability result for each independent variable is greater than 0.05. So it can be concluded that the regression model does not contain heteroscedasticity problems.

Table 5. Heterokedacity Test Results

| Model Summary | | | | |
|---|---|---|---|---|
| Type | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .165a | ,027 | -,032 | 1721,83852338 |
| a. Predictors: (Constant), Interest Rates, Exchange Rates, Inflation | | | | |

Source: Processed data, 2024

The linearity test aims to find out whether these variables have a significant linear relationship. The output results show an R2 value of 0.027 with 90 observations, so the calculated c2 value = 90 X 0.027 = 2.43. This value will be compared with the table c2 with df = 90 and a significance level of 0.05 or 5% so that the table c2 is 113.14. Because the calculated c2 value is smaller than the table c2, it can be concluded that the regression model is linear.

DOI: https://doi.org/10.48173/jdmps.v5i1.255
 

## Statistical Test

Table 6. Multiple Linear Regression Analysis Results

| Coefficientsa | | | | | | |
|---|---|---|---|---|---|---|
| Type | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -3942,526 | 6394,206 | | -,617 | ,539 |
| | Interest | -17,158 | 2,635 | -,667 | -6,511 | ,000 |
| | Exchange rate | ,558 | ,443 | ,113 | 1,261 | ,211 |
| | inflation | 5,404 | 1,800 | ,314 | 3,002 | ,004 |
| a. Dependent Variable: Return | | | | | | |

Source: Processed data, 2024

The constant of -3942.526 explains that if the Interest Rate, Exchange Rate, and Inflation equals zero, then the contribution to the *Stock Return* is -3942.526. If the Interest Rate increases by one unit, then the Share *Return* contribution decreases by -17,158. If the Exchange Rate increases by one unit, then the Share *Return* contribution increases by 0.558. If inflation increases by one unit, the contribution *of return will*increase by 5.404.

Table 7. Multiple Correlation Coefficient Analysis and Determination Coefficient Analysis

| Model Summary | | | | |
|---|---|---|---|---|
| Type | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .583a | ,340 | ,317 | 2201,79934 |
| a. Predictors: (Constant), Interest Rates, Exchange Rates, Inflation | | | | |

Source: Processed data, 2024

Based on table 8, the multiple correlation value is 0.583. This means that between Interest Rates, Exchange Rates, Inflation to *Stock Returns* has a fairly strong relationship with a value of 0.583. The results of the coefficient of determination test produced by the regression model of Interest Rate, Exchange Rate, Inflation to *Stock Return* were obtained at 0.340. This shows that 34% (1 x 0.340 x 100%) has an effect on Stock Return. While the remaining 66% (1 x 0.340 x 100%) *Stock Return* is influenced by other variables that were not studied in the study.

Table 8. Simultaneous Effect Test Results (Test F)

| ANOVAa | | | | | | |
|---|---|---|---|---|---|---|
| Type | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 214524905,151 | 3 | 71508301,717 | 14,750 | ,000b |
| | Residuals | 416921148,449 | 86 | 4847920,331 | | |
| | Total | 631446053,600 | 89 | | | |
| a. Dependent Variable: Return | | | | | | |
| b. Predictors: (Constant), Interest Rates, Exchange Rates, Inflation | | | | | | |

Source: Processed data, 2024

DOI: https://doi.org/10.48173/jdmps.v5i1.255
 

It is known that together the independent variables have a significant effect on the dependent variable. based on F the count obtained is 14.750 while F table is 2.71. Then the results of the F test state that F count is greater than F table which is 14.750 > 2.71 with a significance value of 0.000 < 0.05. Which means Ha is accepted so that the conclusion is that the variables of Interest Rate, Exchange Rate, Inflation together have a significant effect on *Stock* Return.

Table 9. Partial Effect Test Results (T Test)

| Coefficientsa | | | | | | |
|---|---|---|---|---|---|---|
| Type | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -3942,526 | 6394,206 | | -,617 | ,539 |
| | Interest | -17,158 | 2,635 | -,667 | -6,511 | ,000 |
| | Exchange rate | ,558 | ,443 | ,113 | 1,261 | ,211 |
| | Inflation | 5,404 | 1,800 | ,314 | 3,002 | ,004 |
| a. Dependent Variable: Return | | | | | | |

Source: Processed data, 2024

The results of the t test (partial) between the variable Interest Rate (X1) to *Stock Return* (Y) show t count -6.511 while the table t value is 1.987, thus it can be seen that t count (-6.511) < 1.987 and has a significant probability value of 0.000 < 0.05, meaning that the Interest Rate has a significant negative effect on Stock *Return* partially.

The results of the t (partial) test between the Exchange Rate variable (X2) to Stock *Return* (Y) show t count 1.261 while the table t value is 1.987, thus it can be seen that t calculate 1.261 < 1.987 and has a significant probability value of 0.211 > 0.05, meaning that the Exchange Rate does not have a significant effect on Stock *Return* partially.

The results of the t (partial) test between the variables Inflation (X3) to *Stock Return* (Y) show t count 3.002 while the table t value is 1.987, thus it can be seen that t calculate 3.002 > 1.987 and has a significant probability value of 0.004 < 0.05 meaning that Inflation has a significant effect on Stock *Return* partially.

## Conclusion

From the results of data analysis and discussion, the conclusion that can be drawn from this study is that inflation has an influence on stock returns. This is due to the fact that a good macroeconomic environment can significantly affect stock returns, and this macroeconomy will always change every month. The study findings also revealed that other macroeconomic variables such as exchange rates had no influence. This is due to other macroeconomic factors beyond this study. In addition, interest rates have a significant but negative influence.

## References

Abnaina, E., &; Swandari, F. (2022). The Effect of Macroeconomic Variables and Global Index Variables on the Composite Stock Price Index (JCI). *Journal of Management and Business, 19*, 83-92.

Arjunita, C. (2016). Factors Affecting Inflation in Indonesia. *Journal of Economic and Development Studies, 5*, 137-148.

Bela, K., Suryadi, E., &; Safitri, H. (2019). The effect of SBI interest rate, rupiah exchange rate and inflation on share prices of companies in the consumer goods industry sector listed on the Indonesia Stock Exchange. *Journal of Productivity, 6*, 112-119.

Christianingrum, R., & Syafri, A. R. (2019). Factors affecting inflation in Indonesia. *Journal of Budget, 4*, 18-39.

Fadilah, A. N., &; Jalaludin. (2019). Investment Risk Management in Islamic Banking. *Journal of STIES Indonesia Purwakarta, 3*, 40-47.

Ghozali, I. (2018). *Application of multivariate analysis with IBM SPSS 25 program.* Semarang: Diponegoro University Publishing Board.

Halimatussa'diah, H., &; Son, R. A. (2021). Factors Affecting Stock *Return* in Large Trade and Investment Sub-Sectors. *Journal of Management, 13*, 17-25.

Hamzah, M. Z., &; Sudiarto, T. D. (2014). The Efect Of Local Autonomy Policy And Budget Allocation Towarrd The Capital Expenditure Share In Indonesia. *Indonesia Mnagement &; Accounting Research, 19*, 66-85.

Hidayat, L. R., Setyadi, D., &; Azis, M. (2017). The effect of inflation, interest rates, rupiah exchange rate and money supply on *stock returns. Journal of Economics and Business, 7*, 148-154.

Indonesia, B. (2023, 10 21). *Exchange Rate*. Retrieved from Bank Indonesia: www.bi.go.id

Indonesia, B. (2024). *Interest Rate, Exchange Rate and Inflation Data*. Retrieved from Bank Indonesia: https://www.bi.go.id

Indonesia, B. E. (2024). *Issuer Data and Stock Price (close price).* Retrieved from Indonesia Stock Exchange: http://www.idx.co.id

Irham, & Fahmi. (2016). *Introduction to Financial Management.* Bandung: Alfabeta.

Isnaini, Hariyanto, D., &; Ferdian, R. (2023). Analysis of the effect of liquidity, solvency, profitability on stock prices. *Journal of Business, Economics, Management, and Accounting Sciences, 1*, 163-175.

Munib, &; Fatih, M. (2016). The Effect of Rupiah Exchange Rate, Inflation, and BI Rate on Share Prices of Banking Sector Companies on the Indonesia Stock Exchange. *Journal of Business Administration, 4*, 947-969.

Nainggolan, & Gebby, F. (2017). The Effect of Inflation Rate, Interest Rate, and Exchange Rate on Stock Prices (case study on manufacturing sector companies on the Indonesia Stock Exchange). *Journal Procceding Of Management, 4*, 1-6.

Siregar, & Syofian. (2019). *Parametic Statistics for Quantitative Research.* Jakarta: Bumi Aksara.

Sugiyono. (2017). *Quantitative, Qualitative, and R&D Research Methods.* Bandung: Alfabeta.

*DOI: https://doi.org/10.48173/jdmps.v5i1.255*
 

Sujarweni, W. (2015). *SPSS For Research* (1st ed.). Yogyakarta: Pustaka Baru Press.

Suriyani, N. K., &; Sudiartha, G. M. (2018). The Effect of Interest Rates, Inflation and Exchange Rates on Stock *Returns* on the Indonesia Stock Exchange. *Journal of Management, 2*, 3172-3200.

Wardianda, N. G., &; R Octaviani, D. (2014). Analysis of the transmission mechanism of monetary policy exchange rate channel with the VECM approach for the period 2005-2012. *Trisakti Journal of Development Economics, 1*, 59-72.

Wefi, A. (2020). *Investment Management and Capital Market.* IAIN Madura.

Weigand, R. A. (2014). *Apllied Equity Analysis and Portfolio Management.* NJ: John Wiley & Sons: Inc.

Joseph, Z. A. (2015). Analysis of Internal and External Influences on Stock *Return of* Manufacturing Companies Listed on the Indonesia Stock Exchange for the 2010-2012 Period. *Media Economics and Management, 30*, 41-55.

Zulfikar. (2016). *Introduction to Capital Markets with a Statistical Approach* (1 ed.). Yogyakarta: Deepublish.

*DOI: https://doi.org/10.48173/jdmps.v5i1.255*
 