THE EFFECT OF INFLATION, INTEREST RATE, AND EXCHANGE RATE ON STOCK RETURNS IN FOOD & BEVERAGES COMPANIES

Suharyanto
PGRI Adi Buana University Surabaya, Indonesia

Achmad Zaki
Raden Rahmat Islamic University Malang, Indonesia

Abstract: The purpose of this study was to determine the effect of technical information on stock returns partially. Risk and return are interrelated. The greater the return, the greater the risk obtained. However, if these risks are managed, the risks that will occur can be controlled properly. Several things need to be considered in making investment decisions, namely, by analyzing fundamental information and technical information, including inflation, exchange rates, interest rates, and their effect on stock returns. The method used in this study uses quantitative methods. This study indicates that inflation has a significant negative effect on stock returns, interest rates have no effect on stock returns, and the exchange rate has a significant negative effect on stock returns. Further researchers are expected to pay attention to the influence of other factors that can affect price movements and company stock returns.

Keywords: Stock Returns, Inflation, Exchange Rates, Interest Rates

Cite this article as: Suharyanto and Achmad Zaki. 2021. The Effect of Inflation, Interest Rate, and Exchange Rate on Stock Returns in Food & Beverages Companies. Jurnal Aplikasi Manajemen, Volume 19, Number 3, Pages 616–622. Malang: Universitas Brawijaya. http://dx.doi.org/10.21776/ub.jam.2021.019.03.14.
companies that are listed or listed on the IDX, one of which is the consumer goods industry sector. So that of the many sub-sectors, the food and beverage sub-sector needs to be observed. Based on the 2016-2020 Ministry of Industry Performance Report, five industrial sectors contributed the largest investment during this period. The food and beverage industry ranks second after the Metal, Machinery & Electronic Industry; and Medical Instrument, Precession & Optical & Clock industries, which amounted to 257.47 Trillion. The food and beverage industry has an important contribution in contributing to the total industrial GDP. From 2016 to 2020, it has sequentially increased from year to year, which is 30.84%, until it reaches 36.23%.

In investing, risk and return are interrelated. The greater the return or returns obtained, the greater the risk. However, if these risks are managed, the risks that will occur can be controlled properly. Several things need to be considered in making investment decisions, namely, analyzing fundamental and technical information (Bramantyo, 2006). Fundamental information is obtained from internal companies such as dividends, sales levels, company financial statements, etc. Meanwhile, technical information is obtained from external companies such as economic factors such as inflation, exchange rates, interest rates, and factor of non-economics such as political, social, etc.

The company’s macroeconomic or technical factors can also affect the returns obtained by investors in the future, such as interest rates, inflation rates, and exchange rates. Kuncoro (1998) states that inflation is the tendency of prices to increase in general and continuously. Temporary price increases, such as seasonal or due to disasters, are not referred to as inflation. If the inflation rate increases, it will certainly affect the company’s production process, affecting people’s purchasing power. If the company’s profitability is low, it will affect the stock price.

The interest rate is the price that must be paid in the event of exchange between one rupiah now and one rupiah in the future (Boediono, 1996). An increase in interest rates will cut the company’s profit. That is because the increase in interest rates is proportional to the increase in loan interest to increase the loan interest expense. In addition, when interest rates increase, people will prefer to save their money in banks to affect the company’s sales profit. The exchange rate is the one unit price of foreign currency in domestic currency, or it can also be said that the domestic currency price against foreign currencies (Firdaus and Ariyanti, 2011). The exchange rate is important in economic growth because it will affect prices and services in a country. If the rupiah appreciates (increases) against the US dollar, companies will import imported raw materials because they are relatively cheap. Meanwhile, if the rupiah depreciates (decreased) against the US dollar, the company tends to export. That is supported by research by Wicaksono (2018) and Hidayat et al. (2017), which state that interest rates affect stock returns. However, a different study was revealed by Suriyani and Sudiartha (2018), which stated that interest rates did not affect stock returns. Based on the above background, the researchers wanted to know the effect of interest rates, exchange rates, inflation, and their effect on stock returns in food & beverage companies 2017-2020 period.

Figure 1. Conceptual Framework

| Inflation (X1) | Exchange Rate on Stock (Y) |
|----------------|---------------------------|
| Interest Rate (X2) |                           |
| Exchange Rate (X3) |                           |
HYPOTHESIS DEVELOPMENT

Effect of Inflation on Stock returns

Inflation is an increase in the price of goods in general and continuously. If the price of goods increases, it will automatically affect the production process of manufacturing companies because the price of raw materials also increases. High production costs will affect the selling price, which will also reduce people’s purchasing power. That can negatively impact the company’s performance, which later reduces the return of the company’s stock. Unanticipated inflation will harm the company’s economy as a whole. If the increase in production costs is greater than the price the company will enjoy, then the company’s profitability will also decrease. If the profitability of a company decreases, the distribution of dividends will also decrease to affect stock returns. Based on this description, it can be obtained the following hypothesis.

H1: Inflation has a negative effect on stock returns.

Influence of Interest Rates on Stock returns

Interest rates are the price that must be paid if there is an exchange between one rupiah now and one rupiah later. If the interest rate increases, it will be proportional to the increase in credit interest or increase the issuer’s loan interest expense, so that it will affect the company’s profits which may be cut. If the company’s profit decreases due to the interest expense on loan, the company tends to increase the selling price of the product. As a result, people’s interest in buying is decreasing and they choose to postpone purchases by saving their money in the bank. That can affect the company’s profit which will also affect the Return Stock. That is supported by research by Wicaksono (2018), Afiyati and Topowijono (2018), Hidayat et al. (2017), and Suriyani and Sudiartha (2018), which states that the exchange rate affects stock returns. Based on the description above, the hypothesis can be obtained as follows.

H2: Interest rates have a negative effect on stock returns.

Effect of Exchange Rate on Stock returns

The exchange rate (exchange rate) is a comparison of one country’s currency with other countries. Similarly, it is interpreted as an exchange between two different currencies and there is a comparison of the value or price between the two currencies. Samsul (2015) states that changes in macroeconomic variables have a different impact on each type of stock, which means that a stock can be positively impacted while other stocks have a negative impact. For example, if the rupiah exchange rate strengthens against the US dollar, it will have a negative impact on issuers who have debts in dollars. At the same time, the company’s products are sold locally. On the other hand, if the rupiah exchange rate strengthens, it will positively affect issuers that are export-oriented. In companies that are positively affected, the Stock returns obtained will be large.

In contrast to companies that are negatively affected, the Return of Shares acquired will also decrease. That is supported by research by Wicaksono (2018), Afiyati and Topowijono (2018), Hidayat et al. (2017), and Suriyani and Sudiartha (2018), which states that the exchange rate affects stock returns. Based on the description above, the hypothesis can be obtained as follows.

H3: Exchange rate has a negative and significant effect on Stock Return.

METHOD

This research is a type of quantitative research. Sugiyono (2017) said that quantitative research methods are research methods based on the philosophy of positivism, used to examine certain populations or samples, data collection using research instruments, quantitative/statistical data analysis to test predetermined hypotheses. This study uses time-series data (time series), which includes several periods are: Inflation, Interest Rates, Exchange Rates, and Return Stock from 2017 to 2020. The method used is the method of causal distributive variables used. This study includes the dependent variable and the independent. This study was taken using secondary data obtained from the official website of the Indonesia Stock Exchange and was carried out from January to February 2021.
The Effect of Inflation, Interest Rate, and Exchange Rate on Stock Returns in...

RESULTS
This study discusses the effect of inflation, interest rates, and exchange rates on stock returns in manufacturing companies in the sub-sector. Food & beverages listed on the Indonesia Stock Exchange for the period 2017-2020. Based on the purposive sampling method, a sample of 20 companies was obtained. The sampling criteria are food & beverage manufacturing sub-sectors listed on the Indonesia Stock Exchange during 2016-2020. Manufacturing Company in Beverage Subsector Food &. The following is a list of companies used as samples in this study.

Classical Assumption Test
Before performing the regression analysis, the classical assumption test was first carried out to find out whether there was a relationship between the research variables. The classical assumption test includes four test steps, including normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test.

Normality test Normality
The test aims to test whether, in a linear regression model, the dependent variable and the inde-


| Stock Returns | Inflation | Interest Rates | Exchange Rate |
|---------------|-----------|----------------|---------------|
| Kolmogorov-Smirnov Z | .598 | .701 | .535 | .843 |
| Asymp. Sig. (2-tailed) | .866 | .709 | .937 | .476 |

Table 1. Normality Test Table One-Sample Kolmogorov-Smirnov (KS) Test

| Model                  | collinearity Statistics | Description         |
|------------------------|-------------------------|---------------------|
|                        | Tolerance | VIF       |                      |
| Inflation              | .853       | 1.172     | Non Multicolinearity |
| Interest Rate          | .465       | 2.153     | Non Multicolinearity |
| Exchange Rates         | .506       | 1.977     | Non Multicolinearity |

Table 2. Test Multicollinearity

a. Dependent Variable: STOCK RETURN

Based on the Table above, it is known that the value of the three independent variables is less than ten (VIF < 10), and the value is tolerance > 0.1. So it can be concluded that multicollinearity-free or multicollinearity symptoms do not occur.

Heteroscedasticity Test
Suppose in the diagram scatterplot some points spread irregularly above and below the number 0 on the Y axis and have an unclear pattern. In that case, it can be concluded that there is no heteroscedasticity.
Based on the figure above, it can be seen that in the graph scatterplot, there is no clear pattern, and the points spread above and below the Y-axis. It can be concluded that in the regression, there are no symptoms of heteroscedasticity.

**Multiple Linear Regression Test Multiple**

Linear regression was used to determine two independent variables (X) or more on the dependent variable (Y). The following data are obtained based on multiple linear regression between Inflation, Interest Rates, and Exchange Rates on Stock Returns using SPSS.

Based on the test data in the table above, the multiple linear regression equation is as follows.

\[ Y = 0.132 - 0.023X_1 + 0.137X_2 - 0.016X_3 \]

**Table 3. Multiple Linear Regression Table**

| Model     | Unstandardized Coefficients | Standardized Coefficients | t      | Sig.  |
|-----------|-----------------------------|---------------------------|--------|-------|
|           | B                           | Std. Error                | Beta   |       |
| 1 .132.074.084 |                             | .010                      | .394   | 1.795 | .030  |
| Inflation | -.023                       | .010                      | .394   | 2.296 | .156  |
| Interest Rate | .094.340                  | .137                      | 1.460  | .048  |
| Exchange   | -.016                       | .081                      | -.043  |       |

a. Dependent Variable: Stock Return

**Hypothesis Test**

Multiple Linear Regression Analysis was used to determine the relationship and influence between inflation, interest rates, and exchange rates on stock returns. Using multiple regression analysis techniques to determine the magnitude of the effect quantitative of a change (variable X) to other events (variable Y). The regression analysis using multiple regression equations

Hypothesis 1 (the effect of inflation on Stock Return) variable inflation has t significance of 0.030. This value is smaller than the significance of (0.030
The Effect of Inflation, Interest Rate, and Exchange Rate on Stock Returns in...

0.05), so $H_0$ rejected. These results show that the variable inflation has a significant negative effect on stock returns.

Hypothesis 2 (the effect of interest rate on Stock Return) Variable interest rates have t significance of 0.156. This value is greater than the significance of (0.156 > 0.05) so that $H_0$ accepted. These results show that the variable interest rate has a significant effect on stock returns. The positive or negative regression coefficient on the variable interest rate has no effect at all.

Hypothesis 3 (Effect of Exchange Rate on Stock Return) Variable exchange rates have t significance of 0.048. This value is greater than the significance of (0.048 > 0.05), so that $H_0$ rejected. These results show that the variable the exchange rate has a significant negative effect on stock returns.

DISCUSSION

The Effect of Inflation on Stock Returns

This statistical hypothesis illustrates that the level of inflation has a negative effect on stock returns. When inflation is high, stock returns will decrease, and vice versa. In line with Jogiyanto (2017), in investing in stocks, there are economic factors that must be considered the inflation. Inflation needs to be considered, especially for long-term horizon investments, so that portfolio investments in the future do not lose their attractiveness because their returns are below inflation. That is in line with the research of Hidayat et al. (2017), which stated that an increase in the percentage of inflation would make people tend to secure their money and use it more for their daily needs. So that public interest in investing decreases and will ultimately have an impact on decreasing stock returns. Wicaksono (2018) stated that interest rates affect stock returns.

The Effect of The Exchange Rate on Stock Returns

The currency of a country is a reflection of the economic condition of a country. If a country’s economy improves, that country’s currency tends to strengthen against other currencies. The weakening of the Rupiah exchange rate is the result of government policies in lowering the value of the currency (devaluation) to increase the purchasing power of the demand for domestically produced goods. It will provide benefits for companies that will have an impact on the returns obtained by investors. Observation of currency values is very important, considering the exchange rate plays a very important role in forming profits for the company. Investors will usually be careful in determining a buy or sell position if the unstable currency exchange rate. That is supported by research by Wicaksono (2018); Afiyati and Topowijono (2018); Hidayat et al. (2017); Suriyani and Sudiartha (2018) which states that the exchange rate affects stock returns.

CONCLUSION

Based on the results of the analysis and discussion described in the previous chapter, this study concludes that inflation has a negative and significant effect on stock returns in manufacturing companies in the sub-sector food & beverage, interest rates have no effect on stock returns in manufacturing companies food & beverage, and the value of exchange has a negative and significant effect on stock returns in manufacturing companies food & beverage listed on the Indonesia Stock Exchange for the 2016-2020 period.

LIMITATIONS

This research is limited to testing the company’s external factors that affect stock returns, namely Inflation, Interest Rates, Exchange Rates, and does not include micro factors such as company fundamentals.
RECOMMENDATIONS

Researchers who want to conduct research with the same theme are expected to use other variables more specific to stock returns. This research is still limited in terms of macroeconomic actors used as a basis for predicting stock prices and stock returns. It is hoped that further research will pay attention to other factors that can affect price movements and company stock returns.

REFERENCES

Afifyati, Hidaya Tri and Topowijono. 2018. Pengaruh Inflasi, BI Rate Dan Nilai Tukar Terhadap Return Saham (Studi Pada Perusahaan Subsektor Food & Beverages Yang Terdaftar Di Bursa Efek Indonesia Periode 2013-2016). Jurnal Administrasi Bisnis. Vol. 61, No. 2, 2018.

Boediono. 1994. Macroeconomics. Synopsis Series Introduction to Economics No. 2, Fourth Edition. Yogyakarta: BPFE.

Bramantyo. 2006. Effect of Dept. to Equity Ratio (DER) Price to Book Value (PBV) and Dividend Payout Ratio (DPR) on Stock Returns in Manufacturing Companies. Thesis. Semarang: Faculty of Social Sciences, Semarang State University.

Fahmi, I. 2015. Investment Management: Theory of Questions and Answers, Second Edition. Jakarta: Salemba Empat.

Firdaus, Rachmat dan Maya Ariyanti. 2011. Pengantar Teori Moneter. Bandung: Alfabeta.

Ghozali, Imam. 2012. Aplikasi Analisis Multivariate dengan Program IBM SPSS. Yogyakarta: Universitas Diponegoro.

Hidayat, La R., D. Setyadi, and M. Azis. 2017. The Influence of Inflation and Interest Rates and Rupiah Exchange Rates and the Money Supply on Returns Stock. Economic Forum. Vol 19 (2), 2017; 148-154.

Jogiayanto, H. 2017. Portfolio Theory and Investment Analysis, Eleventh Edition. Yogyakarta: BPFE.

Kuncoro, Mudrajad. 1998. Metode Kuantitatif Teori & Aplikasi Untuk Bisnis & Ekonomi. Yogyakarta: YKPN.

Samsul, M. 2015. Pasar Modal dan Manajemen Portofolio. Jakarta: Erlangga.

Sugiyono. 2017. Quantitative, Qualitative, and R&D Research Methods. Twenty-sixth Edition. Bandung: Alfabeta.

Suriyani, Ni K., and Gede M. Sudiartha. 2018. Pengaruh Tingkat Suku Bunga, Inflasi Dan Nilai Tukar Terhadap Return Saham Di Bursa Efek Indonesia. E-Jurnal Manajemen Universitas Udayana, vol. 7, no. 6, 2018, doi:10.24843/EJMUNUD.2018.v07.i06.p12.

Wicaksono, A. 2018. The Influence of Inflation, Rupiah Exchange Rate, and Interest Rates on the Stock Price Index (Empirical Study on Consumer Goods Industrial Sector Companies on the Indonesia Stock Exchange Period 2011-2015). Thesis. Yogyakarta: Faculty of Economics, Sanata Dharma University.