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THE ANALYSIS OF THE INFLUENCE OF INFLATION, EXCHANGE RATE AND BI RATE TOWARDS THE JAKARTA COMPOSITE INDEX IN THE INDONESIA STOCK EXCHANGE

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Keywords :

Inflation, Exchange Rate, BI Rate, JCI

Abstract

The capital market is often used as a benchmark for a country's economy that influences the investment activities in macroeconomics which is reflected in some indicators like inflation rates, exchange rates, and the BI rate. This article aims to find out and analyze the influence of inflation, exchange rate, and the BI Rate on the Jakarta Composite Index. This study used a quantitative approach with the type of associative. The results of this study showed that there is no significant influence between the inflation towards the JCI, but there is an influence between the exchange rate and the BI Rate towards the JCI. Simultaneously these variables, like Inflation, Exchange Rate, and BI Rate have a positive and significant influence towards the JCI

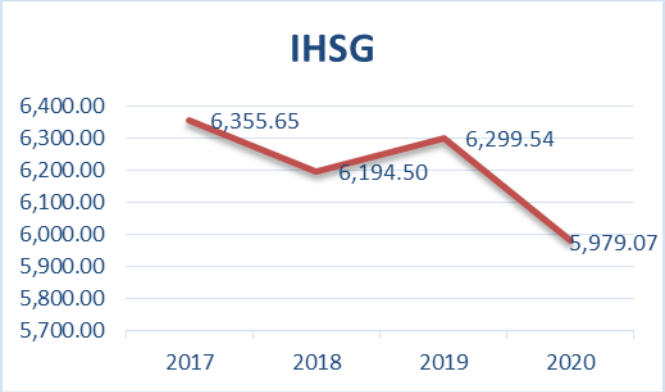
INTRODUCTION

The capital market is an alternative for investors to invest their money to generate optimal profits. The capital market also has a function as a productive allocation of funds to transfer funds from lenders to borrowers. All stock exchange investors are in dire need of information related to trading developments on the stock exchange. This is very important for developing strategies and making investment decisions in the capital market (Hartono, 2017).

Stock exchanges can be used to support the efficient allocation of funds because they can show investment opportunities for those who have excess funds and are called investors who generate optimal profits and returns (Aditya et al., 2018). An optimal or profitable investment is considered a very active sector, so the money earned by investors can be used productively by the company (Hartono, 2017).

Funds received from investors can be used for additional working capital, business development, expansion and so on. In Indonesia, investors who invest in the capital market can invest in the Indonesia Stock Exchange (IDX). The

Composite Stock Index (JCI) is one of the indexes seen by investors on the Indonesia Stock Exchange when investing (Puspitasari, 2021). The following is JCI data for the period 2017-2020:

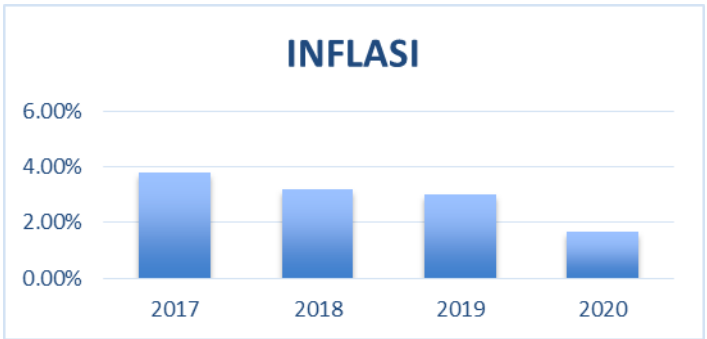


Source: 2017-2020 JCI Indonesia Report

Figure 1. JCI Development Chart for the period 2017-2020

From the picture above, in 2017 it was 6,355.65, 2018 was 6,194.50, 2019 was 6,299.54, and in 2020 it was 5,979.07, this shows that the JCI price in Indonesia is fluctuating from year to year. . In 2020, the JCI declined drastically due to a global disaster, namely the COVID-19 virus pandemic which hit various sectors, especially the economic sector, which was greatly affected in various parts of the world.

Several factors are thought to affect the JCI, namely inflation. Inflation is an increase in the prices of goods in general and continuously. So an increase in a small group of goods or a price change cannot be said to be inflation (Boediono, 2017). Inflation is considered a monetary phenomenon because the value of the currency unit of a commodity decreases. By definition, only temporary if there is an increase in the exchange rate. and we can't talk about inflation. For example, the price of an item increases before Eid or other holidays. At the end of the month, the price of goods will return to its original state, so the price is not considered inflation (Bakar, 2020). The following is inflation data (%) for the period 2017-2020:



Source: Indonesia Monthly Inflation Report 2017-2020

Figure 2. Graph of Inflation Development for the period 2017-2020

From the picture above, in 2017 it was worth 3.81%, 2018 was worth 3.20%, 2019 was worth 3.30%, and 2020 was worth 1.68%, this shows that the inflation rate in Indonesia from year to year moves fluctuates. The higher the inflation rate, the higher the burden of living. This can cause consumption costs to increase and real income to decrease, resulting in companies experiencing

difficulties in repaying the financing provided by banks. This will indirectly affect their financial statements.

Inflation tends to increase the total price of a product. Relative inflation is a negative sign for capital market investors. This is because inflation increases a firm's profits and costs. If the cost of production is higher than the price increase that can be enjoyed by the company, the company's profitability will decrease. A decrease in the profitability of a company reduces the real profit that investors get from their investment. According to Anak Agung Gde Aditya Krisna and Ni Gusti Putu Wirawati, partially this inflation variable has a positive and significant influence on the JCI on the IDX. (Ardelia Rezeki Harsono dan Saparila Worokinasih, 2018).

For the exchange rate itself, it is understandable when exchanging between two different currencies, that there is a comparison of the value/price between the two currencies. This comparison of values is often referred to as the exchange rate. Currency rates show the price of a currency when it is exchanged for another currency. The determination of the exchange rate between your home currency and the currency of another country is determined by, i.e., the supply and demand of the currency concerned, in the case of commodities. This law also applies to the rupiah exchange rate.

The exchange rate is defined as the amount of domestic money needed to acquire one unit of foreign currency. The exchange rate will be different from the currency of a country (Fahrika & Roy, 2020). The exchange rate (exchange rate) shows the price or value of a country's currency expressed in terms of another country's currency value. The exchange rate between one country and another is not the same (Sudarman, 2020). If the demand for rupiah is greater than the supply, the rupiah exchange rate will rise and vice versa. The exchange rate is determined by the market mechanism because if a country implements an exchange rate policy that is free to fluctuate, it will either rise or depreciate.

According to Ria Astuti, etc. The Rupiah exchange rate has a significant and negative effect on the Jakarta Composite Index (JCI) (Astuti et al., 2013). The following is the Exchange Rate data for the 2017-2020 period:

Source: BPS Data on Rupiah to Dollar Exchange Rate for the period 2017-2020

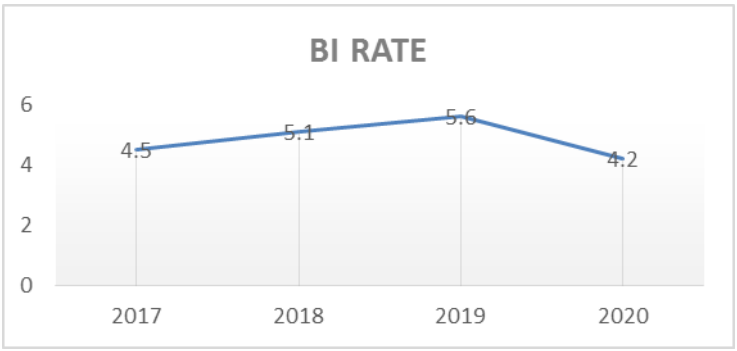
Figure 3. Graph of Exchange Rate Development for the period 2017-2020

From the picture above, in 2017 it was worth 13,439, in 2018 it was worth 14,300, in 2019 it was worth 14,232, in 2020 it was worth 14,709, this shows that the exchange rate in Indonesia from year to year is fluctuating. The higher the exchange rate ratio, the higher the live load. This can cause consumption costs to increase and real income to decrease, resulting in companies experiencing difficulties in repaying the financing provided by banks. This will indirectly affect their financial statements.

According to Kewal, interest is the price that connects the present and the future. Therefore, the interest rate is determined by the interaction between supply and demand. With this statement, interest rate policy can also be directed at the public interest to keep your money in the bank. Based on research conducted by Saifudin Zuhri, etc. BI Rate has a negative and significant effect on the Composite Stock Price Index (JCI) (Zuhri et al., 2019).

Then the BI rate is a financial policy set by BI which is preceded by a meeting of members and governors by looking at the overall economic conditions at home and abroad. Then BI's attitude towards these conditions was formulated through monetary operations as a reference for setting the BI rate.

One of the main factors in determining the BI rate is inflation. Prices of goods and services will rise or fall in general and continuously due to the rise and fall of inflation. The determination of the BI rate will depend on the rise and fall of inflation. If inflation rises, Bank Indonesia will increase the BI rate. On the other hand, if inflation falls, Bank Indonesia will lower the BI rate. The following is BI Rate data for the period 2017-2020:



Source: BPS data on the BI Rate for the period 2017-2020

Figure 4. Graph of BI Rate Development for the 2017-2020 period

From the picture above, in 2017 it was worth .5, 2018 was worth 5.1, in 2019 it was 5.6, and in 2020 it was worth 4.2, this shows that the exchange rate in Indonesia from year to year moves fluctuates from year to year. . In 2020, the BI Rate decreased due to a global disaster, namely the COVID-19 virus pandemic that hit various sectors, especially the economic sector, which was greatly affected in various parts of the world.

Based on the theories as well as the previous research that has been described above, the researcher wants to test the effect of inflation, exchange rate, and BI Rate variables on the composite stock price index on the Indonesia Stock Exchange. Thus, the researcher chose the topic "The Effect of Inflation, Exchange Rate and BI Rate on the Composite Stock Price Index on the IDX in 2017-2020"

RESEARCH METHOD

This study used a quantitative approach with the type of associative research looking for a relationship between one variable and another. The variables used in this study were the composite stock price index (CSPI) as the dependent variable, the BI rate, inflation, and the exchange rate as the independent variable. In this study, the report data used as variables for the 4 years, starting from 2017 - to 2020, were published in the Central Statistics Agency, Bank Indonesia, and the Indonesia Stock Exchange as case studies in this research. The source of data in this study was secondary data, namely data obtained indirectly from the company that is the object of research. Instead, secondary data is obtained in the form of annual reports that are registered and published in the Central Statistics Agency, Bank Indonesia, and the Indonesia Stock Exchange.

Secondary data was obtained from the website of the Central Statistics Agency, www.bps.go.id, Bank Indonesia, namely www.bi.go.id, and the Indonesia Stock Exchange (IDX), namely www.idx.co.id. This study used a systematic sampling technique. The data analysis method used in this study uses the multiple linear regression method. The use of the multiple linear regression analysis methods requires a classical assumption test which statistically must be met. To process secondary data obtained by researchers using statistical software assistance application programs including MS Exel 2019 which includes making tables and graphs for descriptive analysis while data processing activities with SPSS version 26.00 are used to assist in analyzing the data used in performing multiple linear regression significance Test.

RESULT AND DISCUSSION

Classic Assumption Test

Normality Test Results

The normality test in this study was used by looking at the significant value of the Kolmogorov-Smirnov test. It is said to be normal if the significant value is > 0.05. The following table 1 results are obtained:

Table 1. Normality Test Results

Significance	Description
0,082	Normal

Source: Secondary Data, processed (2022)

From table 4 above, it is known that the significance value of 0.082 is greater than 0.05, so it can be concluded that the inflation data, exchange rate, bi rate, and composite stock price index are normally distributed.

Autocorrelation Test Results

The autocorrelation test aims to test whether in the linear regression model there is a correlation between the confounding error in period t and the confounding error in period t-1. The test method is using Durbin - Watson. Where is the upper limit of du < d < 4 – du, then there is no autocorrelation. The results of the autocorrelation test can be seen in Table 2 below:

Table 2. Autocorrelation Test Results

Model	D	Dl	du	4-dl	4-du	Keterangan
Regresi	1.680	1.406	1.670	2.593	2,329	Tidak terdapat autokelerasi

Source: Secondary Data, processed (2022)

Based on the data in table 5. above, shows that there is no autocorrelation in this study. This is because the DW value is dU < d < 4 – dU, which is 1,670 < 1,680 < 2,329. So it can be concluded that there is no correlation between the nuisance error in period t and the nuisance error in the previous t period.

Multicollinearity Test Results

Is a method to detect the presence or absence of multicollinearity problems in a multiple regression model. One method to detect multicollinearity uses the F and tolerance method. If the F value is less than 10 then there is no multicollinearity problem and the tolerance number is not close to 0.

Table 3. Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
Inflation (X1)	.684	1.462
Exchange Rate (X2)	.673	1.486
BI Rate (X3)	.875	1.142

Source: Secondary Data, processed (2022)

From table 6 above, it is known that the VIF values for each variable of Inflation (X1), Exchange Rate (X2), BI Rate (X3), namely 1.462, 1.486, and 1.142 which are smaller than 10, can be concluded that the Inflation questionnaire, Exchange Rate, and BI Rate, as well as the JCI JCI, there are no multicollinearity problems.

Heteroscedasticity Test Results

Detecting the presence or absence of heteroscedasticity in a model can be seen using the Glejser test. The results of Test the variables in table 4 are as follows:

Table 4. Glejser. Heteroscedasticity Test

Model	Sig.
(Constant)	.000
Inflation (X1)	.531
Exchange Rate (X2)	.127
BI Rate (X3)	.719

Source: Secondary Data, processed (2022)

From the results of the heteroscedasticity test, the sig value for the inflation variable is 0.531 while the price variable is 0.127, and the BI Rate variable is 0.719. The three variables have a sig value > 0.05 so these results indicate that in this study, the variance of the residuals does not occur heteroscedasticity

Multiple Linear Regression Test Results

Multiple regression is a tool that can be used to predict future demand, based on past data or to determine the effect of one or more independent variables on one dependent variable. This study uses three independent variables, namely inflation (X1), an exchange rate (X2), BI Rate (X3), and one dependent variable, namely JCI (Y). and produces table 5 as follows:

Table 5. Multiple Linear Regression Test

Coefficients		
Model	Unstandardized Coefficients	Standardized Coefficients
	B	Beta
(Constant)	10212.271	
Inflation(X1)	42.387	.066
Harga (X2)	-.442	-.521
BI Rate (X3)	394.321	.616

Source: Secondary Data, processed (2022)

Based on the results of multiple regression analysis, the following regression equation is obtained:

Y = 10212.27 + 42.387 (X1) -0.442 (X2) + 394.321 (X3)

The results of the calculation of multiple linear regression analysis in the equation can be described as follows:

1. The inflation regression coefficient (X1) is 42,387 so this can be interpreted that Inflation has a positive and significant effect on the JCI. So the stronger the inflation, the higher the JCI level.
2. The exchange rate regression coefficient (X2) is -0.442 so it can be interpreted that the price has a negative and significant effect on the JCI. The better the exchange rate. the higher the JCI level. If the company increases the price, the JCI will be higher.
3. The BI Rate regression coefficient (X3) is 394,321 so it can be interpreted that the BI Rate has a positive and significant effect on the JCI. The more affordable the BI Rate, the higher the JCI. If the company sets an affordable BI Rate, the JCI level will be higher.

Hypothesis Test

T Test Results

It is suspected that Inflation, Exchange Rate. The BI rate has an effect on the JCI from the data analysis discussed in table 6.

Tabel 6. Test Results t

Variable	t_{count}	Significant	t_{table}	Description
Inflation (X1)	0.557	.580	2,010	Not Significant
Exchange Rate (X2)	-4.347	.000	2,010	Significant
BI Rate (X3)	5.867	.000	2,010	Significant

Source: Secondary Data, processed (2022)

a. First Hypothesis Test (H1)

Given the value of Sig. for the effect of X1 on Y is 0.580 > 0.05 and the t value is 0.557 < t table 2.010, it can be concluded that H1 is rejected, which means that there is no effect of X1 on Y.

b. Second Hypothesis Test (H2)

Given the value of Sig. for the effect of X2 on Y is equal to 0, 000 < 0.05 and the value of t count is 4,347 > t table 2,010, it can be concluded that H2 is accepted which means there is an effect of X2 on Y.

c. Third Hypothesis Test (H3)

Given the value of Sig. for the effect of X3 on Y is 0.000 <0.05 and the t value is 5.867 > t table is 2.010, it can be concluded that H3 is accepted which means that there is an effect of X3 on Y.

F Test Results

Significant influence on inflation, exchange rate. and the BI Rate simultaneously against the JCI. Data analysis is discussed in table 7.

Tabel 7. Silmultan (Test F)

Variable		Sig.
X1, X2, X3→ Y	Inflation (X1)	0,000
	Exchange Rate (X2)	
	BI Rate (X3)	

Source: Secondary Data, processed (2022)

The results of table 10 show that the sig value is 0.000 or less than 0.05. This can be interpreted that the independent variables, namely inflation (X1), an exchange rate (X2), BI Rate (X3) can jointly affect the dependent variable, namely the JCI (Y).

Dominant Test Results

The coefficient of determination (R^2) is used to determine the contribution of the independent variable Inflation (X1), an exchange rate (X2), BI Rate (X3) to the dependent variable JCI (Y) using the value (R^2). The value (R^2) in this study can be seen in Table 8.

Table 8. Coefficient of Determination

Model Summary			
Model	R	R Square	Adjusted R Square
1	.758[a]	.575	.546

Source: Secondary Data, processed (2022)

The result of table 11 is the effect of inflation, and exchange rate. and the BI Rate against the JCI at 57.5%. Then the rest, namely 42.5% of the influence on the JCI variable, namely from other variables not discussed in this study.

Discussion

a. Influence of Inflation towards JCI

The results of the analysis show that inflation does not affect the JCI.

So it can be interpreted that an increase or decrease in inflation will not affect the JCI. The results of this study are following the results of Yuni Appa's research which shows that inflation has no significant effect on the JCI (Appa, 2014). However, it is not following the results of Aditya Setiawan's research in his research showing that inflation has a positive and significant effect on the JCI (Aditya et al., 2018).

b. Influence of Exchange Rate towards JCI

The exchange rate has a negative (b2 = -0.442) and significant (sig. =0.000) effect on the JCI, so it is interpreted that a 1% increase in the exchange rate will decrease the JCI by 0.442. The results of this study support the research of Ruhul Ayu Lestari which shows that the exchange rate has a negative and significant effect on the JCI (Anati et al., 2019).

c. Influence of BI Rate towards JCI

BI Rate has a positive effect (b2 = 394.321), and significant (sig. = 0.000) on the JCI. So it is interpreted that a 1% increase in the BI rate will increase the JCI by 0.603. The results of this study are in line with the research of Witjaksono and Ardian which showed that the BI rate had a positive effect on the JCI (Witjaksono, 2010).

d. Influence of Inflation, Exchange Rate, and BI Rate towards JCI

Inflation, exchange rate, and BI rate have a positive effect (F = 19.846), and significant (sig. = 0.000) on the JCI. So it is interpreted that an increase in inflation, exchange rate, and the BI rate will increase the JCI. On the other hand, a decrease in inflation, exchange rates, and the BI rate will lower the JCI.

CONCLUSION AND SUGGESTION

Conclusion

Based on the formulation of the problem, findings, and discussion that have been mentioned, the conclusions that can be put forward in this study are as follows:

1. Inflation has no significant effect on the JCI because an increase or decrease in inflation will not affect the JCI
2. The exchange rate has a negative and significant effect on the JCI, because an increase in the exchange rate will decrease the JCI, and conversely a decrease in the BI rate will increase the JCI.
3. The BI Rate has a positive and significant effect on the JCI, because an increase in the BI rate will increase the JCI, and conversely a decrease in the BI rate will reduce the JCI.
4. Inflation, exchange rate, and the BI rate have a positive and significant effect on the JCI because an increase in inflation, the exchange rate, and the BI rate will increase the JCI, and conversely a decrease in inflation, the exchange rate, and the BI rate will decrease the JCI.

Suggestion

Based on the conclusions from the results of the study, the researchers suggest several things, namely as follows:

1. For the Indonesia Stock Exchange

   The results of this study are expected to be used as a review to consider factors that affect the JCI. Factors such as Inflation, Exchange Rate, and BI Rate as described in this study have a large contribution to the fluctuation of the composite stock index chart in Indonesia.

2. For the next researcher

   This research can be used as a reference for further research by developing research using the same factors but with other research subjects. However, with the addition of other variables, it can also be done to improve the limitations that exist in this study

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