IJEBA: *International Journal of Economics, Business and Applications*
p-ISSN: 2477-1244, eISSN: 2477-1236
DOI:
Accepted:

THE EFFECT OF INFLATION, BI RATE, ECHANGE RATE, AND STANDARD AND POOR'S 500 ON THE COMPOSITE STOCK PRICE INDEX: AN EMPIRICAL STUDY OF MANUFACTURING COMPANIES LISTED ON THE STOCK EXCHANGE IN 2015-2019

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ABSTRACT**:** *This study aimed to determine the effect of inflation, the BI rate, the exchange rate, and Standard & Poor's 500 on the Composite Stock Price Index (JCI). The population of this study is all data on the JCI, BI Rate, Inflation, Exchange Rates, and the Standard & Poor's 500 in the 2016–2019 period on the Indonesia Stock Exchange (IDX). The sample for this study was selected by the* saturated sampling method *within the range of 48 months, starting from January 2016 to December 2019. The analytical tool used in this study was* multiple linear regression analysis*. The results of this study indicate that inflation, the BI Rate, and the Standard & Poor's 500 have a positive and insignificant effect on the composite stock price index. Furthermore, the exchange rate has a negative and significant effect on the composite stock price index*.

Keywords: *Inflation, BI Rate, Exchange Rate, Standard & Poor's 500, and the Composite Stock Price Index (JCI)*

INTRODUCTION

In this era of globalization, almost all countries pay great attention to the capital market because it has a strategic role in strengthening the economic resilience of a country. The Composite Stock Price Index (JCI) is a reflection of capital market activities in general. Information about the Jakarta Composite Index (JCI), which is difficult to predict, is very important for investors to make investment decisions in the capital market. JCI is an index that summarizes the development of stock prices on the IDX (Indonesian Stock Exchange); hence, JCI fluctuations will affect the condition of the capital market in Indonesia, whether it is in a bullish or bearish position. JCI is an index that shows the movement of stock prices listed on the stock exchange, which is a reference for developing activities in the capital market (Anoraga & Pakarti, 2019).

According to Hartono (2014), the Composite Stock Price Index (CSPI) is a stock price index number that has been calculated and compiled to produce a

trend, whereas an index number is a number that is processed in such a way that it can be used to compare events in the form of changes in stock prices from time to time. This study uses the JCI as the object of research and takes 2016–2019 as the research period. The JCI has several benefits, including a market direction marker, a benchmark for portfolio performance, and a measure of profit levels. Therefore, JCI information (the combined stock price index) is needed by every potential investor to make investment decisions.

Table 1. Composite Stock Price Index Data on the Indonesia Stock Exchange

JCI					
NO	**MONTH**	**2016**	**2017**	**2018**	**2019**
1	JANUARY	4615.163	5294.103	6605631	6532,969
2	FEBRUARY	4770.956	5386692	6597,218	6443,348
3	MARCH	4845,371	5568.106	6188,987	6468,755
4	APRIL	4838,583	5685,298	5994.595	6455.352
5	MAY	4796,869	5738.155	5983.587	6209.117
6	JUNE	5016,647	5829,708	5799,237	6358,629
7	JULY	5215,994	5840.939	5936,443	6390.505
8	AUGUST	5386.082	5864.059	6018.46	6328.47
9	SEPTEMBER	5364,804	59000.854	5976,553	6169.102
10	OCTOBER	5422,542	6005.784	5831.65	6228,317
11	NOVEMBER	5148.91	5952.138	6056,124	6011.83
12	DECEMBER	5296.711	6355.654	6194.498	6299.539

Source: Indonesia Stock Exchange (www.idx.co.id)

Based on the data in Table 1, the composite stock price index on the Indonesian stock exchange, taken from the official website of IDX, shows a trend that fluctuates every month of every year. Compared to the data from 2016 to 2019, the 2019 composite stock price index data tended to be higher and more stable.

According to Natsir (2014), inflation is a tendency to increase the price of goods and services in general and is continuous. If the inflation rate increases, it will impact production costs due to increased raw material prices, operational costs, and other costs. These conditions will also reduce a company's profitability because the purchasing power of society will decrease in an item. Therefore, this will affect the condition of the capital market. With this condition, investors will no longer be interested in investing in the capital market, decreasing the demand for shares. This decrease in demand will cause the price of the stock to decline. When the economic position declines, Bank Indonesia, the implementing agency for the monetary authority, increases the benchmark interest rate (BI Rate) to reduce the amount of money circulating in the community.

Changes in the BI rate will affect the movement of a stock in Indonesia. An increase in interest rates will also affect the increase in deposit interest rates and loan interest rates. For investors, an increase in deposit interest rates will increase the level of profit obtained if the funds have been invested in the form of deposit deposits. In addition, if credit interest rates experience an increase, this will make the cost of capital very large. With these conditions, it will be difficult for the company to obtain the additional low-cost capital fund needed to be used in its production activities. I hope to increase the level of productivity. Therefore, when the productivity level of a company experiences a decline, the profits to be generated by the company will be reduced, which will also reduce the attractiveness of investors to invest in the capital market. These conditions will impact the decline of the Composite Stock Price Index (JCI).

Chen *et al.*, (1986) found that stocks react to another economic variable, namely interest rates. Bank Indonesia explained that the BI interest rate is the basis that can be used as a benchmark in explaining interest rates in Indonesia. The BI interest rate acts as a reference, which indirectly affects the interest rates on loans and savings in banking institutions and non-bank financial institutions. Generally, Bank Indonesia can raise the BI interest rate if the estimated inflation exceeds the predetermined target. On the other hand, Bank Indonesia may lower the BI interest rate if future inflation is estimated to be below the predetermined target.

Table 2. BI Rate Data 2016-2019

BI RATE					
NO	**MONTH**	**2016**	**2017**	**2018**	**2019**
1	JANUARY	7.25	4.75	4.25	6.00
2	FEBRUARY	7.00	4.75	4.25	6.00
3	MARCH	6.75	4.75	4.25	6.00
4	APRIL	6.75	4.75	4.25	6.00
5	MAY	6.75	4.75	4.75	6.00
6	JUNE	6.50	4.75	5.25	6.00
7	JULY	6.50	4.75	5.25	5.75
8	AUGUST	5.25	4.50	5.50	5.50
9	SEPTEMBER	5.00	4.25	5.75	5.25
10	OCTOBER	4.75	4.25	5.75	5.00
11	NOVEMBER	4.75	4.25	6.00	5.00
12	DECEMBER	4.75	4.25	6.00	5.00
*In percentage (%)					

Source: Bank Indonesia (www.bi.go.id)

Table 2 of the BI Rate from 2016 to 2019, derived from Bank Indonesia's official website, indicates a decrease trend in the determination of the BI rate set

by Indonesia in 2017. Meanwhile, the BI rate increased in 2018 and 2019, and this trend maintained until June 2019. The BI rate fell from the middle of 2019 to the end of 2019. According to the data presented above, the lowest BI rate in Indonesia happened during August to December 2019.

The exchange rate of a country's currency with another country's currency is determined as well as the price of goods, namely by the demand and supply of the currency in question. According to Ruhendi & Arifin (2003), the currency exchange rate shows the price of a currency when exchanged with other currencies, where the exchange rate can be interpreted as a comparison of values between currencies. For a company that is active in carrying out export and import activities, the stability of therupiahh's value against foreign currencies, such as the United States dollar, is very important. Because when the value of the Rupiah weakens against the United States dollar, this will result in expensive imported goods.

Assume that the majority of a company's raw materials are sourced from other countries. This circumstance raises production costs automatically, reducing a company's profit. Of course, suppose the company's profit level falls. In that situation, it will be able to influence investors' purchasing power toward a company's shares; thus, this condition will induce a decline in the Composite Stock Price Index (JCI). For corporations looking to invest, the Rupiah currency rate is also quite important. If the foreign currency market is more attractive than the capital market, investors will typically shift to the capital market.

Table 3. Exchange Rate Data for 2016-2019

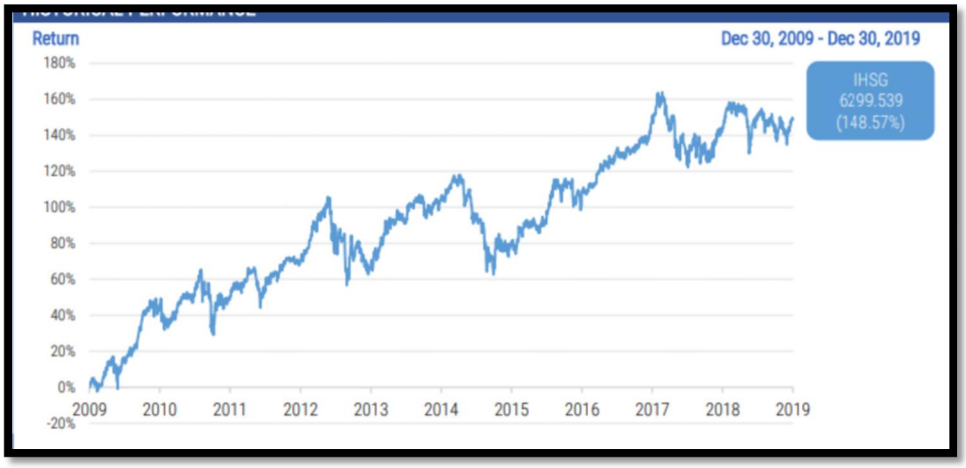
EXCHANGE RATE					
NO	**MONTH**	**2016**	**2017**	**2018**	**2019**
1	JANUARY	14104.37	13338	13421	14033
2	FEBRUARY	13425	13339	13694	14015
3	MARCH	13240	13299	13736	14233
4	APRIL	13210.04	13322	13870	14191
5	MAY	13631	13319	13977	14401
6	JUNE	13139	13278	14350	14184.5
7	JULY	13123.36	13320	14403	14066.4
EXCHANGE RATE					
NO	**MONTH**	**2016**	**2017**	**2018**	**2019**
8	AUGUST	13283	13334	14751	14231
9	SEPTEMBER	13003	13477.09	14890	14158
10	OCTOBER	13063	13574	15273.1	14060
11	NOVEMBER	13502	13504	14356	14081.67
12	DECEMBER	13518	13477	14553	13919
*In Rupiah (Rp)					

Source: Bank Indonesia (www.bi.go.id)

Every year's exchange rate also fluctuates; from 2016 to 2017, it decreased, and it increased in 2018. In 2019, the exchange rate remained around 14,000. If the exchange rate increases, it is called an appreciation of the foreign currency, while if it decreases, it is called a depreciation of the foreign currency. Based on the table, at the end of January 2016, it was Rp 14,104.37, and at the end of December 2016, it reached Rp 13,518. The Rupiah's middle exchange rate at the end of January 2017 was Rp 13.338 and it was Rp 13,477 at the end of December 2017. The middle exchange rate of the Rupiah against the Dollar at the end of January 2018 was Rp 13,421, and it closed at the end of December 2018 at Rp 14,553, and in 2019, the middle exchange rate of the Rupiah against the Dollar at the end of January was Rp 14,033, and it closed at the end of December 2019 at Rp 13,919 The rupiah's midpoint exchange rate against the US Dollar.

The Standard & Poor's 500 (S&P 500) The impact of external variables that affect the JCI, namely the Standard & Poor's 500 (S&P 500), is one of the global indices that can be used as a reference in the decision-making process of investors on the Indonesia Stock Exchange. The S&P 500 is an index consisting of the shares of 500 large-cap companies, mostly from the United States, and is the most popular index owned and maintained by Standard & Poor's, a division of McGraw-Hill. This index is considered to represent the large influence of the United States stock market on global stock markets, including Indonesia. All the stocks listed in this index are those of large, publicly traded companies and are traded on major US stock exchanges such as the New York Stock Exchange and the Nasdaq. After the Dow Jones Industrial Average, the S&P 500 is the most watched index (Arifin, 2014).

Figure 1. JCI Stock Price Movements in 2016-2019



Source: www.idx.co.id

LITERATURE REVIEW AND RESEARCH HYPOTHESES

Random Walk Theory

According to Samsul (2006), the random walk theory explains stock prices that move randomly (random walk). Stock prices that move randomly mean that stock price fluctuations depend on new information that will be received. However, it is not known when information will be received, so new information and stock prices are unpredictable. Whether the information is bad (bad news) or good (good news) is also unknown. If it is known, the information is referred to as "today's information" and will immediately affect the current stock price.

Signal theory

According to Fahmi (2015), signaling theory is a theory that discusses the rise and fall of stock prices in the market so that it will influence investor decisions. The signal theory emphasizes that information announced to the public, both negative and positive, will influence investors' decisions to invest, and they will react in various ways in response to these signals.

The Effect of Inflation on the Composite Stock Price Index

Inflation is defined as the tendency of prices to rise in general and continuously (Boediono, 2001). The relative increase in inflation is a negative signal for investors in the capital market. Inflation increases the company's revenues and costs. If the increase in production costs is higher than the increase in prices that the company can utilize, its profitability will decrease. If the profit earned by the company is small, this will result in investors not wanting to invest their funds in the company, so the stock price decreases. The higher the

inflation rate, the lower the stock price index. Thus, inflation has a negative effect on the Composite Stock Price Index. The results of this study are in accordance with research conducted by Sunardi & Ula (2017), which shows that inflation affects the JCI.

The Influence of the BI Rate on the Composite Stock Price Index

Classical economists state that the demand and supply of investments in the capital market determine the interest rate. The interest rate will determine the balance between the amount of savings and the investment demand. The high and low supply of investment funds is determined by the high and low interest rates on public savings. Novitasari (2013). An increase in the BI Rate will also cause an increase in bank interest rates, causing stock prices to fall, and this will result in a decline in the JCI in the property and real estate sectors on the IDX (Maslikha *et al*., 2017). The results of research conducted by Maslikha et al. (2017) show that the BI Rate negatively and significantly affects the JCI. Similar results were also shown by Maurina *et al*. (2015), which show that the BI Rate has a negative and significant effect on the JCI. Different results are shown from research conducted by Aliyah (2016), which shows that the BI rate has a positive and significant effect on the Jakarta Islamic Index (JII) stock price index. The results of this study are in accordance with research conducted by Nidianti & Wijayanto (2019), which shows that the BI Rate has a significant effect on the JCI.

The Effect of Exchange Rate on the Composite Stock Price Index

According to Thobarry (2009), the exchange rate of a foreign currency is the price of a country's currency against the currencies of other foreign countries. According to Tandelilin (2008), strengthening the Rupiah exchange rate against foreign currencies will reduce the cost of importing raw materials for production and the prevailing interest rate. Changes in the Rupiah exchange rate against the dollar affect companies with high foreign debt and imports. If the Rupiah exchange rate falls (the Rupiah strengthens or appreciates) and the monetary authority responds by lowering the deposit interest rate, people tend to withdraw their deposits and redirect them to stock investments, which eventually leads to an increase in stock prices. The results of this study are in accordance with research conducted by Taufiq and Kefi (2015), which shows that the exchange rate has a positive and significant effect on the JCI.

Effect of Standard & Poor's 500 on the Composite Stock Price Index

Standard & Poor's 500 is one of the largest stock index averages in the world. Therefore, the movement of the Standard & Poor's 500 can affect almost all stock indices, including the Composite Stock Price Index. The influence of the Standard & Poor's 500 on the composite stock price index is estimated to be positive in that the increase in the Standard & Poor's 500 will result in an increase in the composite stock price index on the Indonesia Stock Exchange. This condition is due to investors' positive attitude toward global economic conditions. Thus, it can be concluded that the Standard & Poor's 500 has a positive effect on the Composite Stock Price Index. The results of this study are in accordance with research conducted by Arifin (2014), which shows that the Standard & Poor's 500 has a positive and significant effect on the JCI.

METHOD

The data source used in this study is secondary data, and the type of data used is quantitative data, which is time series data for 48 months of observations from 2016–2019. The secondary data needed is obtained from publications by related agencies such as Bank Indonesia and the Central Statistics Agency for the 2016–2019 period. This study's population is entirely comprised of JCI data. The sample in this study used saturated sampling. In this study, the number of samples was 48, namely the amount of data from January 2016 to December 2019 because the study used monthly data. In collecting data, this research uses the method of documentation.

Operational Definitions and Variable Indicators

The Value of The Company

According to Anoraga & Pakarti (2001), JCI is an index that shows the general movement of stock prices listed on the stock exchange, which becomes a reference for developing activities in the capital market. The calculation of the combined share price is carried out to determine the average development of all shares listed on the stock exchange. The formula for calculating the Composite Stock Price Index (Arifin, 2014) is:

$$\text{IHSG} = \frac{\text{Market Value}}{\text{Base Value}}$$

$$\text{IHSG} = \frac{\text{number of registered shares} \times \text{Last Price}}{\text{number of registered shares} \times \text{prime price}} \times 100\%$$

Information:

JCI = Composite Stock Price Index day 1

Market Value = Weighted average market value (number of shares listed on the stock exchange multiplied by the market price per share) of common and preferred shares on day t

Base Value = Same as market value but starting from August 10, 1982

Inflation

Inflation is defined as the tendency of prices to rise in general and continuously (Boediono, 2001). The Consumer Price Index (CPI) must first be known to calculate the level of inflation. The CPI is a measure of the price change for the group of goods and services most consumed by households in a certain period. According to Natsir (2014), the formula for calculating the inflation rate is as follows:

$$\text{In}f = \frac{IHK_n - IHK_{n-1}}{IHK_{n-1}} \times 100\%$$

Information :

in *f* = inflation

CPI = Consumer Price Index for the Current Period

CPI-1= Consumer Price Index for the previous period

BI Rate

The BI Rate is the BI policy rate that reflects the monetary policy stance set by BI (Raharjo & Elida, 2015). The BI Rate is the interest rate for one year set by BI as a benchmark for interest rates on loans and deposits for banks and/or financial institutions throughout Indonesia. The BI rate data taken is monthly data for the 2016-2019 period.

Exchange Rate

The exchange rate is a currency's price relative to other countries' currencies (Mahyus, 2014). Variable exchange rate changes are calculated by dividing the current exchange rate by the previous day's exchange rate. The exchange rate used is the average rate per month. The Exchange Rate Variable is measured using the average middle exchange rate of the US dollar against the Rupiah issued by Bank Indonesia every month. According to Arifin (2014), the formula for calculating exchange rate changes is:

$$Exchange\ Rate = \frac{Kurs_t - Kurs_{t-1}}{Kurs_{t-1}}$$

Information:

Rate t = Exchange rate for the current period

Rate t-1 = Exchange rate of the previous period

Standard & Poor's 500

The Standard & Poor's 500, or S&P 500, index consists of the shares of 500 large-cap companies, mostly from the United States. According to Arifin (2014), the Standard & Poor's 500 is measured by:

$$S\&P = \frac{S\&P_t - S\&P_{t-1}}{S\&P_{t-1}}$$

Information:

S&Pt = Standard & Poor's 500 for the current period

S&Pt-1 = Standard & Poor's 500 previous period

Data analysis method

Multiple Linear Regression Analysis was used to test the independent and dependent variables' relationship.

RESULT AND DISCUSSION

Descriptive Statistics

In this study, descriptive analysis is used to determine the statistical picture of the value of the stock price index to be studied. The following will be presented as descriptive statistical analysis in this study:

Table 4. Descriptive Statistics Test Results

Descriptive Statistics

	N	Minimum	Maximum	mean	Std. Deviation
JCI	48	-6.18	6.77	.71	2,705
INFLATION	48	2.48	4.45	3.3917	.46795
BIRATE	48	4.25	7.25	5.3229	.84576
EXCHANGE RATE	48	-6.00	9.67	.2276	2.23776
SP500	48	-9	7.86	1.01	3.338
Valid N (listwise)	48				

Source: Processed Data 2022

Classic assumption test

1. Linearity Test

This test is used to see whether the specifications of the model used are correct or not. The function used in an empirical study should be linear, quadratic, or cubic (Ghozali, 2011). One way to test linearity is to use the Test for Linearity with a significance level of 0.05. Another test that can be carried out is the one developed by Ramsey (1969). This test aims to produce an F statistic with the

help of the SPSS program. The results of the F statistic were then compared with the F table. When F statistic F table, the relationship is linear; when F statistic > F table, the relationship is not linear.

Table 5. Inflation Linearity Test Results

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
JCI * INFLATION	Between Groups	(Combined)	287,917	40	7.198	.900	.625
		linearity	1.511	1	1.511	.189	.677
		Deviation from Linearity	286,406	39	7.344	.918	.611
	Within Groups		56,000	7	8.000		
	Total		343.917	47			

Based on the linearity test in Table 5.2, it can be seen that the inflation variable has an F value of 0.918. So it is concluded that the calculated F is smaller than the F table (0.918 2.57), so there is a linear relationship between the JCI and inflation.

Table 6. BI Rate Linearity Test Results

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
JCI * BI RATE	Between Groups	(Combined)	46,947	11	4.268	.517	.879
		linearity	3.778	1	3.778	.458	.503
		Deviation from Linearity	43.168	10	4.317	.523	.862
	Within Groups		296,970	36	8,249		
	Total		343.917	47			

Based on the Linearity Test in Table 5.3, it can be seen that the BI Rate variable has an F value of 0.523. So it is concluded that if the calculated F is greater than the F table (0.523 < 2.57), there is a linear relationship between the JCI and BI Rate.

The results of the linearity test for exchange rate changes and Standard & Poor's in this study can be seen in Table 7 below:

Table 7. Test Results for Linearity of Exchange Rate Changes and Standard & Poor's 500

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.460 [a]	.212	.177	2.454

a. Predictors: (Constant), VALUE, SP500
b. Dependent Variable: JCI

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.711 [a]	.505	.472	1966

a. Predictors: (Constant), DFFIT, SP500, VALUE

Based on table 7 above, it can be obtained:

$$\mathrm{F} = \frac{R^2new - R^2old/m}{(1 - R^2new)/(n - k)}$$

$$\mathrm{F} = \frac{0.505 - 0.212/1}{(1 - 0.505)/(48 - 4)}$$

$$\mathrm{F} = \frac{0.293}{(0.495)/(44)}$$

$$\mathrm{F} = \frac{0.293}{0.01125}$$

$$\mathrm{F} = 26.044$$

ASSUMPTION: F ^{2} statistic < F ^{2} table = > There is Linearity

26,044 > 2.57 => No Linearity

2. Normality Test

The normality test aims to test whether the regression model, confounding variables, or residuals are normally distributed (Ghozali, 2011). The assessment criteria for this test are: if the significance of the calculated data (Sig) is greater than 5%, then the data is normally distributed, whereas if the significance of the calculated data (Sig) is less than 5%, then the data is not normally distributed. To test for normality, this study used the Kolmogorov-Smirnov test.

Table 8. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		48
Normal Parameters [a,b]	mean	.0000000
	Std. Deviation	2.36086336
Most Extreme Differences	Absolute	.074
	Positive	.069
	negative	-.074
Kolmogorov-Smirnov Z		.511
asymp . Sig. (2-tailed)		.956

a. Test distribution is Normal.
b. Calculated from data.
Source: Processed Data 2022

Based on Table 8 above, it can be seen that the asymptotic value is 0. The Sig (2-tailed) Kolmogorov-Smirnov is greater than 0.05.This means that the analyzed data has met the normality test criteria.

3. Autocorrelation Test

Autocorrelation, often known as "serial correlation," is commonly encountered in time series data. The autocorrelation test determines whether there is a link in the regression model between the confounding error in period t and the confounding error in period t-1 (previous). Autocorrelation is not present in a good regression model. The Durbin-Watson (DW) test was employed in this investigation to determine the presence of autocorrelation. The following hypotheses will be tested in this study:

H0 (there is an autocorrelation, r = 0)

Ha (absence of autocorrelation, r = 0).

Table 9. Autocorrelation Test Results

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.554 [a]	.307	.241	141.99285	1,889

a. Predictors: (Constant), SP, BIRATE, INFLATION, EXCHANGE
b. Dependent Variable: JCI
Source: Processed Data 2022

Table 9 shows that the dW obtained by the regression model is 1.850. Testing using the dW table yielded dL values of 1.361 and 1.7203, indicating that the autocorrelation meets the following criteria:

$$dU < DW < 4\text{-}dU$$

$$1.7203 < 1.889 < 4\text{-}1.7203$$

$$1.7203 < 1.889 < 2.2797$$

Therefore, it can be concluded that in this regression model, there is no positive or negative autocorrelation for this study.

4. Multicollinearity Test

To be free of the multicollinearity problem The multicollinearity test determines whether or not there is a relationship between the independent variables in the regression model (Ghozali, 2011). If the independent variables have a high correlation, the relationship between the dependent and independent variables will be disrupted. A good regression model should not have multicollinearity, as seen from the tolerance value and VIF (Variance Inflation Factor). The tolerance value must be 0.10 (Ghozali, 2011).

Table 10. Multicollinearity Test Results

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3.479	3,510		-.991	.327		
	INFLATION	.577	.772	.100	.748	.458	.994	1.006
	BIRATE	.415	.427	.130	.973	.336	.995	1.005
	EXCHANGE RATE	-.469	.178	-.388	-2,643	.011	.822	1.217
	SP500	.125	.119	.154	1.044	.302	.817	1,224

a. Dependent Variable: JCI
Source: Processed Data 2022

Based on Table 10, it can be seen that the VIF value of the inflation variable, BI Rate, exchange rate, and Standard & Poor's 500 shows the number <10 and the tolerance value > 0.1. This means that there is no multicollinearity in the variables in the research model.

5. Heteroscedasticity Test

Heteroscedasticity is the inequality of variable variations in all observations and errors that show a systematic relationship according to the magnitude of one or more independent variables, so that the error is not random. The method used to detect the presence or absence of heteroscedasticity in this study is the Glejser Test, which regresses the absolute value of the residual on the independent variable. This can be seen from the significance probability above the 5% confidence level. So it can be concluded that the regression model does not contain heteroscedasticity (Ghozali, 2011).

Table 11. Heteroscedasticity Test Results

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.339	2.055		2,598	.013
	INFLATION	-.461	.452	-147	-1.021	.313
	BIRATE	-.362	.250	-.209	-1,450	.154
	EXCHANG E RATE	.120	.104	.184	1.159	.253
	SP500	-.042	.070	-.096	-.607	.547

a. Dependent Variable: JCI
Source: Processed Data 2022

Table 11 shows that the value of the sig. of inflation variable, BI rate, exchange rate, and Standard & Poor's 500 is greater than 0.05. Therefore, in this study, there were no symptoms of heteroscedasticity.

Multiple Linear Regression Analysis

Regression analysis in statistics is one method to determine the causal relationship between one variable and other variables. According to Ghozali (2011), the multiple linear regression equation can be stated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Table 12. Multiple Linear Regression Analysis test results

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.479	3,510		-.991	.327
	INFLATION	.577	.772	.100	.748	.458
	BI RATE	.415	.427	.130	.973	.336
	EXCHANGE RATE	-.469	.178	-.388	-2,643	.011
	SP500	.125	.119	.154	1.044	.302

a. Dependent Variable: JCI

Based on the data processing results, the equation model produced multiple linear regressions as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$Y = (-3.479) + 0.577X_1 + 0.415X_2 + (-0.469)X_3 + 0.125X_4$$

$$\text{IHSG} = (-3.479) + 0.577\text{Inflation} + 0.415\text{BIRate} + (-0.469)\text{Exchange Rate} + 0.125\text{SP}$$

Goodness of Fit

1. Coefficient of Determination Test (R^2)

The coefficient of determination is used to determine how much the ability of the independent variable affects the dependent variable.

Table 13. Coefficient of Determination Test Results (R^2)

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.488 [a]	.238	.167	2.468	1.850

a. Predictors: (Constant), SP500, INFLATION, BIRATE, VALUE
b. Dependent Variable: JCI
Source: Processed Data 2022

Based on table 13, the R-squared number is 0.238 (23.8%). This means that 23.8% of the variation in the composite stock price index can be explained by inflation, the BI rate, the exchange rate, and Standard & Poor's 500 variables. In contrast, the remaining 76.2% is explained by other variables outside the research model.

2. F Test (Simultaneous Significant)

The F test shows whether all the independent variables included in the regression model have a joint or simultaneous effect on the dependent variable.

Table 14. Simultaneous Significance Test (F Statistics Test)

ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	81,954	4	20,488	3.363	.018 [b]
	Residual	261,963	43	6.092		
	Total	343.917	47			

a. Dependent Variable: JCI
b. Predictors: (Constant), SP500, INFLATION, BIRATE, VALUE
Source: Processed Data 2022

Table 14 obtained an F statistic as high as 3.363, and the significance of F is 0.018. With a 5% significance level, df1 is 3 (k-1 / 4 -1) and df2 is 44 (nk / 48 - 4), resulting in an F table of 2.57. It can be seen that the calculated F is greater than the F table (3.363 2.57),7) and the significance value is smaller th = 0.00.018 8 < 0.05As a result, inflation, the BI rate, the exchange rate, and the Standard & Poor's 500 variables all have an impact on the Indonesian Composite Index variable from 2016 to 2019.

3. Hypothesis Testing (t-Test)

The t-test was conducted to determine the effect of the independent variables individually on the variation of the dependent variable. In this study, the t-test was carried out by comparing the t-significance value in the table with a significance level of 0.05. Accept Ho if t statistics are equal to t table (= 0.05) and Accept Ha if t statistics are greater than t table (= 0.05).

Table 15. Results Test Partial (T Statistics Test)

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.479	3,510		-.991	.327
	INFLATION	.577	.772	.100	.748	.458
	BITRATE	.415	.427	.130	.973	.336
	EXCHANG E RATE	-.469	.178	-.388	-2,643	.011
	SP500	.125	.119	.154	1.044	.302

a. Dependent Variable: JCI
Source: Processed Data 2022

Effect of inflation on JCI

The statistical analysis results for the inflation variable show that the regression coefficient is positive. The existence of a positive influence means that there is a unidirectional relationship; the higher the inflation, the higher the JCI

will be. The first hypothesis shows that inflation has no significant effect on the composite stock price index on the Indonesia Stock Exchange. The absence of influence between inflation and the composite stock price index indicates that the rise and fall of inflation have no impact on the movement of the composite stock price index on the Indonesia Stock Exchange. This condition causes investors not to dare to speculate and to wait for more stable inflation conditions. Investors are better off waiting because every investor does not expect to suffer bigger losses.

The random walk theory states that stock prices move randomly (random walk). Stock prices that move randomly mean that stock price fluctuations depend on new information that will be received. However, it is not known when information will be received, so new information and stock prices are unpredictable. In addition to the random walk theory, the signaling theory also supports the results of this study. Signaling theory discusses the rise and fall of stock prices in the market so that it will influence investor decisions. The signaling theory explains the connection to information disclosure issues.If companies disclose bad news, the market will have a negative reaction, which is consistent with the efficient market hypothesis (Purnamasari, 2006). This study's results align with the research conducted by Taufiq and Kefi (2015), which showed that inflation and the exchange rate had a positive effect on the JCI. However, this study's results differ from the research conducted by Jayanti *et al*., (2014) which reveals that inflation has a negative effect on the JCI.

The Influence of the BI Rate on the JCI

The statistical analysis results for the BI Rate variable show that the regression coefficient is positive. This positive influence means a unidirectional relationship; the higher the interest rate, the higher the stock pricetive influence means a unidirectional relationship; the higher the interest rate, the higher the stock price. The second hypothesis shows that the BI Rate is not significant to the composite stock price index on the Indonesia Stock Exchange. There is no significant effect of the BI Rate on the Composite Stock Price Index because the fluctuations in the interest rate of Bank Indonesia have no effect on the JCI. When Indonesian bank interest rates rise, investors will prefer to invest in banks, such as through deposits, rather than in the capital market. Nevertheless, from the results of the research conducted, this statement is not proven, so that rising interest rates do not make investors move to invest in banks instead of the capital

market. This can happen because investments in the form of deposits have a certain period, so investors cannot freely withdraw funds from these savings deposits at any time. This differs from investing in the capital market, which can liquidate its shares when considered profitable. In addition, investors have prepared their funds, namely how much to invest in the capital market and how much to save in deposits, so that the rise and fall of interest rates will not affect the JCI.

The random walk theory states that stock prices move randomly (random walk). A random walk shows that price changes are independent and are random variables that are identically distributed so that future prices cannot be predicted using previous price changes (Gillette, 2005). Stock prices that move randomly mean that stock price fluctuations depend on new information that will be received. However, it is not known when information will be received, so new information and stock prices are unpredictable. This study's results align with Nuraini (2018), which shows that the BI rate positively influences the JCI. The study's results differ from the research conducted by Kumalasari (2016), where the BI Rate negatively influences the Composite Stock Price Index.

Effect of Exchange Rate on JCI

The statistical analysis results for the exchange rate variable show that the regression coefficient is negative. This negative influence means that the relationship is not unidirectional or inversely proportional; the higher the exchange rate, the lower the JCI will be, or vice versa.

The third hypothesis demonstrates that the exchange rate has an impact on the Indonesia Stock Exchange's composite stock price index.If the exchange rate in developed countries changes, then the change will affect the exchange rate in developing countries such as Indonesia. Developed countries have a strong influence on the economies of developing countries. Developed countries generally act as lenders to developing countries, so if the exchange rate between developed countries changes, the change will affect the exchange rate for developing countries as loan recipients. The results of this study are in accordance with the theory put forward by Tandelilin (2008), which states that strengthening the Rupiah exchange rate is a positive signal for investors.

The results of this study are in accordance with the investment theory, which states that for a company that is active in exporting and importing goods, the stability of the value of the rupiah against foreign currencies such as the

United States dollar is very important. Because when the value of the Rupiah weakens against the United States dollar, this will result in expensive imported goods. Suppose most of the raw materials a company uses are imported from other countries. In that case, this condition will automatically lead to an increase in production costs, which will also impact the company's profit level. Suppose the company's profit level decreases, of course. In that case, it will greatly affect investors' purchasing power toward a company's shares, so this condition will encourage a decrease in the Composite Stock Price Index (JCI).

This is in line with the results of research conducted by Jayanti *et al*., (2014), Al Hazmi (2015), Manurung (2016), Solichin (2017), and Apriyan (2018) which state that exchange rates partially affect significantly to the Composite Stock Price Index (JCI).

The Effect of Standard & Poor's 500 on JCI

The statistical analysis results for Standard & Poor's 500 variables show that the regression coefficient is positive. The existence of this positive influence means that there is a unidirectional relationship. The higher the S&P 500, the higher the JCI, and vice versa.

The fourth hypothesis shows that the Standard & Poor's 500 is not significant to the composite stock price index on the Indonesia Stock Exchange. The Standard & Poor's 500, or S&P 500, index consists of the shares of 500 large-cap companies, mostly from the United States. It is the most popular index owned and maintained by Standard & Poor's, a division of McGraw-Hill. All the stocks listed in this index are those of large, publicly traded companies and are traded on major US stock exchanges such as the New York Stock Exchange and the Nasdaq. After the Dow Jones Industrial Average, the S&P 500 is the most watched index. The increase in the Standard & Poor's 500 means that the performance of the United States economy has also improved. As one of Indonesia's export destinations, the United States' economic growth can encourage Indonesia's economic growth through export activities and capital inflows for both direct investments and the capital market (Arifin, 2014). According to Arifin (2014), the Indonesian capital market has been integrated with the world capital market. Thus, an increase in the Standard & Poor's 500 will increase the Composite Stock Price Index.

Meanwhile, the Standard & Poor's 500 has no significant effect on the composite stock price index in the long term. Standard & Poor's 500, as a credit rating agency, has issued a credit rating for the company's debt. Furthermore, now S & P is recognized as America's national statistical rating organization by the US Securities and Exchange Commission (a capital market supervisory agency in America). S&P issues ratings for its short-term and long-term debt. In long-term credit, S&P assigns ratings to companies on a scale from AAA to D. The middle ratings are at each level between AA and CCC (e.g., BBB+, BBB, and BBB-). For some companies, the S&P may also issue instructions called "credit watch" (credit that must be monitored), namely credit that can change its rating to increase (positive), decrease (negative), or remain neutral.

This study's results align with those of Wijayanti & Hasmarini (2017), which state that the Standard & Poor's 500 has an insignificant effect on the Composite Stock Price Index. However, different results in the research conducted by Patel (2012) stated that the Standard & Poor's 500 significantly negatively affected the Composite Stock Price Index.

CONCLUSION AND SUGGESTION

Based on the analysis and discussion carried out in this study, it can be concluded that inflation, the BI rate, and the Standard & Poor's 500 have no significant positive effect. In contrast, the exchange rate has a significant negative effect.

Investors who want to invest in stocks should consider fundamental factors, especially inflation, changes in exchange rates, and foreign indices such as the Standard & Poor's 500, because these factors are proven to have an influence on the Composite Stock Price Index on the Indonesia Stock Exchange.

Researchers interested in similar topics should conduct additional research by including other independent variables such as gross domestic product, unemployment rate, gold prices, foreign exchange reserves, and external factors originating from elsewhere, such as global economic growth and oil prices, among others. Further study should be conducted to extend the research period in order to acquire a more complete picture of the state of the Indonesian capital market.

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