

## Research Article

# INVESTIGATION OF FACTORS DETERMINE THE INDONESIA COMPOSITE STOCK PRICE INDEX PERIOD 2014:1 – 2019:12

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### ABSTRACT

This study aims to analyze the effect of economic growth, interest rates, exchange rates, world oil prices and the Dow Jones index, on the Composite Stock Price Index in the Indonesia Stock Exchange (JCI), in the short and the long term. The data used are monthly data for the period 2014:1 - 2019:12 sourced from the Indonesia Stock Exchange (BEI), Investing.com, Bank Indonesia (BI) and the World Bank. The estimation tool used is the Error Correction Model (ECM). The results show that in the short and the long term, the effect of economic growth and the interest rate are insignificant on JCI. The exchange rate and world oil prices have a negative and significant effect on the JCI, while the Dow Jones index has a positive and significant effect on the JCI movement.

**Keywords:** Economic Growth, Interest Rate, Exchange Rate, World Oil Prices, Dow Jones Index, Error Correction Model (ECM).

### INTRODUCTION

The capital market is one of the important instruments in a country's economy, which has two functions, namely an economic function and a financial function. In an economic function, the capital market bridges the government or companies as parties who need funds with investors as capital providers. Meanwhile, in the financial function, the capital market provides an opportunity for investors to benefit (return) through investment in the form of capital gains or dividends according to the investment characteristics chosen by the investor (Zhixin, 2019). For investors who apply sharia principles in their transactions, currently there is also an Islamic capital market available. The Islamic capital market is a capital market that uses sharia principles in its transaction activities and is limited to prohibited things, such as usury, gambling, speculation and so on. (Nurhayati and Wasilah, 2015; Bilal, 2019) Submission of information about the state and development of transactions on the stock exchange is indispensable for capital market players, especially investors. From this information, capital market players can make reference material, considerations and input in the decision making process. Thus the Indonesia Stock Exchange (IDX) as the capital market regulator continues to strive to improve the performance of periodic information delivery. One of the information needed by capital market players is the stock price index. Indonesia has a stock index, namely the Composite Stock Price Index (IHSG) or familiarly called Jakarta Composite Index (JCI). Jakarta Composite Index (JCI) is one of the main indicators that reflects the performance of the capital market Indonesia whether it is experiencing an increase (bullish) or a decrease (bearish) (Mie & Agustina, 2014).

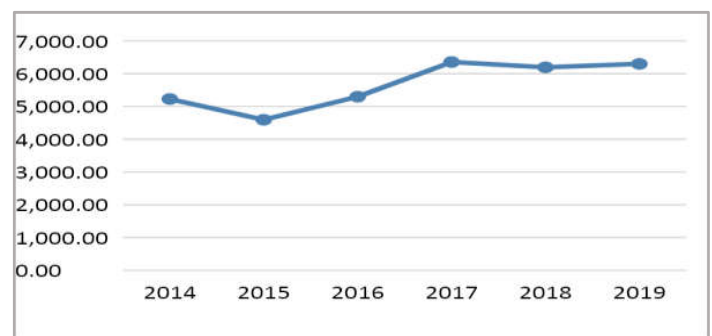


Figure 1. Source: Indonesia Stock Exchange, Investing, 2014-2019

### JCI Movement on the Indonesia Stock Exchange

When a country's economic conditions are good, the JCI will show an increasing trend. However, if the economic condition of a country is in a downturn, it will also affect the JCI. From this theory, it can be seen in Figure 1.1 that the JCI movement tends to be sluggish. The JCI seems to be trying hard to maintain its position at the level of 6000 points amidst the uncertain global economic situation throughout 2018 until the end of 2019. Despite the sluggish movement of the JCI in the last 3 years, in 2019 the JCI closed at the level of 6,299.54 with a growth of 1.7% (Year to date). This slight growth was partly due to global sentiment, namely the peak of the trade war between the United States and China, the aggressiveness of the Fed to raise the benchmark interest rate by 6x which resulted in the JCI experiencing significant capital outflows (Mia and Agustina, 2014) In 2019 was a tough year for economic players, especially investors, so they applied a "wait and see" system in making investment decisions. This is because the movement of the Composite Stock Price Index can be caused by two factors, namely internal factors and external factors. On the internal side, theoretically, the growth in stock investment in a country can be influenced by the country's economic growth (Hismendi, 2013; Ariyasta, *et al.*, (2019); Kewal (2012); Untono (2015). Wahyudi, *et al.*, (2017) in their research which aims to analyze macroeconomic variables on the composite index in Southeast Asian countries; Indonesia, Malaysia, Singapore, Philippines, Thailand, also had different results, namely that Economic Growth had a significant

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negative effect on the stock price index in all countries except Thailand. Other internal factors influence the JCI is interest rate which have a negative effect (Mohammad *et al.*, (2017); Ernayani (2015); Gumilang, *et al.*, (2014); Wahyudi, *et al.*, (2017). On the other side, some research even contrary, where the interest rate has a positive effect on JCI (Pinem (2019); Kewal (2012); Krisna (2013). Previous research on the effect of exchange rates on the JCI partially found two different results. According to research by Arysta, *et al.*, (2019); Handiani (2014); Krisna, *et al.*, (2013); Mohammad, *et al.*, (2017) show that the exchange rate variable has a significant positive effect on the JCI. On the other hand, different things are found in research by Harfikawati (2016); Hismendi, *et al.*, (2013); Imbayani (2015); Kewal (2012); Nidar, *et al.*, (2017), Pinem (2019); Untono (2015); The eight research results agree that the exchange rate variable has a significant negative effect on the JCI. Simultaneously all of these studies agree that the exchange rate variable has a significant effect on the JCI. Stock index movements are also influenced by external factors such as world oil prices, and stock index of other countries. If the country has good economic prospects it will encourage investors to invest in that country. The United States is one of the countries with a stock index that can be used as a reference for developing countries. The oldest stock index and most popular with investors is the Dow Jones Index. With improved economic conditions, the United States can also move the Indonesian economy through export activities and through the capital market (Sunariyah, 2000). There is a link between global exchanges and the global economy because foreign investors invest in stock exchanges around the world so that they are linked globally (Mansyur, 2005), as well as according to (Mie & Agustina, 2014) when a country's economic conditions are good, the stock index (IHSG) will show an increasing movement, if a country's economic conditions decline, it will also affect the country's stock index. Several studies aim to find out what variables affect the JCI, such as research to find the relationship between external factors such as the global index against the JCI conducted by Arysta, *et al.*, (2019); Handiani (2014); Imbayani (2015); Nidar, *et al.*, (2017); Pinem (2019); Untono (2015). Then research to find the relationship between internal factors such as macroeconomic variables on the JCI was carried out by Harfikawati (2016); Hismendi, *et al.*, (2013); Kewal (2012); Krisna, *et al.*, (2013); Mohammad, *et al.*, (2017); Wahyudi, *et al.*, (2017). The results of varying significance tests were found in several previous studies for the World Oil variable. Research conducted by Handiani (2014); Kilian, *et al.*, (2009); Wahyudi, *et al.*, (2017) show that partially the World Oil variable has a positive and significant effect on the JCI. On the other hand, research conducted by Hidayat, *et al.*, (2014); Nidar, *et al.*, (2017) show that partially the world oil variable has a significant negative effect on the JCI. These two results show simultaneously the world oil variable has a significant effect on the JCI. The results of different significance tests are found in research by Untono (2017) which shows that the positive world oil variable does not have a significant effect on the JCI. The results of varying significance tests were found in several previous studies for the Dow Jones Index variable. Research conducted by Ernayani (2015); Harfikawati (2016); Imbayani (2015); Nidar, *et al.*, (2017); Pinem (2019); Untono (2017) shows that the Dow Jones Index has a significant positive effect on the JCI. The six studies agree that partially the Dow Jones index variable has a significant positive effect on the JCI. Another result is shown by research from Pratama (2012) which states that the Dow Jones Index variable has a significant negative effect on the JCI. Another test of significance is found in research conducted by Aryasta, *et al.*, (2019) which states that the negative Dow Jones Index has no significant effect on the JCI. The difference from the previous researchers, the authors want to further research related to the influence of economic growth variables, interest rates, exchange rates, world oil prices and the Dow Jones Index on the JCI.

## RESEARCH METHODOLOGY

Data used in this study are secondary data with time periode from Januari 2014 – December 2019, consists of economic growth, interest rates, exchange rates, world oil prices, and Dow Jones index. They obtained from various sources, such as Finansial Services Authority, Indonesia Stock Exchange, Investing.com, and World Bank. E-views 8.0 is used for data processing. The analysis method used is the Error Correction Model (ECM) to see the relationship between independent variables and the dependent variable in the short and the long term. Before conducting the test, steps must be taken first is a stationary test, determining the lag length, and co-integration test. After being estimated using ECM, analysis can be carried out using the IRF method and variance decomposition. To make it easier to find out the data, it will be explained in the summary table of the following operational definitions:

**Table 1. Data Source of Variables**

No.	Abbreviation	Variable	Unit	Source
1	JCI	Composite Stock Price Index	Point	Indonesia Stock Exchange, Investing.com
2	GDP Growth	Indonesia Economic Growth	Percentage (%)	Bank Indonesia, World Bank
3	Interest Rate	Interest Rate (Bank Indonesia)	Percentage (%)	Bank Indonesia
4	Exchange Rate	Exchange Rate (Currency)	(USD/IDR)	Investing.com, Yahoo! Finance
5	Crude Oil	World Price Oil (WTI)	USD/Barrel	Investing.com, Yahoo! Finance
6	Dow Jones	Dow Jones Index	Point	Investing.com, Yahoo! Finance

### Specification of ECM Model

The analysis method used is the Error Correction Model (ECM) to see the relationship between independent variables and the dependent variable in the short and the long term. Before conducting the test, steps must be taken first is a stationary test, determining the lag length, and co-integration test. After being estimated using ECM, analysis can be carried out using the IRF method and variance decomposition. The ECM model is as follows:

$$IHSG_t = \alpha_0 + \alpha_1 gdp_t + \alpha_2 interest_t + \alpha_3 exchange\ rate_t + \alpha_4 oil_t + \alpha_5 dj_t + \dots \dots (1)$$

**Note:**

- IHSG<sub>t</sub> = IHSG per month in certain periods
- Gdp<sub>t</sub> = Economic growth in a certain period
- Interest<sub>t</sub> = Interest rate per month in a certain period
- Exchange rate<sub>t</sub> = Exchange rate per month in a certain period
- Oil<sub>t</sub> = World oil per month in a certain period.
- Dj<sub>t</sub> = Dow jones per month in a certain period
- A<sub>0</sub> α<sub>1..5</sub> = short term

The concept used in testing the stationary time series data is the unit root test. If the time series data is not stationary, it can be said that the data has a problem (unit root problem). The existence of the unit root problem can be seen by comparing the t-statistical value of the regression results with the Augmented Dicky Fuller test value (Basuki, 2017). The equation model is:

$$\Delta IHSG_t = a_1 + a_2T + \Delta IHSG_{t-1} + \alpha_1 \sum \Delta IHSG_{mi} = \epsilon_{t-1} + \dots \dots (2)$$

**Degree of Integration Test**

If the time series root data unit test is seen not stationary, then the next step is to do a degree test integration to see the degree of integration to what extent the data will be stationary. The test model for the degree of integration is as follows:

$$\Delta IHSg_t = \beta_1 + \delta \Delta IHSg_{t-1} + \alpha_{ti=1} + e_t \dots\dots\dots (3)$$

$$\Delta IHSg_t = \beta_1 + \beta_2 T + \delta \Delta IHSg_{t-1} + \alpha_{ti=1} + e_t \dots\dots\dots (4)$$

The t-statistical value resulting from the regression of equations (3) and (4) is compared with the t-statistic value in the DF table.

**Cointegration Test**

Cointegration Tests that are often used are the Engle-Granger (EG) test, the Augmented Engle-Granger (AEG) test and the Durbin-Watson (CRDW) cointegrating regression test. To obtain calculated EG, AEG and CRDW values, the data to be used must be integrated to the same degree. OLS test on an equation below:

$$IHSg_t = a_0 + a_1 \Delta gdp_t + a_2 \Delta interest_t + a_3 \Delta rate_t + a_4 \Delta oil_t + a_5 \Delta dj_t + e_1 \dots\dots (5)$$

**Error Correction Model (ECM)**

If it passes the cointegration test, the next step is to test using a dynamic linear method to find out the possibility of changes due to the long-term equilibrium relationship of the independent and dependent variables which from the cointegration test results do not apply every time. In short, the ECM working process in the JCI equation is modified to:

$$\Delta IHSg_t = a_0 + a_1 \Delta gdp_t + a_2 \Delta interest_t + a_3 \Delta rate_t + a_4 \Delta oil_t + a_5 \Delta dj_t + a_6 e_t + e_t \dots (6)$$

**RESULTS AND DISCUSSION**

**Instrument Quality Test and Data**

**Stationary Test Data (Unit Root Test)**

In this stationary test using the Augmented Dickey Fuller method. Data is considered stationary if the probability is less than 5% alpha (<0.05) and vice versa, data is considered non-stationary if the probability is greater than 5% alpha (> 0.05).

**Table 2. Unit Root Test-Level**

Variable	Level Probability	Explanation	1st Difference Probability	Explanation
JCI	0.5111	Not Stationary	0.0000	Stationary
Economic Growth	0.4364	Not Stationary	0.0000	Stationary
Interest Rate	0.5322	Not Stationary	0.0121	Stationary
Exchange Rate	0.4512	Not Stationary	0.0000	Stationary
Crude Oil	0.2207	Not Stationary	0.0000	Stationary
Dow Jones	0.8959	Not Stationary	0.0000	Stationary

Source: Appendix 1.

Based on table 1. it can be seen that at the level there are no stationary variables because all the probability of the variables is above 5% alpha (> 0.05). Thus, data testing is carried out at level 1 st

Difference which at this level shows all variables are known to be stationary because the probability value is smaller than alpha 5% (<0.05).

**Long-term Estimation Test**

Below is the result of the equation from the long-term estimation test in this study:

**Table 3. Long-term Estimation Test Results**

Variable	Coefficient	Probability
Economic Growth	0.481304	0.1438
Interest Rate	-0.000857	0.7399
Exchange Rate	-0.833368	0.0000
Crude Oil	-0.088638	0.0015
Dow Jones	0.761820	0.0000
Prob (F-Statistic)	0.000000	

Source: Appendix 3.

From table 2. it is known that the Prob (F-Statistic) value is 0.000000, which is less than 0.05. This shows that the long term equation is valid. In the long run, the Economic Growth and Interest Rate variables do not have a long-term effect on the Composite Stock Price Index (IHSg) because the probability value is greater than alpha 5% (0.05). Meanwhile, the Exchange Rate, World Oil and Dow Jones variables have a significant long-term effect on the Composite Stock Price Index (JCI) because the probability value of these three variables is smaller than alpha 5% (0.05).

**Cointegration Test**

Cointegration Test is part of the stages after the unit root test. This test is conducted to see if there is a long-term relationship between the variables used in this study. The results of the co-integration test were obtained by forming the residuals obtained by regressing the independent variables on the dependent variable using OLS. The residual must be stationary at the level to be said to have co-integration. After testing the DF to test the resulting residuals, it was found that the residuals were stationary as seen from the significant t-statistical value at a critical value of less than 5% (0.05). In this co-integration test, the variables being tested must be stationary at the same level of integration. In this co-integration tests using test ADF (Augmented Dickey Fuller Unit root test) and the results can be seen in Table. 3 below:

**Table 4. Data Unit Root Test Results**

Variable	T-Statistic	Probability
ECT	-3.601434	0.0081

Source: Appendix 2.

Based on the table above can be seen that the probability value is 0.0081 which explains that the data is co-integrated, so that the formulation using the ECM model can be continued.

**Error Correction Model (ECM)**

The approach used in this study is the Engle-Granger ECM approach which functions to correct short-term to long-term imbalances. The ECM model of this study is as follows:

**Table 5. ECM Model Test Results**

Variable	Coefficient	Probability
D (ECONOMIC GROWTH)	0.427185	0.2916
D (INTEREST RATE)	-0.008536	0.1597

D (EXCHANGE RATE)	-0.524912	0.0004
D (CRUDE OIL)	-0.071468	0.0279
D (DOW JONES)	0.355105	0.0005
ECT (-1)	-0.309425	0.0001
R <sup>2</sup>	0.509293	
Adjusted R <sup>2</sup>	0.463290	
Prob (F-Statistic)	0.000000	

Source: Appendix 4.

In table 4 it can be seen that the Prob (F-statistic) value is 0.000000 which is more smaller than 0.05 and ECT (-1) has a significant negative value indicating that this ECM model is valid and has a significant effect in the short and long term. In addition, Adjusted R2 of 0.463290 or 46% indicates that 54% of the JCI variable diversity is influenced by independent variables outside the model. The estimation results of the short term equation show that in the short term the Economic Growth variable does not have a significant effect on the JCI, the Interest Rate variable does not have a significant negative effect on the JCI. It can be seen from the probability value that is more than 0.05. Meanwhile, the exchange rate variable has a significant negative effect on the JCI, the World Oil Price variable has a significant negative effect on the JCI, and the Dow Jones variable has a positive and significant effect on the JCI in the short term. Short-term equations using the ECM method generate the ECT coefficient that measures the regression response each period deviates from equilibrium. the ECT imbalance correction coefficient describes how quickly it takes to get the equilibrium value. The ECT coefficient value of 0.309425 means that the difference between JCI movement and its balance value is 0.309425 which will be adjusted within one year.

**Significance Test**

Results of data processing and estimation the ECM model are as follows:

**Table 6. Regression Results of the ECM**

Variable	Coefficient	T-Statistic	Probability
C	0.001017	1.063476	0.4278
(ECONOMIC GROWTH)	0.427185	1.063476	0.2916
(INTEREST RATE )	-0.008536	-1.422602	0.1597
(EXCHANGE RATE)	-0.524912	-3.710909	0.0004
(CRUDE OIL)	-0.071468	-2.249531	0.0279
(DOW JONES)	0.355105	3.655310	0.0005
ECT (-1)	-0.309425	-4.079532	0.0001
F-statistic	11.07069		
Prob ( F-Statistic)	0.000000		

Source: Appendix 4.

Based on the table above, the ECM model equation can be compiled as follows:

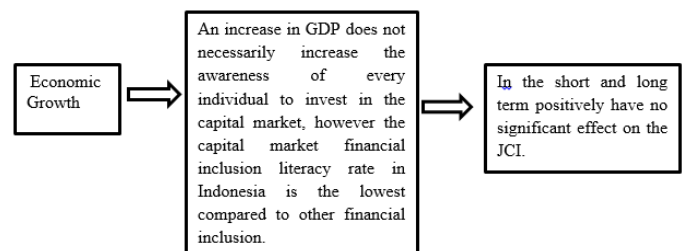
$$JCI = 0.001017 - 0.427 (GROWTH) - 0.008 (RATE) - 0.525 (X- RATE) + 0.071 (CRUDE OIL) + 0.355 (DOWJONES) - 0.309 ECT (-1)$$

**DISCUSSION**

**The Effect of Economic Growth on the JCI**

Regression results show that the results of the analysis of the effect of Economic Growth on the JCI movement in the short and long term have no effect. The results of this analysis are different from the hypothesis which states that economic growth has a significant positive effect on the JCI as the results of previous research

conducted by IN Aryasta, *et al.*, (2019) state that economic growth has a significant positive effect on the JCI. While different results, but in line with the results of this study, indicated by SS Kewal's research (2012) that GDP growth has no influence on the JCI. Michael Untono's research (2015) also shows that partially positive economic growth has no significant effect on the JCI. From the results of these studies it can be said that increased economic growth also increases people's purchasing power and the level of welfare. With an increase in income, theoretically more and more people will have excess funds, with the excess funds can be used to be stored in the form of savings or invested in securities traded in the capital market such as stocks. However, in the current reality, Indonesian people still tend to use their money for consumption of goods and services rather than saving to invest, especially in the capital market, as reflected in the economic growth data released by the Central Statistics Agency (BPS), from 2014 to 2019, namely the main support for growth. the economy is still dominated by household consumption. This data is in line with the small growth in the number of Indonesian investors. According to data from the Indonesia Stock Exchange, the number of retail investors as of December 2019 reached 1.10 million Single Investor Identification (SID), of course this is not comparable to the total population of Indonesia which has reached 260 million. Then according to the results of a survey conducted by the Financial Services Authority (OJK) in 2019, the biggest factor why the number of retail investors is still small is that the level of financial literacy and inclusion in the capital market sector is the lowest among other financial sectors. The capital market literacy rate was recorded at only 4.92%, far below the national literacy rate of 38.03%. Meanwhile, the level of financial inclusion in the capital market was recorded at only 1.55%, far below the national inclusion rate of 76.19%.



**Figure 2.** Scheme of the Influence of Economic Growth Variables on the JCI

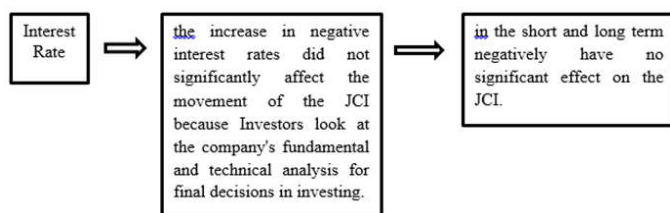
The things described above indicate that the public has not seen stocks as a long-term investment instrument that can provide good returns for investing in the future. The lack of retail investors also slowed the development of the Indonesian capital market. The development of investment in the real sector was not followed by an increase in investment in the capital market. From this, if there is an increase in GDP it does not necessarily increase the awareness of every individual to invest in the capital market so that an increase in positive economic growth does not affect the movement of the Composite Stock Price Index.

**The Effect of Interest Rate on the JCI**

Regression results show that the results of the analysis of the effect of the interest rate on the movement of the JCI in the short and long term negatively have no effect on the JCI. The results of this analysis are different from the hypothesis which states that interest rates have a negative and significant effect on the JCI as the results of previous research conducted by Ernayani (2015); Gumilang, *et al.*, (2014); Wahyudi, *et al.*, (2017) which shows that the interest rate variable has a negative and significant effect on the JCI. Meanwhile, different results but in line with the results of this study are shown by SS Kewal's research (2012); D. Br. Pinem (2019); Krisna (2013), which shows that the interest rate has no influence on the JCI movement, IN



Aryasta, *et al.*, (2019) also stated that negative interest rates did not have a significant effect on the JCI. Theoretically, movements in interest rates and stock price movements have a negative or inversely proportional relationship. This means that if the interest rate increases, the prices of shares traded on the Indonesia Stock Exchange will decrease, the stock prices will fall because investors switch to investing in banking instruments such as deposits. Conversely, if the movement of the interest rate decreases, then stock prices tend to rise because investors will switch to investing in stock instruments that provide more returns. When interest rates rise, operating costs will also increase, thereby reducing the company's profitability. The company is more likely to lose money. Companies will also be faced with a more difficult credit bureaucracy because credit interest rates will also rise. This condition does not provide good prospects for investors to place their funds in these shares. Declining investor interest causes stock prices to fall and affects the JCI.



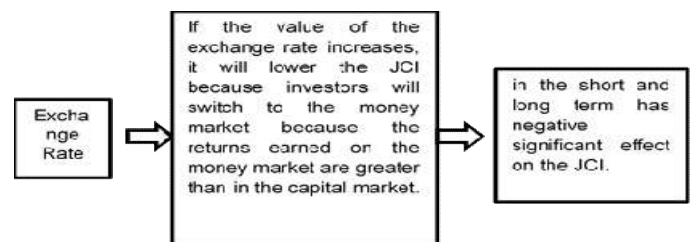
**Figure 3.** Scheme of the Influence of Interest Rate Variables on the JCI

The results showed that the increase in negative interest rates did not significantly affect the movement of the JCI in the long and short term. This could be due to the views on the sustainability of geopolitical issues from market participants. Throughout 2018 Bank Indonesia has increased the BI-7DRRR six times with a total interest increase of 175 basis points to 6.00%. The increase was considered aggressive in connection with the Fed's sharp increase in its benchmark interest rate. This step was followed by central banks of other countries to adjust their benchmark interest rates so that developing country currencies do not depreciate against the US dollar. Investors and market players choose to adopt a "wait and see" strategy. The wait and see strategy is a strategy commonly used in the world of the stock capital market as investors wait and see economic developments in the country and globally for investment decisions. This strategy is carried out by researching the company's fundamental and technical analysis. This strategy was implemented by investors during the Indonesian democracy party in April 2019, namely at the beginning of 2019 the Composite Stock Price Index (IHSG) was corrected quite deeply because investors took a wait and see strategy to face the tension of selecting new policy makers, then the JCI rebounded as they waited. the results of the general election which will take place on April 17, 2019. Conditions for correction and rebound (recovery) reflect that investors are implementing a wait and see strategy and continue to look at the company's fundamental and technical analysis for final decisions in investing. In 2019 Bank Indonesia lowered interest rates up to four times, namely to 5.00%. The decline in the benchmark interest rate is certainly a stimulus for the capital market, however, trade war tensions between the United States and China and volatility in the Fed interest rate are still predominantly haunting market players. A reduction in the benchmark interest rate will only act as a momentary positive catalyst for market movements. In the medium and long term, lowering the benchmark interest rate will only temporarily halt the decline in the JCI but will not lift market conditions. Investors and market players believe that the massive fluctuation of interest rates is necessary to control the economy to remain stable. It is proven that in the midst of various global uncertainties in 2018-2019, the JCI was still maintained at the

level of 5600-6500 and according to the Indonesia Stock Exchange Annual Performance Report, at the end of 2019 IHSG still gave a slight growth of 1.7%. This is a sign that investors are still doing fundamental and technical analysis on companies for investment decisions and focus on the performance of shares and the company's fundamentals.

### The Effect of Exchange Rate on JCI

Regression results show that the analysis of the effect of exchange rates on the JCI movement in the short and long term has a significant negative effect on the JCI movement. The results of this analysis are in accordance with the hypothesis which states that the exchange rate has a negative and significant effect on the JCI. The same thing was stated by Harfikawati (2016); Hismendi, *et al.*, (2013); Imbayani (2015); Kewal (2012); Nidar, *et al.*, (2017), Pinem (2019); Untono (2015) states that the exchange rate (exchange rate) has a negative and significant impact on the JCI movement. The results are different and not in line with this study, namely research from Aryasta, *et al.*, (2019); Handiani (2014); Krisna, *et al.*, (2013); Mohammad *et al.*, (2017) show that the exchange rate variable has a significant positive effect on the JCI. The negative coefficient identifies if the value of the exchange rate increases, it will lower the JCI and vice versa if the exchange rate decreases, the JCI will tend to increase. The weakening of the rupiah exchange rate against the US dollar had a negative impact on the equity market, thereby reducing the attractiveness of the capital market. This causes investors to switch to the money market because the returns earned on the money market are greater than in the capital market, which ultimately lowers the JCI.



**Figure 4.** Scheme of the Influence of Exchange Rate Variables on the JCI

In the long run, the exchange rate also has a negative and significant relationship with the JCI. If the Rupiah exchange rate depreciates, it can increase the value of exported goods, because the weakening of the Rupiah will cause the prices of exported goods from within the country to tend to decline abroad, this price reduction will cause an increase in demand for exported goods and the company will get sales profit. Conversely, if the value of the rupiah is appreciated, the value of exported goods will decrease, and increase the price of imported goods, import prices tend to be expensive so that production costs increase and reduce company's profit, which leads to a decrease in the JCI.

### The Effect of World Oil Price on JCI

The regression results show that the analysis of the effect of the World Oil Price on the IHSG in the short and long term has a negative and significant effect. By having a negative relationship, the decline in world oil prices in the short and long term will coincide with the increase in the JCI. The results of this analysis are in accordance with the hypothesis which states that world oil prices have a negative and significant effects on the JCI. The same thing was stated in research conducted by R. Rustam Hidayat *et al.*, (2014); SR Nidar, *et al.*, (2017), both of which stated that the World Oil price has a significant negative effect on the Composite Stock Price Index (IHSG). The results of previous research are not in line with this research

conducted by Handiani (2014); Kilian, *et al.*, (2009); Wahyudi, *et al.*, (2017) show that partially the World Oil variable has a positive and significant effect on the JCI.

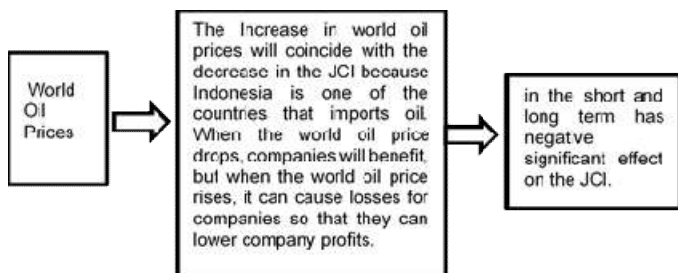


Figure 5 Scheme of the Influence of World Oil Prices Variables on the JCI

If the price of oil is cheaper, then development in a country can be spurred and developed massively because production and operational costs are relatively low. The high oil price is considered to only benefit oil producing countries, and is a disaster for countries that import oil because the price of basic commodities has soared. Indonesia is one of the countries that imports oil, so when the world oil price drops, companies will benefit, but when the world oil price rises, it can cause losses for companies operating outside the mining sector because the company's operating costs increase so that they can lower company profits. Therefore, the decline in world oil prices will reduce operating costs because production fuel will be cheaper so that it can increase company profitability. This positive sentiment can increase the demand for shares. When the stock price rises, it will be able to encourage the strengthening of the Jakarta Composite Index (IHSG).

**The Effect of The Dow Jones Index on JCI**

The regression results show that the results of the analysis of the effect of the Dow Jones Index on the JCI in the short and long term have a positive and significant effect on the movement of the JCI. This means that every time there is an increase in the Dow Jones Index, the JCI will also increase. This is because the United States is Indonesia's main and largest export destination country. If the performance of the Dow Jones Index provides good profit growth, it will also have a good impact on the JCI. The economic condition of the United States will also be reflected in the performance of the Dow Jones Index which simultaneously affects the Indonesian economy through the JCI. The same results were also stated in research conducted by Ernayani (2015); Harfikawati (2016); Imbayani (2015); Nidar, *et al.*, (2017); Pinem (2019); Untono (2017) which states that the Dow Jones Index has a positive and significant effect on the Composite Stock Price Index (IHSG). Different results and not in line with this study are shown by research from Pratama (2012) which states that the Dow Jones Index variable has a significant negative effect on the JCI. Another test of significance is found in research conducted by Aryasta, *et al.*, (2019) which states that the negative Dow Jones Index has no significant effect on the JCI.

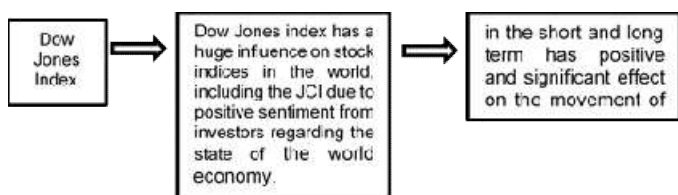


Figure 6 Scheme of the Influence of Dow Jones Index Variables on the JCI

The Dow Jones Index is the oldest stock index in the United States that is popular and the most popular in the world. The Dow Jones

Index is a representation of the performance of multinational companies in the United States so that it has become one of the countries that has become the center of the capital market by the world. This index has a huge influence on stock indices in the world, including the JCI due to positive sentiment from investors regarding the state of the world economy. If the Dow Jones index corrects and lasts long enough, it indicates that the world economy is not doing well. Indexes of other countries also followed suit due to market sentiment. The United States can also move the Indonesian economy through the capital market with an injection of capital, so that the movement of the Dow Jones Index can actually attract investors to invest in Indonesia which leads to an increase in the JCI. Apart from that, through American export activities, capital inflows through the capital market will certainly affect the movement of the Composite Stock Price Index (IHSG).

**CONCLUSION**

This research aims to analyze factors that affecting the movement of JCI in the short term and long term. Based on findings in this research, it can be concluded several things about the factors that affecting the movement Jakarta Composite Index.

- Economic growth has no effect to Composite Stock Price Index (JCI) in the short and long run, due to the increasing economic growth has not been accompanied by a growth in the number of domestic investors. The number of Indonesian domestic investors is still small because the lack of stock market literation.
- Interest rates has no effect on the Composite Stock Price Index (JCI) in the short and long term due to investor perceptions. In geopolitical conditions, investor continue to analyze the company's fundamentals and technicalities for investment decisions.
- Exchange rates has negative and significant effect on the Composite Stock Price Index (JCI) in the short and long term due to in the money market and capital market, the main transaction instrument is still dominated by the dollar currency.
- World Oil Prices has negative and significant effect on the Composite Stock Price Index (JCI) in the short and long term due to Indonesia is one of the countries that still imports oil, so when the world oil price is cheap (decrease) it will have a positive impact on the JCI which is getting stronger.
- The Dow Jones Index has positive and significant effect on the Composite Stock Price Index (JCI) in the short and long term due to the United States is one of the countries that used as a center for the world. The strengthening of the Dow Jones Index is a positive external sentiment that can encourage investors to invest in the capital market. The index of each country will respond positively to the stability of the world economy.

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