

JCI Analysis Through SBI Interest Rate, World Oil Price, World Gold Price, Rupiah Exchange Rate, Nikkei 225 Index, and Dow Jones Index in 2016–2020

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ABSTRACT

The capital market is one of today's economic instruments that experience very rapid development. One measure of the performance of the capital market is the stock index. There are many factors that can affect the Stock Index, including domestic interest rates, foreign exchange rates, international economic conditions, a country's economic cycle, inflation rates, tax regulations, and the amount of money in circulation (Samsul, M., 2008). During the observation period from 2016 to 2019, there was a phenomenon where the relationship between macroeconomic variables and JCI movements did not match the theory. This is supported by the gap in the results of previous studies. The purpose of this study is to analyze the impact of the SBI interest rate, world oil prices, world gold prices, the rupiah exchange rate, the Nikkei 225 Index, and the Dow Jones Index on the JCI. The analytical method used in this study is the multiple regression analysis methods performed with SPSS 16. One of the requirements to perform the multiple analysis test is the classical assumption test. This is necessary so that the resulting regression equation is BLUE (Best, Linear, Unbiased, Estimator). In addition, to assess the goodness of fit of a model, the coefficient of determination test, F-test, and t-test are carried out. This study uses monthly data from 2016 until 2020 for each research variable. The results of this study indicate that the SBI Interest Rate and the Rupiah Exchange rate have a negative effect on the JCI. Meanwhile, the variables of World Oil Price, World Gold Price, Nikkei 225 Index, and Dow Jones Index have a positive effect on the JCI. In addition, it is found that the adjusted square value is 96.1%. It means that 96.1% of the JCI movement can be predicted from the movement of the seven independent variables.

Keywords: JCI, Macroeconomics, World Capital Market Integration, Globalization.

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I. INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is a virus that firstly emerged in the city of Wuhan, China, at the end of December 2019. The outbreak of COVID-19 caused respiratory problems in humans which resulted in the city of Wuhan, having to decide on a lockdown to slow down the spread of the virus.

The existence of the COVID-19 pandemic not only poses a threat to health but also to economic growth in a country. The impact of the spread of COVID-19 cannot be calculated exactly. However, the slowdown in the economic system has been felt, especially in the mining, industry, tourism, trade, transportation, and investment sectors. It is unavoidable, as well as in Indonesia, that the increase in positive cases of COVID-19 has an effect on the stock market (iNews.id, April 6, 2020). The following is complete data on the SBI interest rate, world oil prices, world gold prices, the rupiah exchange rate, the Nikkei 225 Index, and the Dow Jones Index in 2019–2020:

From Table I, it can be seen that when the SBI interest rate fell, the JCI fell as well. This happened in April 2017, May

2017, December 2017, January 2018, and February 2018. Meanwhile, when the SBI interest rate rose, the JCI also rose. This happened in January–July 2019, October 2019, November 2019, and May 2018. This is, of course, contrary to what has been described above, that interest rates have a negative effect on the JCI.

From Table I, it can also be seen that when world oil prices rose, the JCI also rose. This occurred from February–July 2017, and from February to July 2018. Meanwhile, when world oil prices fell, the JCI also fell, this occurred in June – November 2008. This condition is certainly not in accordance with the description above that oil prices world has a negative influence on the JCI.

The world gold price from August 2019 to February 2017 experienced an increase in price, and this was followed by an increase in the JCI during the same period (www.goldfixing.com). Meanwhile, for the rupiah exchange rate, from May 2017 till February 2018, when the JCI rose sharply, the exchange rate tended to stagnate. This is, of course, contrary to what (Sunariyah, 2017) stated that when the exchange rate depreciates, the JCI will decrease.

TABLE I: JCI, SBI, OIL PRICES, WORLD GOLD PRICES, RUPIAH EXCHANGE RATE, DOW JONES INDEX, AND NIKKEI 225 INDEX

Month	JCI	SBI	OP	WGP	RER	DJI	N225I
2016							
Jan	1,045.44	7.42	46.84	424.03.00	9,165.00	10,489.94	11,387.59
Feb	1,073.83	7.43	47.97	423.50.00	9,260.00	10,766.23	11,387.59
Mar	1,080.17	7.44	54.31.00	434.32.00	9,480.00	10,503.23	11,668.95
Apr	1,029.61	7.7	53.04.00	429.23.00	9,570.00	10,192.51	11,008.90
May	1,088.17	7.95	49.83	421.87	9,495.00	10,467.48	11,276.59
Jun	1,122.38	8.25	56.26.00	430.65	9,713.00	10,274.97	11,584.01
Jul	1,182.30	8.49	58.70	424.47.00	9,819.00	10,640.91	11,899.60
Aug	1,050.09	9.51	64.97	437.92	10,240.00	10,481.60	12,413.60
Sep	1,079.28	10	65.57.00	456.04.00	10,310.00	10,568.80	13,574.30
Oct	1,066.22	11	62.37.00	469.89	10,090.00	10,440.07	13,606.50
Nov	1,096.64	12.25	58.30.00	476.66	10,035.00	10,805.87	14,872.15
Dec	1,162.64	12.7	59.43.00	510.09.00	9,830.00	10,717.50	16,111.43
2017							
Jan	1,232.32	12.7	65.51.00	549.86	9,395.00	10,864.86	16,649.82
Feb	1,230.66	12.7	61.63	554.99	9,230.00	10,993.41	16,205.43
Mar	1,322.97	12.7	62.90	557.09.00	9,075.00	11,109.32	17,059.66
Apr	1,464.41	12.7	69.69	610.65	8,775.00	11,367.14	16,906.23
May	1,33	12.5	70.94	675.39.00	9,220.00	11,168.31	15,467.33
Jun	1,310.26	12.5	70.96	596.14.00	9,300.00	11,150.22	15,505.18
Jul	1,351.65	12.2	74.41.00	633.70	9,070.00	11,185.68	15,456.81
Aug	1,431.26	11.7	73.05.00	632.59.00	9,100.00	11,381.15	16,140.76
Sep	1,534.61	11.2	63.87	598.18.00	9,235.00	11,679.07	16,127.58
Oct	1,582.63	10.7	58.88	585.77	9,110.00	12,080.73	16,399.39
Nov	1,718.96	10.2	59.37.00	627.82	9,165.00	12,221.93	16,274.33
Dec	1,805.52	9.75	62.03.00	629.79	9,020.00	12,463.15	17,225.83
2018							
Jan	1,757.26	9.5	54.57.00	631.16.00	9,090.00	12,621.69	17,383.42
Feb	1,740.97	9.25	59.26.00	664.74	9,160.00	12,268.63	17,604.12
Mar	1,830.92	9	60.56.00	654.89	9,118.00	12,354.35	17,287.65
Apr	1,999.17	9	63.97	679.36.00	9,083.00	13,062.91	17,400.41
May	2,084.32	8.75	63.46.00	666.85	8,828.00	13,627.64	17,875.75
Jun	2,139.28	8.75	67.48.00	655.49.00	9,054.00	13,408.62	18,138.36
Jul	2,348.67	8.25	74.18.00	665.29.00	9,186.00	13,211.99	17,248.89
Aug	2,194.34	8.25	72.39.00	665.41.00	9,410.00	13,357.74	16,569.09
Sep	2,359.21	8.25	79.93	712.65	9,137.00	13,895.63	16,785.69
Oct	2,643.49	8.25	86.20.00	754.60	9,103.00	13,930.01	16,737.63
Nov	2,688.33	8.25	94.62	806.24.00	9,376.00	13,371.72	15,680.67

Source: Secondary Data (www.bi.go.id).

This shows that the results of research on the impact of interest rates, world oil prices, world gold prices, rupiah exchange rates, and indexes tend to be inconsistent or different from one researcher to another. With the inconsistency of the results of this study, as well as the influence of the world economy that has an impact on the Indonesian economy, based on the problems researcher is interested in conducting research with the title "JCI Analysis Through SBI Interest Rate, World Oil Price, World Gold Price, Rupiah Exchange Rate, Nikkei 225 Index, and Dow Jones Index in 2016–2020".

II. THEORETICAL REVIEW AND FRAMEWORK

In general, there are two definitions of world capital market integration. The first is the understanding according to the Capital Asset Pricing Model theory, that the capital market is considered integrated when securities with the same risk characteristics have the same price, even though they are traded in different capital markets (Markus *et al.*, 2019). In other words, if there are two or more integrated capital markets, identical securities should have the same price throughout the integrated capital market. The existence of an integrated capital market means that all stocks in all capital markets have the same risk factors and the risk premium for each factor will be the same in every capital market.

The second understanding relates to the latest literature on capital market integration using The Generalized Auto-

Regressive Conditional Heteroscedasticity Model (GARCH) and Granger Causality and Vector Auto-Regressive (VAR) models. Capital market integration occurs when they have a sustainable equilibrium relationship (Nasry & Amir, 2018). In other words, there is a joint movement between capital markets, indicating a joint integration between capital markets, which results that one of the integrated capital markets can be used to predict returns from other capital markets because the correction of the error value is valid for each capital market, the capital market will exist.

Capital market integration itself can refer to a situation where an investor in one country, can buy and sell without restrictions, securities issued in another country. This situation implies that the price of identical securities will be the same after adjusting for the prevailing exchange rate (Pieper & dan Vogel, 1997).

The purpose of capital market integration is actually to connect the capital market electronically so that exchange members can execute orders from investors to buy shares at the best price. This situation will substantially increase the depth and liquidity of the relevant capital market and can encourage the capital market to compete more effectively.

III. RESEARCH METHOD

This study uses quantitative methods with multiple regression analysis tools. Multiple regression analysis was used to examine the effect of the SBI interest rate, world oil

prices, world gold prices, the rupiah exchange rate, the Nikkei 225 Index, and the Dow Jones Index on the JCI. How much the independent variable affects the dependent variable is calculated using the multiple regression line equation.

IV. FINDING AND DISCUSSION

Based on the results of the data analysis and discussion that have been stated in the results and discussion, several conclusions can be drawn as follows:

1. From testing 3 methods on the Chow Test, Langrange Test & Hasuman Test, the most appropriate fixed effect method is obtained to proceed to the next test of panel data regression.
2. From the regression equation above, it can be seen that the t-count value of the SBI Interest Rate is -4,316 with a significance level of 0.002. Because the significance value is less than 5% and the t-count value (-4.316) is greater than t-table (1.96), there is a significant effect between the SBI Interest Rate variable on the JCI.
3. From the regression equation above, it can be seen that the t-count value of World Oil Prices is 14,389 with a significance level of 0.000. Because the significance value is less than 5% and the t count value (14.389) is greater than t-table (1.96), there is a significant effect between the World Oil Price variable on the JCI.
4. From the regression equation above, it can be seen that the t-count value of the World Gold Price is 19,417 with a significance level of 0.000. Because the significance value is less than 5% and the t count (19.417) is greater than the t-table (1.96), there is a significant effect between the World Gold Price on the JCI.
5. From the regression equation above, it can be seen that the t-count value of the Rupiah exchange rate is -2,460 with a significance level of 0.001. Because the significance value is less than 5% and the t count (-2,460) is greater than the t-table (1.96), there is a significant effect between the Rupiah exchange rate and the JCI variable.
6. From the regression equation above, it can be seen that the t-count value of the Nikkei 225 Index is 2.494 with a significance level of 0.004. Because the significance value is less than 5% and the t count (2,494) is greater than the t-table (1.96), there is a significant effect between the Nikkei225 Index on the JCI.
7. From the regression equation above, it can be seen that the t-count value of the Dow Jones Index is 10.251 with a significance level of 0.000. Because the significance value is less than 5% and the t count (10.251) is greater than the t-table (1.96), there is a significant positive effect between the Dow Jones Index on the JCI.

V. CONCLUSION AND SUGGESTION

A. Conclusion

Based on the results of the data analysis and discussion that have been stated in the results and discussion, several conclusions can be drawn as follows:

1. The SBI interest rate has a negative effect on the JCI.
2. World oil prices have a positive effect on the JCI.

3. The world gold price has a positive effect on the JCI.
4. The rupiah exchange rate has a negative effect on the JCI.
5. The Nikkei 225 index has a positive effect on the JCI.
6. The Dow Jones index has a positive effect on the JCI.

The results of this study indicate that the Composite Stock Price Index is influenced by the SBI interest rate, world oil prices, world gold prices, the rupiah exchange rate, the Nikkei 225 Index, and the Dow Jones Index. The dependent variable used in this study is the JCI, although the JCI is widely used as a reference by investors to observe general stock movements in Indonesia (Bisnis Indonesia, 2018).

B. Suggestion

Here are some suggestions that the author can give from the results of this study:

1. Investors should always look at the movement of the six variables that have been submitted, namely the SBI interest rate, world oil prices, world gold prices, rupiah exchange rate, Nikkei 225 Index, Dow Jones Index.
2. Advice for the government
3. The government must be able to control the macro-economy that occurs in Indonesia, such as suppressing the inflation rate, and interest rates, especially the currency exchange rate which has a significant negative effect on overall stock prices, as well as stabilizing stock prices so that investors invest more capital in Indonesia.
4. For further research, it is expected to increase the number of samples and find the independent variable of GDP, inflation. It is recommended that further researchers add the number of years in the study (more than five years) because the longer the research period, the better so that the trend of observations is more visible.

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