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COINTEGRATION OF GLOBAL INDEXES TO THE COMPOSITE STOCK PRICE INDEX FOR THE PERIOD OF 2017 TO 2019

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ABSTRACT
This research was conducted to answer the extent of the influence of developed country indices on developing countries, using panel data regression, and also the amount of data as many as 36 data units, the results found that only the Dow Jones index affects the Composite Stock Price Index.

Keywords: Dow Jones Index, Nikkei 225 Index, Composite Stock Price Index

PRELIMINARY
The condition of a country's capital market will reflect how the economy of a country is. This also applies in Indonesia as a developing country, with the indicator Composite Stock Price Index (CSPI). During 2017 to 2019 there were fluctuating movements, but there were interesting anomalies in that year, such as in 2017 where the JCI managed to reach an all-time record high, precisely in December by breaking through the level of 6355.65. This happened not only because of the issuer's brilliant performance, but also due to the positive sentiment of the international rating agency Fitch Ratings which raised Indonesia's debt

rating to BBB from the previous BBB- with a stable outlook. But in the following year, 2018, decreased by minus 2.54% to close at 6194.50. This is due in part to the depreciation of the exchange rate, stagnant economic growth and the existence of trade wars between developed countries such as China and America. In 2019 there was an increase, although not as big as in 2017, which was closed at 6299.54. These increases include an increase in investors, good economic growth compared to before. The Composite Stock Price Index is strongly influenced by foreign stock indexes, because as a developing country it causes high dependence on the domestic capital market on foreign capital markets.

As a result, capital market conditions in a country will be influenced by foreign conditions, especially the condition of capital markets in developed countries. Indonesia as a developing country allows foreign investors to participate in owning securities traded on the Indonesia Stock Exchange. This was done to provoke capital inflow in Indonesia (Husnan, 2015). Developed countries that have a strong influence on the performance of other stock exchanges in general are the United States, Hong Kong, Japan, and so on. In addition, stock exchanges that are in one region can also influence because of their geographical location which are close to each other (Mie and Agustina, 2014). This causes when the country's stock exchange is experiencing a recession, it can affect its investment in other countries.

The index movement in the Indonesian capital market was influenced by the movements of the capital markets of developed countries, such as the United States and Japan. The two countries were chosen because aside from being the largest destination for oil and gas exports for the past five years, they are also the largest economy.
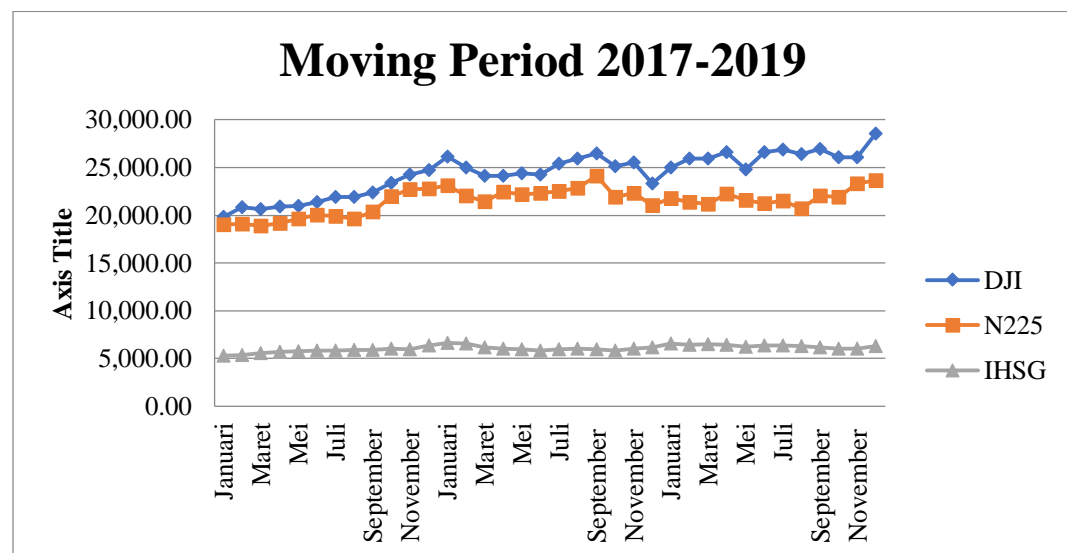
Based on the graph above, it appears that there is a fluctuating movement between the CSPI on the Dow Jones index and the Nikkei 225, so to be able to prove

that there is an influence of the Dow Jones index and the Nikkei 225 on the CSPI, an in-depth study is needed.

LITERATURE REVIEW
Composite Stock Price Index (CSPI)
CSPI or the abbreviation of the Composite Stock Price Index or commonly referred to in English as the Index, JCI, or JSX Composite is one form of the stock market in Indonesia that is used by the Indonesia Stock Exchange (formerly the Jakarta Stock Exchange). JCI is a stock index that continues to grow every day because JCI is a stock market that continues to spin and is centered in Jakarta. JCI first held its share trading on April 1, 1983. (Andriana and Gumilar, 2015).
Calculation of Composite Stock Price Index is no different from calculation of individual stock price indexes. It's just that, in calculating the Composite Stock Price Index, we must add up the total price of the shares (listing). The general formula for calculating the Composite Stock Price Index according to Samsul (2015) is:

$$IHSG = \frac{Kapitalisasi\ pasar}{total\ nilai\ dasar}\ x\ 100$$

Dow Jones Index (DJI)
The Dow Jones index is the oldest stock market index and is a representation of the performance of the most important industries in the United States (Imbayani, 2015). The Dow Jones Index was first issued on May 26, 1896 by editors of the Wall Street Journal and Dow Jones & Company. The Dow made this index as a way to measure the performance of the American stock market. This stock exchange consists of the 30 largest companies in the United States that are already widely public.including 30 large companies. To compensate for the effects of stock splits and other adjustments, which currently uses a weighted average instead of the actual average of the share price of the component. The Dow Jones index can be calculated using the following formula (Gom, 2015):

$$DJIA = \frac{\sum Ps}{Divisor}$$

Nikkei 225 index (N225)
This index is in the stock market for the Tokyo Stock Exchange (TSE). This index is calculated daily by the Nihon Keizai Shimbun (NIKKEI) daily since September 7, 1950 (Virby, 2014). (Virby, 2014). Companies listed on the Nikkei 225 Index are large companies that have operated globally, including in Indonesia. Similar to Hong Kong, Japan is a destination country for Indonesian exports, Japan's economic growth can encourage economic growth in Indonesia through export activities and investment flows either directly or through the capital market (Sunariyah, 2015). The Nikkei 225 Index calculation method uses the following formula (Gom, 2015):

$$N225 = \frac{\sum Ps}{Divisor}$$

Hypothesis

The hypothesis formulated is the existence of a global index cointegration to the 2017-2019 IHSG period.

RESEARCH METHODS

Data analysis technique Analysis of the data used in this study is panel data regression using the application program Eviews 9. Before panel data regression analysis, the model selection and classical assumption tests are performed using heteroscedasticity and multicollinearity tests. The data analysis panel is used to answer hypothesis testing regarding the effect of independent variables on the dependent variable. (Wijaya, 2019)

RESEARCH RESULT

Table 1 Descriptive Statistics

	CSPI	DJI	N225
Mean	6058.372	24246.26	21395.04
Median	6012.120	24767.13	21687.34
Maximum	6605.630	26970.71	24120.04
Minimum	5294.100	19864.09	18909.26
Std. Dev.	328.4769	2099.425	1317.815
Skewness	-0.247073	-0.597496	-0.385872
Kurtosis	2.632266	2.101217	2.364007
Jarque-Bera	0.537494	3.167406	1.416774
Probability	0.764337	0.205214	0.492438
Sum	205984.6	824372.7	727431.4
Sum Sq. Dev.	3560603.	1.45E+08	57309033
Observations	34	34	34

illustrated that CSPI has an average value of 6058.372 during the period 2017-2019, as well as DJI and N225 respectively of 24246.26 and 21395.04. The highest scores of IHSG, DJI and N225 were 6605,630 26970.71 and 24120.04 respectively while the lowest scores for IHSG were 5294.1 for DJI of 19864.09 and N225 of 18909.26.

Table 2 Panel Data Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DJI	0.135241	0.028611	4.726912	0.0000
N225	-0.046983	0.045557	-1.031293	0.3099
C	3772.300	578.9487	6.515775	0.0000

The results from the table above illustrate that the independent variables used in this research are able to explain the dependent variable properly or the regression model used is appropriate. Prob value The F-statistic is 0.000001 <0.05 so it can be concluded that the DJI and N225 variables have a linear relationship with the IHSG variable or the regression model used is appropriate. The coefficient of determination test results show the adjusted R-square value of 0.556082 which

means that the ability of the independent variables (DJI and N225) in explaining the variation in the dependent variable (CSPI) of 55.61%, while the remaining 44.39% is influenced by other variables not used in this study. In addition, it can be seen that the value of prob. by 0.0000 smaller than the significance level (α = 0.05). Besides that it can also be seen from the results of the comparison between the probability and the level of significance From these results it can be seen that the probability is smaller than the level of significance (0.0000 <0.05). So it can be concluded that DJI has a significant effect on CSPI, and conversely it turns out that N225 has no significant effect on CSPI.

CONCLUSION

The results of this study indicate that DJI and N225 affect the ups and downs of CSPI. A country's capital market can experience the same movement (comovement) because of the underlying economic factors (underlying factors), which reflect financial conditions in the world in general, and systematically affect all markets. The stability of a country's economy cannot be separated from events that occur both domestically and externally. This connection can be made possible because of the contagion effect theory. Where the effect of this transmission explains that if a major turbulent event occurs in a large country, it can affect the country's economic conditions which will ultimately have an impact on the movement of stock prices and the integration of a country's capital market (Suganda and Soetrisno, 2016). But for N225 it does not have a direct impact on the CSPI, because after all America as a superpower will have more influence on Indonesia than any other country.

REFERENCES

Gom, Hotneri. 2015. Analisis Pengaruh The Fed Rate, Indeks Dow Jones dan Indeks Nikkei 225 Terhadap Indeks Harga Saham Gabungan (IHSG) di Bursa Efek Indonesia (Periode 2008-2013). Jurnal Ekonomi dan Keuangan. Vol. 1, No. 8. Universitas Sumatera Utara.

Husnan, Suad. 2015. Dasar-Dasar Teori Portofolio & Analisis Sekuritas, Edisi Kelima. Yogyakarta: AMP YKPN.

Hussain, H.I., Kamarudin, F., Mohamad Anwar, N.A., Nassir, A.M., Sufian, F., Mang Tan, K. (2020), Impact of Country's Governance Dimensions on Bank Revenue Efficiency: Overview on Middle East, Southeast Asia, and South Asia Countries, Transformations in Business & Economics, 19 (1), 191-228.

Imbayani, I Gusti Ayu. 2015. Analisis Pengaruh Indeks Dow Jones, Indeks Strait Times, Indeks Nikkei 225, Indeks Hang Seng, dan Kurs Rupiah Terhadap Indeks Harga Saham Gabungan di Bursa Efek Indonesia. Jurnal Vol. 5 No. 1, Maret 2015.

Mie, Mie dan Agustina. 2014. Analisis Pengaruh Indeks Harga Saham Gabungan Asing Terhadap Indeks Harga Saham Gabungan Indonesia. Jurnal Wira Ekonomi Mikroskil. Vol 4, No.2.

Rezita Andriana dan Ivan Gumilar SP, 2015, ANALISIS PERBANDINGAN NILAI KURS, SUKU BUNGA SBI, INFLASI DAN INDEKS HARGA

SAHAM GABUNGAN SEBELUM DAN SESUDAH PELAKSANAAN PEMILIHAN UMUM PRESIDEN PERIODE 2009-2014, Jurnal Akuntansi Bisnis dan Ekonomi, Vol 1 No. 2, September 2015.

Samsul, Mohamad. 2015. Pasar Modal & Manajemen Portofolio. Jakarta: Penerbit Erlangga.

Suganda, Tarsisius Renalad dan Yonatan Soetrisno. 2016. Uji Integrasi dan Cointagion Effect Pasar Modal Pada Lima Negara ASEAN (Riset Empiris Pasca Terjadinya Krisis Mortgage dan Krisis Yunani). Jurnal Keuangan dan Perbankan, Vol. 20, No. 2, Mei 2016, hlm. 252-262.

Sunariyah. 2015. Pengantar Pengetahuan Pasar Modal, Edisi Keenam. Yogyakarta: UPP STIM YKPN.

Virby, Shelby. 2014. Pengaruh Indeks Dow Jones Indutrial Average, Nikkei 225, Hang Seng Index, dan Shanghai Stock Exchange Terhadap Indeks Harga Saham Gabungan Bursa Efek Indonesia Periode Tahun 2008-2013. Jurnal Ilmiah Ilmu Manajamen.

Wijaya, J. H. (2019). The Effect of Leverage and Good Corporate Governance on Profitability in Banking Companies Listed in Indonesia Stock Exchange in the 2014-2016 Period. JARDCS Vol 11, 03-Special Issue, 684-688.