Global Index Effect on JCI

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ABSTRACT

Changes in the JCI, on the IDX are inseparable from the improvement in Indonesia's economic indicators, macro variables such as; inflation, economic growth, Indonesia Bank Sertificate (BI7DRR), Dollar Exchange Rate and the influence of other country indices, Regional (Asia) and Global (America, Europe and Australia).

The purpose of this study is to analyze whether macro variables and global capital market indices affect the IHSG on the IDX. The research period is from 2010 to 2021 on the IDX and the Global Capital Market Indices (NYSE, FTSE and ASX).

Simultaneously Inflation, Economic Growth, SBI, Dollar Exchange Rate, NYSE, FTSE, ASX, have a significant effect on the Jakarta Composite Index (IHSG) in Indonesia from 2010 to 2021. Partially Inflation, NYSE and FTSE Index have no significant effect on the Jakarta Composite Index (JCI), while Economic Growth, BI7DRR, Dollar Exchange Rate and ASX Index, have a significant effect on the Jakarta Composite Index.

Keywords: *inflation, economic growth, BI7DRR, Dollar Exchange Rate, NYSE, FTSE and ASX.*

I.   PRELIMINARY

Indonesia's economic development has developed rapidly and was followed by the development of the stock exchange, so that the stock exchange can become a profitable investment vehicle. Securities traded on the stock exchange are common stock, preferred stock, bonds, convertible bonds, rights certificates, warrants.

The Composite Stock Price Index (IHSG), is the main indicator of the performance of the Indonesian capital market, this condition shows changes in the value of all shares listed on the Indonesian Stock Exchange (IDX). The movement of the Jakarta Composite Index (IHSG) is influenced by several factors such as; the inflow of foreign funds and the influence of regional and global (international) index movements, which can cause the Rupiah exchange rate and JCI fluctuations.

The world economy has entered the era of globalization, where economic relations between countries have a very close and high dependency.The factor that causes dependence is the development of financial investment in various countries. Investments are made on the basis of optimal profit preferences through portfolio investment (Mansur, 2005). Financial investment in the capital market will increase Indonesia's national output, so that it can affect the economy of the Republic of Indonesia as a whole.

Global stock exchanges are closely related to each other, due to growing globalization. Globalization increases the flow of international trade, thus causing more integrated economies between countries. This has resulted in a higher turnover of international capital flows. This development has increased the degree of interdependence and sharpened competition between countries.

Bodie et al in Chababib and Witjaksono (2011), stated that according to the theory of the Capital Asset Pricing Model, an integrated capital market, if securities with the same risk characteristics have the same price, even though they are traded in different capital markets. This shows that in an integrated capital market, identical securities should have the same price. The existence of an integrated capital market results in all stocks in all capital markets having the same risk factors.

The linkage of stock exchanges between countries causes the economic conditions of a country to have an impact on other countries. Bad events in several stocks occurred during the Asian crisis in the summer of 1997. Madura (2006:177), revealed that Thailand experienced severe economic difficulties which were followed by economic decline in several other Asian countries.

International portfolio diversification is an alternative choice to domestic diversification.Portfolio investment or international diversification is basically the purchase of stocks and bonds in the context of international capital markets (Mudrajad in Tamara 2013). International

diversification is carried out to reduce and avoid the negative effects of stock investment in a country.

The decision to determine an international stock portfolio considers many factors, so that the rate of return on stocks is related to the market conditions of a country. This is because individual stocks in certain countries have a high correlation. In contrast, if a country's economy is segmented, stock returns do not have a high correlation, because individual stocks in a country do not have a high correlation with individual stocks in other countries (Madura, 2006: 114).

Liberalization of the Indonesian Capital Market began in 1989, so that foreign investors could invest in Indonesian equities and vice versa Indonesian investors could also invest in equities in foreign countries. Currently investors can get greater profits, by diversifying their portfolio, namely a mixture of stocks from various capital market indices (Nikunj et al., 2012). International diversification gave rise to a modern portfolio theory, which is about integration and interdependence between the Indonesian capital market (IHSG) and capital markets in various countries.

Changes in the composite stock price index (IHSG) on the IDX are inseparable from the improvement in Indonesia's economic indicators, such as; inflation, economic growth, SBI and Rupiah exchange rates and other macro variables. The following is JCI data and stock indices from the United States (NYSE), British/London Index (FTSE) and Australian Index (ASX).

Data of IHSG, NYSE, FTSE dan ASX
Year 2010 until 2021

PERIOD	JCI INDONESIA	NYSE AMERICA	FTSE ENGLAND	ASX AUSTRALIA
2010	3.703,51	11.577,51	5.899,94	4.846,90
2011	3.821,99	12.217,56	5.572,28	4.111,04
2012	4.316,67	13.104,14	5.897,81	4.664,59
2013	4.274,18	16.576,66	6.749,09	5.353,08
2014	5.226,95	17.823,07	6.566,09	5.388,60
2015	4.522,65	17.552,17	6.240,98	5.193,55
2016	5.296,71	19.762,60	7.104,71	5.719,10
2017	6.355,65	24.719,22	7.687,77	6.167,29
2018	6.194,50	23.327,46	6.728,13	5.709,40
2019	6.299,54	28.538,44	7.542,44	6.802,40
2020	5.979,07	28.939,67	6.460,52	6.850,61
2021	6.581,48	36.398,08	7.403,01	7.843,72

Sources : IHSG, Index NYSE, FTSE and ASX

In the table above, the highest JCI (Indonesian Index) in 2021 was 6,581.48 and the lowest IHSG in 2010 was 3,703.51 and the highest NYSE (American Index) in 2021 was 36,398.08 and the lowest NYSE in 2010 was 11,577.51. While the highest FTSE Index (London Index) in 2018 was 67,687.77 and the lowest FTSE in 2011 was 5,572.28 and the highest ASX Index (Australian Index) in 2021 was 7,843.72 and the lowest ASX in 2011 was 4,111.04.

These index numbers show fluctuating movements globally, as if there is a connection between the JCI in the Indonesian Capital Market and the Capital Market Indices in the United States, United Kingdom and Australia. To see real and accurate, it is necessary to analyze macro variables, such as; inflation, economic growth, SBI and dollar exchange rates and the American index, the London index and the Australian index with the JCI on the Indonesian capital market, the period from 2010 to 2021.

II.　THEORITICAL REVIEW
Capital market

Understanding the capital market based on presidential decree no. 52 of 1976 concerning the capital market, states that the capital market is the Stock Exchange as referred to in law no. 15 of 1952. According to this law, a stock exchange is a building or room designated as an office and place for securities trading activities, while securities that are categorized as securities are stocks, bonds and other documents commonly known as securities.

Contagion Effect Theory

Contagion Effect Theory The World Bank has three definitions of the contagion effect (Yang, 2002). First; contagion in a broad sense is a shock that is transmitted across national borders, or the occurrence of a relationship of mutual influence between several countries. Contagion can occur in normal or crisis conditions. Second; the transmission of a shock across national borders or in general the occurrence of significant inter-country correlations that occur outside of some fundamental channels. Third; connecting contagion with a phenomenon when the correlation between countries increases during crisis periods compared to the correlation during normal economic periods.

In connection with contagion there are two main interpretations, the first; comes from the interdependence of interdependence between market economies such as; macroeconomic similarities, trade relations and loans from banks (bank credit) (Barry, Rose & Wyploz, 1996). Rijckeghm and Weder (1999) and Kim and Sheen (2001), state that bank credit and investor behavior through financial channels are important sources that trigger crises, the hypothesis of the same creditor is based on the tendency of lending institutions to limit loans when banks experience losses.

Financial institutions that experience default in a country tend to attract capital not only in that country, but also from other countries, in order to avoid further decline in the value of their assets. Second contagion category; emphasizes investor behavior. This type of contagion stems from information asymmetry, collective behavior and loss of trust regardless of the country's macroeconomic performance.

Signaling Theory

According to Brigham and Houston (2011: 186), Signaling theory or signaling theory is a theory given by company management to investors as an indication of the company's prospects. This information presents information, records for the past, present and future, for the survival of the company and how it affects the company to achieve the set targets.

Composite Stock Price Index

The Composite Stock Price Index (IHSG) is an index that combines all stock prices on the Indonesia Stock Exchange (IDX). According to Astuti (2016), the JCI provides a historical definition of a series of all information related to the combined stock price for a certain period and describes a value, in order to measure the performance of all shares on the Indonesia Stock Exchange (IDX).

Changes in the JCI are expressed through the value weight index formula as follows (Jogiyanto, 2017):

JCI= (Market value/Basic value) x 100%

Base Value = Total shares of all listed shares x market price per share (weighted average of market value) = Same as market value (starting from 10 August 1982).

According to Tandelilin (2011: 86), the market price index is information about the performance of the stock market which is summarized in an index. The stock market index is an indicator that reflects the performance of stocks in the market.

This index functions as an indicator of market trends, meaning that the movement of the index describes market conditions at one time (active or sluggish market conditions).

JCI is the main index used by IDX. The JCI was first introduced on April 1, 1983, as an indicator of price movements of common and preferred stocks listed on the IDX. The basic date for calculating the JCI was August 10, 1982, with 13 shares listed at that time (Hadad, et al., 2004).

Exchange rate

The exchange rate of a country's currency against foreign currency is the value that occurs in the currency market (foreign exchange market), through the mechanism of the balance of supply and demand for foreign currency which is measured (calculated), against the country's currency (H. Effendie, 2017:114). Exchange rates according to (Hadi, 2015: 11), exchange rates or exchange rates in various transactions or buying and selling of goods and services buying and selling transactions with other countries there is a comparison of the value or price between the two currencies and an exchange rate or exchange is created consisting of selling rate, buying rate, and middle rate.

Interest rate

The new reference interest rate or policy rate is the BI-7 Day Reverse Repo Rate (BI7DRR) which has been effective since 19 August 2016, replacing the BI Rate. According to Sunariyah (2018: 80), the meaning of interest rates is the price of loans.

Interest rates are an alternative that can affect stock prices. In general, the mechanism is that if interest rates rise, deposit rates will increase, so that investors will tend to deposit their capital compared to playing in the capital market. This will have an impact on the decline in capital market activity and the weakening of the JCI on the IDX.

Dollar Exchange Rate

According to Miskhin (2017: 162), the exchange rate or exchange rate is the price of a country's currency in currency prices with other countries. The foreign exchange rate affects the prices of domestically produced goods sold abroad and the cost of goods purchased abroad from the domestic country.

NYSE Index

The NYSE is a stock market index covering all common stock listed on the New York Stock Exchange, including American Depository Receipts, Real Estate Investment Funds, Tracking Stock and Foreign Investments. More than 2,000 shares are listed in the index and more than 1,600 shares are from US companies and more than 360 shares are from foreign companies. The largest foreign companies in the index, of the 100 companies in the index have the largest market capitalization and more than half (55%) are non-US stocks, including ten industries in the Industry Classification Benchmark.

Indeks FTSE

The Financial Times Stock Exchange or FTSE is a stock index on the London Stock Exchange. The index is owned by the FTSE Group, which was originally a joint venture between the Financial Times and the London Stock Exchange.

There are several FTSE stock indexes, namely:
" FTSE 100 (Largest 100 companies)
" FTSE 250 (next largest 250 companies)
"FTSE Small Cap
" FTSE 350 (combined FTSE 100 and 250)
"FT All Share Index

According to the FTSE website, the companies in the FTSE 100 index represent around 80% of the UK stock market. The FTSE 100 Index, referred to as the FTSE 100, FTSE, or, informally, the "footsie" is a stock market index of the 100 shares of publicly traded companies on the London Stock Exchange with the highest market capitalization.

The FTSE 100 is one of the most widely used stock indexes, a measure of business prosperity regulated by UK company law. The index is managed by the FTSE Group, a subsidiary of the London Stock Exchange Group.

ASX Index

The Australian Stock Exchange or better known as the Australian Stock Exchange (ASX) is the main stock exchange in Australia. The ASX began as a private exchange founded as early as 1861. Trading on the ASX was conducted entirely by electronic trading system.

Australian Stock Exchange ("ASX"), is the result of a merger between the Australian Stock Exchange and the Sydney Futures Exchange, and the name of the company resulting from the merger is Australian Securities Exchange ("ASX") since 5 December 2006.

The primary market index is the S&P/ASX 200, a stock index comprising the 200 largest stocks on the ASX, and replaces the previous significant All Ordinaries index, which still runs parallel to the S&P/ASX 200.

III.   RESEARCH METHODS

Types of research

The purpose of this type of explanatory research is to test the hypothesis between research variables, so that it can be seen the effect between the dependent variable and the independent variable. This research approach is a quantitative approach with serial data (time series).

Data Sources and Types

The index time series data in this study comes from the Indonesian Stock Exchange Capital Market, Bank Indonesia, the Central Bureau of Statistics, Yahoo Finance, Wikipedia, Bloomberg and others.

Population and Sample

The research population includes the stock price indices of several countries and the research sample is the stock price index for the 2010-2021 period from Indonesia, America, England and Australia.

Table of Variable Operational Definitions

Variable	Definition	of Measurement
JCI	Indicator of share price movement on IDX (Indonesia)	Closing price of JCI at the end of the yearn
NYSE	Indicator of share price movement on NYSE (America)	Closing price of NYSE at the end of the year

FTSE	Indicator of share price movement on FTSE (England/London)	Closing price of FTSE at the end of the year
ASX .	Indicator of share price movement on ASX (Australia)	. Closing price of ASX at the end of the year

Source: Various sources

IV.   RESULTS AND DISCUSSION

Multiple Linear Regression Analysis to determine whether there is influence between the independent (independent) variables on the dependent (dependent) variable.
Partial Test (t test)

Coefficientsª

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
l(Constant)	4976.461	1884.876		2.640	.058
Inflation	273.540	99.404	.376	2.752	.051
Economic_Growth	261.333	64.630	.343	3.889	.018
SBI (BI7DRR)	-10.451	2.508	.911	-4.166	.014
Exchange_Dollars	667.544	158.063	-.805	4.223	.013
NYSE	-94.228	112.022	-.144	-.841	.448
FTSE	-2593.681	1137.044	-.341	-2.281	.085
ASX	1001.705	323.056	.513	3.101	.036

a.   Dependent Variable: IHSG

Multiple Linear Ligression Test Results
Y = - 4,976.461 + 273,540 Inflation + 261,333 Economic_Growth - 10,451 SBI + 667,544 Exchange_Dollars - 94,228 NYSE - 2,593,681 FTSE + 1,001,705 ASX

Based on the results of the Partial Test (t test), it can be concluded as follows:
a.   The constant value (α) is 4,976.461, so if the values of the variables Inflation, Economic Growth, SBI, Dollar Exchange Rate and NYSE, FTSE and ASX are fixed (unchanged), then the JCI is 4,976.461 scale units.
b.   If inflation increases by 1 scale unit, then the Composite Stock Price Index (IHSG) in the Indonesian capital market will increase by 273,540 on a unit scale and vice versa.
c.   If economic growth increases by 1 unit scale, then the Composite Stock Price Index (IHSG) in the Indonesian capital market increases by 261.333 on a scale unit and vice versa.
d.   If   BI7DRR   increases by 1 unit scale, then the Composite Stock Price Index (IHSG) in the Indonesian capital market will decrease by 10.451 on a unit scale and vice versa.
e.   If the dollar exchange rate increases by 1 scale unit, then the Composite Stock Price Index

(IHSG) in the Indonesian capital market will increase by 667,544 on a unit scale and vice versa.
f.   If the NYSE Index increases by 1 scale unit, then the Composite Stock Price Index (IHSG) in the Indonesian capital market will decrease by 94.228 on a unit scale and vice versa.
g.   If the ASX Index increases by 1 unit scale, then the Composite Stock Price Index (IHSG) in the Indonesian capital market, increases by 1,001.705 on a unit scale and vice versa.
h.   If the ASX Index increases by 1 unit scale, then the Composite Stock Price Index (IHSG) in the Indonesian capital market, increases by 1,001.705 on a unit scale and vice versa.

Partial Test (t test)
Based on the results of Coefficientsa analysis, partial test (t test) is:
a)   Inflation has a significance value of 0.051 > 0.050, so it can be concluded that inflation has no

significant effect on the Jakarta Composite Index (IHSG).

b) Economic growth has a significance value of 0.018 <0.050, so it can be concluded that economic growth has a significant effect on the Jakarta Composite Index (IHSG).

c) Indonesia Bank Serificate (BI7DRR) has a significance value of 0.014 <0.050, so it can be concluded that BI7DRR has a significant effect on the Composite Stock Price Index (IHSG).

d) The dollar exchange rate has a significance value of 0.013 <0.050, so it can be concluded that the dollar exchange rate has a significant effect on the Jakarta Composite Index (IHSG).

e) The NYSE Index has a significance value of 0.448 > 0.050, so it can be concluded that the NYSE Index has no significant effect on the Jakarta Composite Index (IHSG).

f) The FTSE Index has a significance value of 0.085 > 0.050, so it can be concluded that the FTSE Index has no significant effect on the Composite Stock Price Index (IHSG).

g) The ASX Index has a significance value of 0.036 <0.050, so it can be concluded that the ASX Index has a significant effect on the Composite Stock Price Index (IHSG).

Uji Korelasi

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.994[a]	.990	.973	274.75575

a. Predictors: (Constant), Inflation, Economic_Growth, BI7DRR, Dollar_Exchange, NYSE, FTSE, ASX.

b. Dependent Variable: JCI

The results of the correlation between Inflation, Economic Growth, SBI, Dollar Exchange Rate, American Index, British Index, Australian Index to the JCI for the period 2010 to 2021 are 0.994 or 99.4% and Adjusted R Square of 0.973 or 97.3%, meaning Inflation, Growth Economy, SBI, Dollar Exchange Rate, American Index, British Index, Australian Index have a very strong influence on the JCI.

Simultaneous Test

Based on data processing in the F test (Anova), the regression equation can be produced as follows:

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	30184123.84	7	4312017.691	57.120	.001[b]
	Residual	301962.892	4	75490.723		
	Total	30486086.73	11			

a. Dependent Variable: JCI

The results of the Anova test, is the simultaneous test showing f count of 57.120 > t table of 4.950 and a significance value of 0.001 <0.050, the influence of Inflation, Economic Growth, SBI, Dollar Exchange Rate, NYSE, FTSE, ASX, simultaneously has a significant effect on the Stock Price Index (IHSG) in the Indonesian Capital Market for the period 2010 to 2021.

V.   CONCLUSION

Simultaneously Inflation, Economic Growth, SBI, Dollar Exchange Rate, NYSE, FTSE, ASX, have a significant effect on the Jakarta Composite Index (IHSG) in Indonesia for the period 2010 to 2021.

Inflation, the NYSE Index and the FTSE Index have no significant effect on the Jakarta Composite Index (IHSG), while Economic Growth, B7DRRI, Dollar Exchange Rate and the ASX Index have a significant effect on the Jakarta Composite Index (IHSG).

VI.   RECOMMENDATION

We recommend that investors, before investing in the Indonesian capital market (IDX), need to analyze macro variables (Inflation, Economic Growth,BI7DRR and Dollar Exchange Rate), and also need to analyze Regional Indexes (Asia) and Global Indexes (America, Europe and Australia).

Inflation in Indonesia increased, the JCI on the Indonesian capital market (IDX) decreased and the NYSE Index (American index) and the FTSE (British Index) had a non-significant effect on the JCI, because economic conditions and the behavior and culture of the British, American and Australian people were different from behavior and culture of Indonesian society.

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