



## COMPARATIVE ANALYSIS OF THE EFFECT OF MACROECONOMIC FACTORS TOWARD IDX COMPOSITE INDEX AND FTSE BURSA MALAYSIA INDEX

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### ABSTRACT

*The aims of this study are to determine the influence of macroeconomic factors toward the Indonesia's and Malaysia's index, and to compare the performance of those two indices. The macroeconomic factors studied were inflation rates, exchange rates, Gross Domestic Product (GDP), and WTI crude oil prices on Indonesian and Malaysian stock indices. This study took the period from January 2012 until December 2017 as a sample. The Indonesian stock market is represented by IDX Composite Index, while Malaysia is FTSE Bursa Malaysia. This research used Multiple Regression Linear Model as analysis tool. The result shows that the inflation rate has no effect on IDX Composite Index and FTSE Bursa Malaysia. While the exchange rate and GDP have a significant positive influence on IDX Composite Index and FTSE Bursa Malaysia. Vice versa, the WTI crude oil price does not affect IDX Composite Index and FTSE Bursa Malaysia. Both of these stock indices significantly proved to be different. The implication of this study is that the results of this study can be used as a reference for investors in choosing which index is better, Bank Indonesia and Bank Negara Malaysia in determining monetary policies made for each country.*

**Keywords:** *Exchange Rate, FTSE Bursa Malaysia, Gross Domestic Product (GDP), IDX Composite Index, Inflation Rate, Macroeconomics, WTI Crude Oil Price.*

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## 1. INTRODUCTION

An investment is any asset or funds placed in financial institutions by a person or institution with an expectation to provide positive income and/or the value will increase (Scott, 2014). It is one of the ways to get wealth effectively. The example of financial institutions are: central bank, commercial banks, investment banks, and non-bank institutions (insurance companies, unit trust, and mortgage companies) includes capital market or stock exchange (Mishkin, 2009). Individuals and/or domestic or international institutions that invest their assets or capital in the short or long term are called investors. Normally, investors who invest their capital definitely expect return from their investment including investors who invest their capital in the stock exchange.

According to Law No. 8 of 1995, the Capital Market is an activity concerned with Public Offering and Securities trading, Public Companies related to Securities issued, and institutions and professions related to securities. Securities traded in stock exchange are issued by listed companies, unit trusts, and derivatives. Mostly, investors invest their capital by buying stocks in capital market. To know the condition of the market today, investors need a composite report which is what stock market averages and indices are designed to provide (Jones, 2013). Basically, it can be used as a benchmark in capital market because it is an indicator reflecting the performance of stocks which is available in capital market (Tendelilin, 2010: 86).

Every country has its own composite index as an indicator of the current condition market performance. Composite index can suddenly fluctuate due to external factors of the company such as macroeconomic condition of a country (Panggraito *et al*, 2014). According to Kewal (2012), exchange rate, interest rate, inflation rate and GDP are the macroeconomics factors that can influence index movement of a country. This research is supported by Murthy (2017), who said that interest rate, exchange rate, money supply and oil prices can influence composite index in Malaysia. These factors can become consideration for investors to make investment decision. This research focuses on inflation, exchange rate, GDP and WTI crude oil price due to these factors have important role in the development of national economy of a country.

Inflation means a general rising in price in goods and services over period of time. According to Sigh (2010), inflation rate negatively affects return on portfolio in the stock exchange and will give impact to economic development. The researcher argues that in Indonesia, inflation rate has strong intercorrelated with economic development (Panggraito *et al*, 2014). If Indonesia has high inflation rate, it will slow down the rate of economic development and will devaluate Rupiah toward other currencies value or exchange rate (Hakimah, 2018).

An exchange rate is the rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in relation to another currency (Sullivan and Sheffrin, 2003).. According to Asmy (2010), exchange rate significantly affects stock exchange in Malaysia. Similar to Malaysia, exchange rate also significantly affects stock exchange in Indonesia (Paggraito, 2014). This also supported by Hakimah (2018); Lail (2017); and Murthy (2017), who said that macroeconomic factors such as inflation rate, interest rate and exchange rate negatively and significantly affect Malaysian stock price movement. This is supported by the phenomenon on June 2018 when the rupiah currency depreciated against the US Dollar. The trend of IDX Composite Index tends to decline at that time. This phenomenon not only did occurred in Indonesia, but also depreciate of currency occur in Malaysia. Malaysia also experienced the effect which was very close to Indonesia, the majority of the population are Muslim, the culture is almost similar, and the economic conditions are not too different so the behavior of investors is also almost the same.

In addition to exchange rate, another macroeconomic factor is Gross Domestic Product (GDP). GDP is the total value of all final goods and services produced within a country in a given

year (Stax, 2014). It includes in one of the macroeconomic factor that has significant effect to Indonesia's composite index (Kewal, 2012). If the number of consumer goods or commonly known as GDP increases, it will increase the company's sales turnover scale. Increasing in profits causes the company's stock price also increase and gives impact on the IDX Composite Index movement.

Unlike GDP, WTI crude oil price is a macroeconomic factors which has a negative relationship to the stock price index (Murthy, 2017). Directly or indirectly, crude oil price affects other prices because it is the main input in the production of goods or services. If there is an increase in world crude oil price, producers tend to increase the price of goods or services in order to get profit.

After knowing several macroeconomic factors mentioned above, the conclusion is that macroeconomic has important role in economic life. It has been proven in 2008. Furthermore, the collapse of Lehman Brothers Investment Bank and insurance company AIG as a signal of the start of the global recession. According Mishkin (2009), there are six sources of global recession. Those are (1) imbalances in financial market caused by decreasing in demand in the capital markets, decreasing of price is unanticipated, a decreasing unanticipated in the domestic exchange rate and in the asset prices, (2) decreasing in the balance sheet of financial institutions, (3) bank crisis, (4) increasing of uncertainty, (5) increasing of interest rates, and (6) imbalances government fiscal. From the above factors, it can be seen that macroeconomy factors played a major role in the global crises in 2008 and exactly give global impact to the investment at that time.

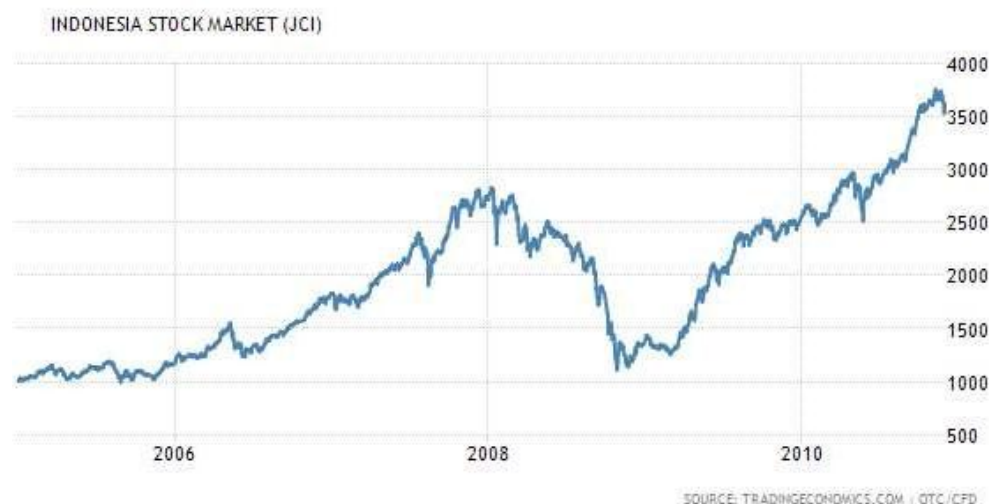


Figure 1: Historical Data of IDX Composite Index During Global Crises  
Source: tradingeconomics.com

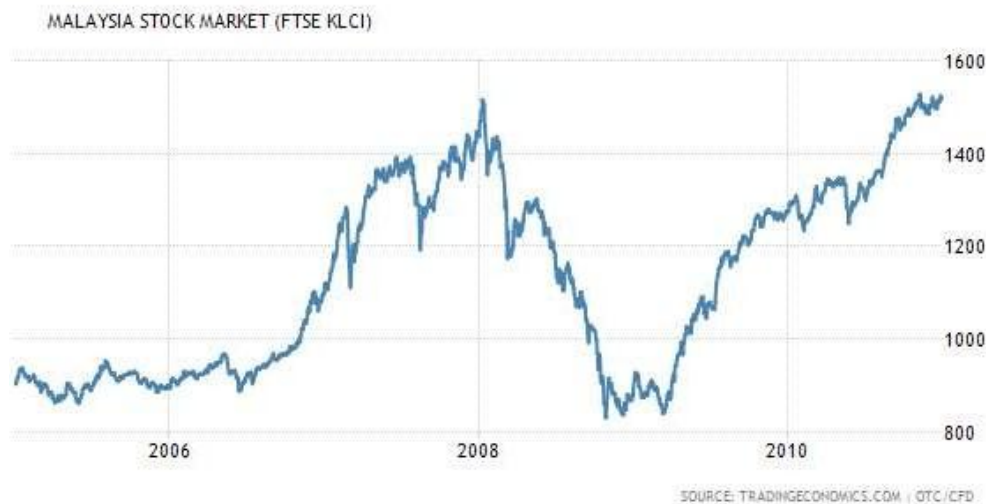


Figure 2: Historical Data FTSE Bursa Malaysia Index During Global Crises Source: tradingeconomics.com

Figure 1 and 2 show that in year 2008 both the IDX Composite Index and FTSE Bursa Malaysia Index declined until 2009. This proves that macroeconomic factor such as global crises have an effect on stock index movements in certain country, in this case is a market benchmark index of both countries. As this proves the similarity between the two countries, researcher is intended to compare the performance of indices of the two countries by comparing each benchmark stock index. This similarity is supported by a theory developed by Shiller (1995) which explained the contagion effect, that is the effect of transmission through similar macroeconomic conditions. The effect of transmission can occur because investors from both countries have the same source of information. So, they have the same reaction when facing an economic upheaval such as global crises. Sometimes, investors have a reaction that tends to be different in facing economic downturns, but researcher argues that investors from Malaysia and Indonesia tend to have the same reaction as indicated by stock price trend chart data in the two countries market indices (Lail, 2017).

Based on the fact of global crises and change in macroeconomic conditions, the main purpose of this research is to identify whether after global crises, whether macroeconomic indicators still have an influence on the IDX Composite Index and FTSE Bursa Malaysia Index or not. The index of a country indicates the tendency of investors to invest their capital to stock exchange, so that to achieve the main purpose, this research is entitled “Comparative Analysis of the Effect of Macroeconomic Factors toward IDX Composite Index and FTSE Bursa Malaysia Index”.

## 2. LITERATURE REVIEW

This study selects several variables that have their own theories and discussions. The explanation is about dependent variables (IDX Composite Index and FTSE Bursa Malaysia Index) and the factors that might influence the dependent variables: inflation, exchange rate, gross domestic product (GDP) and WTI crude oil prices.

### Composite Index

A group of equities, indexes, or other factors categorizing in a standardized way to measure market and/ or sector performance over time is called composite index. Simply, it also known as “composite”. It published daily by electronic media and mass media. The media provides the price change in composite index prices every day in order to see the trends that occur in composite

index. Therefore, the trends of composite index can use to predict the condition of the national economy, it also becomes one of the importance of composite index. Due to it becomes an indicator, so every countries has its own composite index. Likewise, in Indonesia and Malaysia. Both countries has national composite index, IDX Composite Index for Indonesia and FTSE Bursa Malaysia Index for Malaysia.

#### *IDX Composite Index*

Indonesia Stock Exchange (IDX) provides data of stock price movement in electronic and mass media. Stock price index is one of the indicators of stock price movements in stock exchange. Currently, there are 11 kinds of share index in Indonesia, one of them is Jakarta Composite Index are listed below (Indonesia Stock Exchange, 2018): (1) *IDX Composite Index*. (2) *Sectoral Index*. (3) *LQ45 Index*. (4) *Jakarta Islamic Index (JII)*. (5) *Kompas100 Index*. (6) *Bisnis-27 Index*. (7) *PEFINDO25 Index*. (8) *SRI-KEHATI Index*. (9) *The Main Board Index*. (10) *The Development Board Index*. (11) *Individual Index*.

#### *FTSE Bursa Malaysia Index*

The major stock exchange in Malaysia is known as Kuala Lumpur Stock Exchange (KLSE) and was renamed in 2004 to be FTSE Bursa Malaysia Berhad. The FTSE Group collaborates with Bursa Malaysia to create indices of Malaysian market. There are 909 companies (2018) listed in Bursa Malaysia, consisting of 800 companies listed on main market and the other 109 companies listed on ACE market. The 909 companies have different locations in the Bursa Malaysia. They are divided into several sectors such as closed-end funds, construction, consumer products, finances, hotels, industrial products, IPC, mining, plantations, properties, REITs, SPAC, technology, trading, and services (Russel, 2018). The indices of FTSE Bursa Malaysia divides the market into size segments (all cap, large cap, mid cap, and fledging) and includes Shariah indices.

FTSE Bursa Malaysia Index consists of many listed companies and various types of Index. Similar to IDX Composite Index, FTSE Bursa Malaysia Index is an indicator of Malaysian stock market condition. Investors could consider investment decision by examining at the price index movement.

### **Inflation**

Generally, inflation is ongoing rise in the level of price in an entire economy (Stax, 2010). Inflation does not refer to a change in relative prices. In other words, inflation means that there is pressure for prices to rise in most markets in the economy. Additionally, price increase in the supply-and-demand model is one-time event, representing a shift from previous equilibrium to a new one.

According to Ibrahim and Agbaje (2013), inflation rate has been increasingly unsteady despite some stringent policies and efforts made by governments to control and fine-tune its value to satisfactory stationary single-digit number. Moreover, the power of inflation does not only affect goods and services, but also wages and income levels.

### **Exchange Rate**

According to Samuelson et al. (1992), foreign currency is the price of a foreign currency in domestic units. Depreciation of the domestic currency will increase export volume. If international market demand is sufficiently elastic, it will increase domestic company cash flow, then increases stock prices, reflected in the IDX Composite Index. Conversely, if the

issuer buys domestic products, and has debt in the form of dollars, the share price will go down. Depreciation of the exchange rate will increase the stock price reflected in the IDX Composite Index.

Sometimes, exchange rates can change very swiftly (Stax, 2014). The firms engaged in international selling, buying, and borrowing will be fluctuated. These fluctuation in exchange rate can bring about huge effect on profit. Each country must consider its exchange rate to be determined in the market or have the central bank for intervening in the exchange rate. All the choices for exchange rate policy create differentiation in trade off.

The transaction of foreign exchange normally happens in the foreign exchange market. According to Samuelson et al. (1992), foreign exchange market is a place where various currencies are traded and in this place exchange rate is determined.

### **Gross Domestic Product**

Gross Domestic Product. Gross Domestic Product (GDP) is the size of nation's overall economy measured, which is the value of all final goods and services produced within a country in a given year. From the demand side, the parties involved in GDP are divided into four categories (Stax, 2014): business spending (investment), consumer spending (consumption), government spending, and spending on net export. Commonly, consumption expenditure by household is the largest components of GDP. It means that consumer's decision is the major driver in the economy. If there is an increasing in per capita GDP, it tends to reflect an increase in productivity.

Practically, GDP of a country fluctuation depends on the factors of GDP itself. According to Central Bureau of Statistic, there are two factors that can influence GDP: internal and external. External factors influence the GDP of a country consist of national and international economic condition related to real, monetary sector policies, and the development of world oil prices.

### **WTI Crude Oil Price**

Crude oil is the main input in the production of goods or services. Directly or indirectly, then it is clear that oil prices will greatly affect other prices. If there is an increase in world oil price, consumers will increase the price of fuel in order to get profit. This increase can also affect a company which use oil as their main input in operation process. It will increase production costs and affect the company's stock price.

In 2008, the decline of crude oil prices led to the marvelous for commodity markets. Therefore, rising oil prices will cause price changes in other commodities and reduce inflation. The expected inflation rate will be reflected in the discount rate of corporate then transmitted to the capital market. Miller and Ratti (2009) showed the reasons of change in oil price brings impact to stock market: (1) Crude oil is a vital commodity in production process: If there is an oil price shock, it can influence the corporate cash flow. Automatically, it will give impact to stock market performance. (2) Crude oil dominates other commodities as crude oil is trading higher on NYMEX. So, if there is a change which tends to decline, it will lead to other commodity markets to fall apart.

## **HYPOTHESIS DEVELOPMENT AND RESEARCH MODEL**

Inflation is the condition which the price of goods or services are continuously increasing (Stax, 2014). This is one of the internal macroeconomic factors that influence IDX Composite Index. The ascendant in inflation rate is a negative sign for investor in capital market because company income and cost will follow the flow. It will leads to descendant in company profitability. The descendant of company profitability will give impact to company share priceas the company share price will go down. Meant, there is negative relationship between inflation rate and IDX Composite Index. Inflation and other macroeconomic variables seem to substantially influence the behavior of financial aggregates, the example is stock prices. At the same time, there are some literature review which have been different arguments on the manner of the variables that have an impact on stock prices (Geetha, 2011). The researches conducted by Panggraito et al (2014), Kewal (2012), and Wongbangpo (2002) concluded that there is significant negative effect of inflation rate toward IDX Composite Index. Therefore, when inflation rate in Indonesia goes up, the IDX Composite Index will provide decreasing movement. From explanation above, the hypothesis is:

*H1a: Inflation rate has negative effect on IDX Composite Index.*

*H1b: Inflation rate has negative effect on FTSE Bursa Malaysia Index.*

Exchange rate is the price of country's currency in another country currency. In developed countries, war, terrorism, and change in political situation can make exchange rate reacts (Stax, 2014). The fluctuation in exchange rate has direct impact on companys' competitiveness and profitability where exporters are expected to benefit from depreciation of local currency and vice versa for importers (Tsagkanos & Siriopoulos, 2013). According to portofolio approach, there is a negative relationship between exchange rate and stock price. An ascendant in stock price will causes valuation in the national currency (Anlas, 2012). This statement is supported by Panggraito et al (2014) that foreign exchange has negative effect toward IDX Composite Index. Kewal (2012), stated that there is significant negative effect of exchange rate toward IDX Composite Index. Therefore, the hypothesis is:

*H2a: Exchange rate has negative effect on IDX Composite Index.*

*H2b: Exchange rate has negative effect on FTSE Bursa Malaysia Index.*

Gross Domestic Product (GDP) is a vital factor to determine economy growth in a country (Stax, 2014) as this is one of the factors that can influence share price in a country. Changes in information about the future course of GDP may cause prices to change in stock market. This explanation suggests that while stock prices are used to predict future economic activity, the actual causality is from future GDP growth in current stock prices (Reddy, 2012). According to Nazir et al. (2010), there is significant positive effect of GDP toward stock price movements. This research is supported by Shula (2017), who argued that GDP has positive effect toward the index movements. Therefore, the hypothesis is:

*H3a: GDP has positive effect on IDX Composite Index.*

*H3b: GDP has positive effect on FTSE Bursa Malaysia Index.*

Crude oil is important matter especially in commodity market for decade to come (Ding et al., 2016). According to Dhaoui and Khraief (2014), oil acts as a major input for most of the industries. Increase in oil price will induce unemployment, cost-push inflation, and uncertainties. Furthermore, the rise in production cost as the result of oil price hike forces firms to cut down on their production capacity and hence giving impact to the profitability and share price (Bjørnland, 2009). Jones and Kaul (1996), identified that oil shock can affect stock return and this phenomenon can reflect the impact of this shock on the real cash flow.

The volatility in oil price also affect many industrials sector and has significant negative effect on equity return except in mining and oil and gas industries (Nandha and Faff, 2008). Study of Najaf and Najaf (2016) also indicated that oil prices have effect on the stock exchange. So, the researcher creates the following hypotheses:

*H4a: WTI crude oil price has negative effect on IDX Composite Index.*

*H4b: WTI crude oil price has negative effect on FTSE Bursa Malaysia Index.*

Based on hypotheses above, both countries Indonesia and Malaysia have their own macroeconomic condition. This is important for investors to consider the risk and the return they will get from foreign investment. Judging from the trend of each stock exchange during the prior of 2005 until 2011, the price volatility shows the similarity. It indicates that Indonesia and Malaysia have the same index performance that needs to be tested the comparison further. According to Shofiyullah (2014), there is significant difference between FTSE Bursa Malaysia and IDX Composite Index. The study of Gardika (2017) showed that Islamic index of Malaysia has a better performance than Indonesian Islamic Index. Therefore, the study comparing IDX Composite Index and FTSE Bursa Malaysia Index needs to conduct. So, this research formulates hypothesis as follow:

*H5: FTSE Bursa Malaysia Index significantly has better performance rather than IDX Composite Index.*

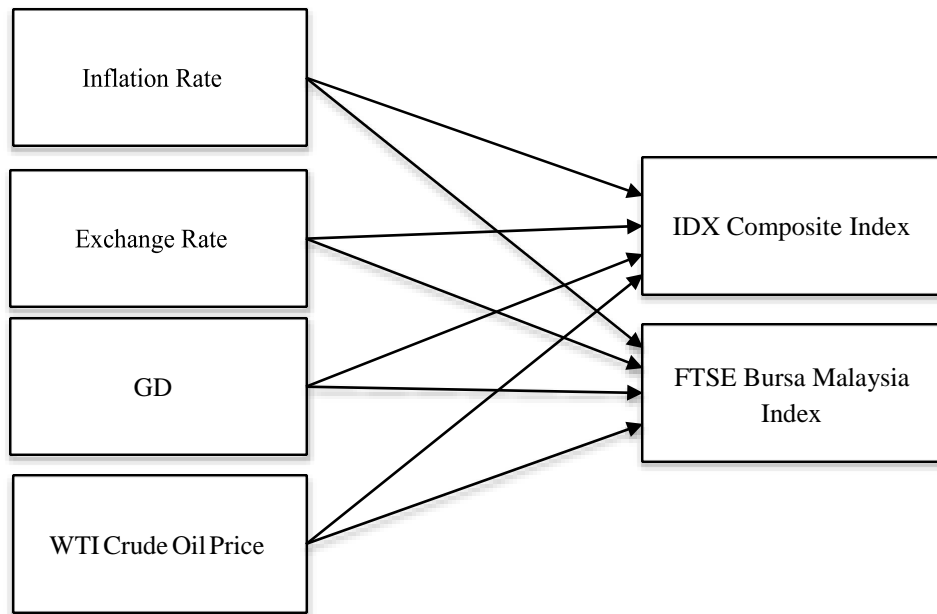


Figure 3: First Research Model

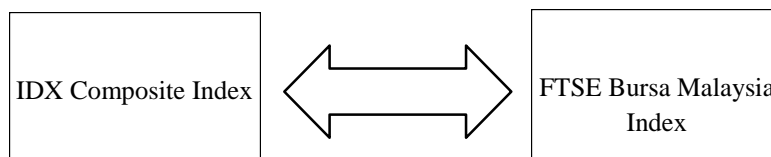


Figure 4: Second Research Model



### 3. RESEARCH METHODS

This study applies a quantitative research. Quantitative research is a systematic empirical observation based on the calculated statistics, mathematics, or computational techniques (Sekaran, 2006). Observation periods of this study were taken from January 2012 to December 2017. The object of this research is IDX Composite Index and FTSE Bursa Malaysia Index taken from Indonesia Stock Exchange (IDX) and Bursa Malaysia Berhad. Meanwhile, the independent variables are limited to Indonesia's and Malaysia's inflation rate, exchange rate, GDP, and WTI oil prices.

The population of this research are all closing prices of IDX Composite Index and FTSE Bursa Malaysia Index. This research uses purposive sampling, that is a nonprobability sampling design in which the required information is gathered from special or specific targets or groups of people on some rational basis (Sekaran, 2006: 422). The criteria for the sample is that the data of variables must be operating during January 2012 - December 2017. Therefore, the amount of data (n) of this study is 67 for each variable. The source of data of this research is secondary data since the data have been available in involved parties: company record, government publication, and media (Sekaran, 2006). The records of monthly returns have been published in Indonesia stock Exchange and Bursa Malaysia website pages. Meanwhile, the independent variables data can be accessed through Bank Indonesia and Bank Negara Malaysia website. In collecting data, this research uses various literature, reference, and theoretical framework related to.

In this research, normality assumption test is conducted using Kolmogorov-Smirnov. To obtain accurate answers of problem statements and hypothesis one until four, this research uses Coefficient of Determination Test, Simultaneous Test (F-test), and Partial Test (t-test). After identifying the accurate information for hypothesis 1 until 4, this research will conduct a comparison between IDX Composite Index and FTSE Bursa Malaysia Index performance on fifth hypothesis through Independent Sample t-Test and Mann-Whitney (U-Test).

### 4. RESULTS

#### First Multiple Regression Model

Refers to the normality test output of first multiple regression model, the asymptotic significant value of 0.952 which is greater than 0.05. Therefore, the data of the first multiple regression model of this research is normal distribution. To test the significant effect of inflation rate, exchange rate, Gross Domestic Product as well as WTI crude oil price on IDX Composite Index, it is necessary to apply first multiple regression model. The result is shown in Table 1.

Table 1: Result Summary of First Multiple Regression Model

No.	Independent Variables	Regression Coefficient	Sig.
1.	Inflation rate (X1)	0.0002	0.983
2.	Exchange rate (X2)	0.491	0.000
3.	Gross Domestic Product (X3)	1.498	0.000
4.	WTI crude oil price (X4)	-0.004	0.952
Constant		= -6.312	
Coefficient of Determination		= 0.598	
F statistic		= 23.060	

Source: SPSS, 2019

Based on the confidence level of 95% or significant level ( $\alpha$ ) = 0.05 with degree of freedom (df) = (k-1) and (n- k), it is identified that Ftable value is 2.53. From the result of the first multiple regression model, it is known that Fstatistic value of 23.060 is greater than Ftable value. Therefore, it can be explained that inflation rate, exchange rate, Gross Domestic Product and WTI crude oil price variables simultaneously have significant effect on IDX Composite Index. It can also be stated that the first multiple regression model within study is fit with the research data (goodness of fit).

Result summary of the first multiple regression model in Table 1 shows that the coefficient of determination (R square) is 0.598. It means that IDX Composite Index can be explained by inflation rate, exchange rate, Gross Domestic Product and WTI crude oil price variables by 59.80 percent, while the remaining of 40.20 percent can be explained by the other variables which are not examined.

From the result summary of the first multiple regression model in Table 1 above, it can be seen that tstatistic value of inflation rate variable is 0.021, tstatistic value of exchange rate variable within this research is 3.678, tstatistic value of Gross Domestic Product (GDP) variable of 4.944, and tstatistic value of WTI crude oil price variable within study is - 0.061. Referring to the statements of H1a, H2a and H4a hypotheses within the study are rejected and the statement of H3a hypothesis within study is accepted.

### Second Multiple Regression Model

Refers to the normality test output of second multiple regression model, the asymptotic significant value of 0.297 is greater than 0.05. Therefore, the data of the second multiple regression model within study is revealed a normal distribution. To test the significance effect of inflation rate, exchange rate, gross domestic product as well as WTI crude oil price toward FTSE Bursa Malaysia Index, it is necessary to test the second multiple regression model and the result summary is shown in Table 2.

Table 2: Result Summary of Second Multiple Regression Model

No.	Independent Variables	Regression Coefficient	Sig.
1.	Inflation rate (X1)	-0.014	0.146
2.	Exchange rate (X2)	0.119	0.106
3.	Gross Domestic Product (X3)	1.065	0.000
4.	WTI crude oil price (X4)	0.023	0.394
Constant		= -0.801	
Coefficient of Determination		= 0.587	
F statistic		= 22.018	

Source: SPSS, 2019

Based on the confidence level of 95% or the significant level ( $\alpha$ ) = 0.05 with degree of freedom (df) = (k-1) and (n-k), it is uncovered that Ftable value is 2.53. From the result of the second multiple regression model, it is known the Fstatistic value of 22.018 is greater than Ftable value. Therefore, it can be explained that inflation rate, exchange rate, gross domestic product and WTI crude oil price variables simultaneously have significant effect on FTSE Bursa Malaysia Index. It can be stated that the second multiple regression model within study is fit with the research data (goodness of fit).

Result summary of second multiple regression model in Table 4.8 shows that the coefficient of determination (R square) is 0.587. It means that FTSE Bursa Malaysia Index

can be explained by inflation rate, exchange rate, gross domestic product, and WTI crude oil price variable by 59.80 percent, while the remaining of 40.20 percent can be explained by the other variables which are not examined.

From the result summary of the second multiple regression model in Table 4.8 above, it can be seen that tstatistic value of inflation rate variable is -1.472, tstatistic value of exchange rate variable within study is 1.641, tstatistic value of Gross Domestic Product (GDP) variable of 7.778, and tstatistic value of WTI crude oil price variable within study is 0.859. Referring to the statements of H1b, H2b and H4b hypotheses within study are rejected and statement of H3b hypothesis within study is accepted.

### Independent Sample t-Test

To identify the better performance between IDX Composite Index and FTSE Bursa Malaysia Index within study, independent sample t-test is used. The output of independent sample t-test, it can be summarized in Table 3.

Table 3: Mann Whitney U-test: University Reputation			
Variable	Levene's Test	t tatistic	Sig.
Index Performace	0.000	49.516	0.000
Group	Mean		
FTSE Bursa Malaysia	70.32167		
IDX Composite Index	0.41209		

Source: SPSS, 2019

Test results in Table 3 shows that the significance value in column Levene's test of 0.000 is less than  $\alpha$  (0.05). It shows that equal variance assumed is rejected, so that the result of independent sample t-test within study which uses the value of tstatistic in second row is 49.516. This tstatistic value (49.516) is greater than the ttable value by using the confidence level of 95% ( $\alpha = 0.05$ ) and degree of freedom (df) = (n1 + n1 - 2) with one tailed t-test of 1.660. Thus, it can be stated that there is a significant difference between performance of IDX Composite Index and performance of FTSE Bursa Malaysia Index. Therefore, the fifth hypothesis (H5) which states that FTSE Bursa Malaysia Index has better performance significantly than IDX Composite Index is accepted. Malaysia has higher mean value, it means that Malaysia has better performance than Indonesian Capital Market.

### DISCUSSION

The result shows that inflation rate has positive and no significant effect on IDX Composite Index. It means that inflation rate has no effect on IDX Composite Index. This result is different from the finding of previous study conducted by Panggraito et al (2014) which concluded that there is a negative significant effect between inflation rate and IDX Composite Index. From January 2012 until December 2017, Indonesia's inflation rate has no change extremely and the price movement on IDX Composite tend to be stable. It can be a reason why inflation has no effect toward IDX Composite Index. This finding is supported by previous study conducted by Fatihudin and Firmansyah (2018) which identified that inflation variable has a positive effect on the Indeks Harga Saham Gabungan (IHSG).

Similar to Indonesia, Malaysia's inflation rate is found to have negative but no significant effect on FTSE Bursa Malaysia Index. On the other words, inflation rate has no effect on FTSE Bursa Malaysia. During January 2012 until December 2017 inflation rate in Malaysia tend to be stable. This phenomenon also have an effect on Malaysia stock price, which certainly is stable. Therefore, Malaysia's inflation rate during January 2012 until December 2017 has no effect toward FTSE Bursa Malaysia. This result is different from the previous finding by Panggraito et al (2014) which concluded that there is significant negative effect of inflation rate toward FTSE Bursa Malaysia Index. On the other hand, result of this research supports Yusof (2017), who stated that the factors of inflation rate risk can also bring three similar effects to foreign exchange rate. The effects can be either negative, positive, or no effect. Furthermore, result within study is consistent with the finding of previous study conducted by Isa et al. (2012), which identified that in the short run, the impact of inflation on the Kuala Lumpur Shariah Index (KLSI) is negative and insignificant.

This study shows that exchange rate has positive effect on IDX Composite Index. This relationship means that the higher level of exchange rate, the level of IDX Composite Index will follow in the same direction. Moreover, the money supply in the U.S. has been exceeded during the period, that phenomenon created an increase in the value value of other currencies value, including Indonesian rupiah. It may made the stock price increase during January 2012 until December 2017. Result of the current study is consistent with the result of previous study conducted by Fatihudin and Firmansyah (2018), which proved that exchange rate has a positive and significant effect on the Indeks Harga Saham Gabungan (IHSG). Vice versa, result of this research is different to the finding of previous study conducted by Kewal (2012), which concludes that there is significant negative effect of exchange rate toward IDX Composite Index.

Different from Indonesia, the result of this study shows that exchange rate has positive and no significant effect on FTSE Bursa Malaysia Index. It means that exchange rate has no effect on FTSE Bursa Malaysia Index. The change of Malaysian currency tends to be more stable than Indonesia during the period. It made the price movement of FTSE Bursa Malaysia was stable at that time. Result of this research is different from the finding of previous study conducted by Kewal (2012), which concluded that there is significant negative effect of exchange rate toward FTSE Bursa Malaysia Index. This is occurred due to the data that researcher took is monthly data, so Malaysian ringgit does not has extremely change. This finding is in line with the result of previous study conducted by Muhammad and Rasheed (2011) which identified that there is no causal relationship between exchange rates with stock prices for Pakistan, India, Bangladesh and Sri Lanka.

This research proves that Gross Domestic Product has positive and significant effect on IDX Composite Index. This causal relationship means that the higher level of Gross Domestic Product tends to be followed by the higher level of IDX Composite Index. This phenomenon can be seen in the Indonesia's GDP and the price of IDX Composite Index during 2012-2017, both of indicators change in the sme direction. This result indicates that an increasing in Indonesia's GDP during 2012-2017 has been affected by the rise of capital allocation from foreign sources to Indonesia. Meanwhile, it boosted up the productivity of the companies, and increasr consumption of final goods and services. Thus, whenever the GDP growth is increasing, the IDX Composite Index price movement will increase. The finding of current study is supported by Reddy (2012) who stated that Gross Domestic Product (GDP) is one of the factors that can influence share price in a country. Changes in information about the future course of GDP may cause prices to change in stock market. Empirically, the result of current study supports the finding of previous study by Nazir et al.

(2010) that there is a significant positive effect of GDP toward stock price movements. Additionally, result of this study is also consistent with study result by Shula (2017) which concluded that GDP has a positive effect on the index movements.

By looking at the result of this research, it proves that Gross Domestic Product has positive and significant effect on FTSE Bursa Malaysia Index. This relationship means that the higher level of Gross Domestic Product tends to be followed by the higher level of FTSE Bursa Malaysia Index. Similar to Indonesia, this result indicates that an increasing in Malaysia's GDP during 2012-2017 has been affected by the rise of capital allocation from foreign sources to Malaysia. Thus, it raised up the productivity of the companies, and increase consumption of final goods and services. Finding in this research supports Nazir et al. (2010) and Shula (2017) which proved that GDP has a positive effect on the index movements.

The result shows that WTI crude oil price has negative but no significant effect on IDX Composite Index. It means that WTI crude oil price has no effect on IDX Composite Index. The change of WTI crude oil price during 2012-2017 is not significant enough. Due to that matter, it does not have much effect on IDX Composite Index price movement. This result is different from the finding of previous study by Nandha and Faff (2008) which concluded that the volatility in oil price affects many industrial sector and has significant negative effect on equity return except in mining and oil and gas industries. On the other hand, finding of current study is consistent with the result of previous study by Hersugondo et al., (2015) which proved that world oil prices (WTI) have no significant effect on the IHSG return. The coefficient of WTI effect is negative, indicating that the greater the rate of WTI oil price change, the lower the IHSG or JCI return.

Similar to Indonesia, finding of the current study shows that WTI crude oil price has no effect on FTSE Bursa Malaysia Index because WTI crude oil price negatively and insignificantly affect FTSE Bursa Malaysia. Not only in Indonesia, but also insignificant change of WTI crude oil price did occur in Malaysia from 2012 until 2017. The result is different from the finding of previous study by Nandha and Faff (2008) which concluded that the volatility in oil price affects many industrial sector and has significant negative effect on equity return except in mining and oil and gas industries. On the other hand, finding of current study is in line with the result of previous study by Hersugondo et al., (2015) which concluded that world oil prices (WTI) have no significant effect on the IHSG return. Result of this research identifies that IDX Composite Index and FTSE Bursa Malaysia Index have significant difference but FTSE Bursa Malaysia tends to have better performance significantly than of IDX Composite Index. This finding explains that IDX Composite Index and FTSE Bursa Malaysia have different performance in price movement. FTSE Bursa Malaysia has better performance than IDX Composite Index. By looking at Appendix 1, if the currency of each country is converted into US Dollar, Malaysian index has higher value in price movement. It shows that investors would more profitable if they invest their fund at Malaysian capital market or Bursa Malaysia Berhad. This result is supported by previous study by Shofiyullah (2014) which proved that there is a significant difference between FTSE Bursa Malaysia and IDX Composite Index, and the study of Gardika (2017) which concluded that Islamic index of Malaysia has a better performance than Indonesian Islamic Index.

## **5. CONCLUSION**

After conducted a research, the author found out the conclusion of the problem statements as follow: (1) Indonesia's inflation rate has no effect on IDX Composite Index during the period 2012-2017. (2) In Indonesia, USD/ IDR exchange rate has positive significant effect

toward IDX Composite Index during 2012-2017. (3) Indonesia's Gross Domestic Product has a positive and a significant effect toward IDX Composite Index in 2012-2017. (4) WTI crude oil price has no effect on IDX Composite Index in the period 2012-2017. (5) In Malaysia, inflation rate has no effect on FTSE Bursa Malaysia Index during 2012-2017. (6) Ringgit Malaysia exchange rate toward USD (MYR/USD) has no effect on FTSE Bursa Malaysia Index in 2012-2017. (7) Malaysia's Gross Domestic Product significantly has positive effect on FTSE Bursa Malaysia Index in the period 2012-2017. (8) WTI crude oil price has no effect on FTSE Bursa Malaysia Index during 2012-2017. (9) IDX Composite Index and FTSE Bursa Malaysia Index are significantly different and FTSE Bursa Malaysia has better performance than IDX Composite Index.

## **IMPLICATION**

In Indonesia, based on for investors, this research can apply for: (1) Otoritas Jasa Keuangan or OJK, it can formulate guidelines for procedures in the Capital Market sector by taking into account macroeconomic factors. (2) Bank of Indonesia can remain to have a stable exchange rate and make it to be strong because exchange rate has positive effect on IDX Composite Index. This can be a consideration for Bank Indonesia in making monetary decisions. (3) Financial managers of public companies listed on Indonesia Stock Exchange need to pay attention on the macroeconomics changes, such as Inflation rate, exchange rate, Gross Domestic Product (GDP) and WTI crude oil price.

For Malaysia, stock prices in Malaysia were not significantly affected by exchange rates, oil prices, and inflation rates. This implies that the exchange rates, oil prices, and inflation rates are not the right indicators to predict the index stock price for those who want to invest in the Malaysian stock capital market. Investors who want to invest their capital in the Malaysian capital market must pay more attention to factor or other macroeconomic variable that had a significant effect on stock prices on Malaysian capital market such as gross domestic product. Besides for investors, Bank Negara Malaysia can uses this research to maintain the stability of macroeconomic factors in order to make stability in Malaysian Capital Market or Bursa Malaysia.

## **REFERENCES**

- Aloui, R., Aïssa, M. S. B., & Nguyen, D. K. (2011). Global financial crisis, extreme interdependences, and contagion effects: The role of economic structure? *Journal of Banking & Finance*, 35(1), 130–141.
- Anlas, T. (2012). The Effects of Changes In Foreign Exchange Rates On ISE-100 Index. *Journal of Applied Economics and Business Research*, 2(1), 34-45.
- Asmy, M., Wisam Rohilina AH., and M. Fouad. (2010). Effect of Macroeconomic Variables on Stock Prices in Malaysia: An Approach of Error Correction Model. *The Global Journal of Finance and Economics*, 7 (2): 149- 168.
- Bjørnland, H. C. (2009). Oil price shocks and stock market booms in an oil exporting country. *Scottish Journal of Political Economy*, 56(2), 232-254.
- Cong, R.-G., Wei, Y.-M., Jiao, J.-L., and Fan, Y. (2008). Relationships between oil price shocks and stock market: An empirical analysis from China. *Energy Policy*, 36(9), 3544–3553.

- Coppock, L., & Mateer, D. (2014). *Principles of Macroeconomics*. New York: W.W. Norton & Company Inc.
- Demerguc, A., & R. Levine. (1996). Stock markets, corporate finance, and economic growth: An overview. *TheWorld Bank Economic Review* 10(2): 223-239.
- Dhaoui, A., & Khraief, N. (2014). Empirical linkage between oil price and stock market returns and volatility: Evidence from international developed markets. *Economics Discussion Papers* (No. 2014-12).
- Ding, Haoyuan et al. (2016). Crude oil and stock market: Causal Relationship in Tails?. *Energy Economics*.
- Eiteman, David K., Arthur I. Stonehill, and Michael H. Moffet. (2006). *Multinational Business Finance* 11th Edition. New York: Pearson Education, Inc.
- Fatihudin, D., & Firmansyah, MA. (2018). The Effect of Macro Economics on Indeks Harga Saham Gabungan (IHSG) in Indonesia Stock Exchange (IDX) Period 2007-2016. *International Journal Of Innovative Research & Development*, 7 (11), pg 69-71.
- Gardika, Rama. (2017). Comparative Study Between The Performances Of Two Islamic Indices: Ftse Bursa Malaysia Emas Syariah (Fbms) And Indonesia Sharia Stock Index (ISSI). *Jurnal Akuntansi, Manajemen, dan Ekonomi*, 20 (1), pg. 16-36.
- Geetha, Caroline. (2011). The Relationship Between Inflation And Stock Market: Evidence From Malaysia, United States And China. *International Journal of Management and Business Research*, 1 (2).
- Glick, R., and A. K. Rose. (1999). Contagion and trade. *Journal of International Money and Finance*, 18(4), 603–617
- Gujarati, Damodar N. (2003). *Basic Econometrics*. 4th Edition. The McGraw-Hill Companies, Inc. New York.
- Hadi, Nor. *Pasar Modal (Acuan Teoritis dan Praktis Investasi di Instrumen Keuangan Pasar Modal)*. Yogyakarta: Graha Ilmu.
- Hamidi, Hakima NA., Norlin Khalid, and Zulfeily Abdul Karim. (2018). Revisiting Relationship Between Malaysian Stock Market Index and Select Macroeconomic Variables Using Asymmetric Cointegration (Mengkaji Semula Hubungan Antara Indeks Pasaran Saham Malaysia dan Pembolehubah Makroekonomi Menggunakan Kointegrasi Asimetri). *Jurnal Ekonomi Malaysia*, 52(1), 2018 341-350.
- Hamilton, James D., (2008). *Understanding Crude Oil Prices*. NBER WORKING PAPER SERIES. 14492. Cambridge.
- Hata, Yasmin N. (2018). *Federal Reserve Quantitative Easing And Its Impact On Indonesian*

Stock Market. Thesis.

Hendry, Damondar F. (1995). *Dynamic Econometric*. Oxford University Press.

Hersugondo, Robiyanto, Wahyudi, S., and Muharam, H. (2015). The World Oil Price Movements And Stock Returns In Several Southeast Asia's Capital Markets. *I J A B E R*, (13) 2, pg. 527-534.

Hooker, Mark A. (2004). Macroeconomic Factors and Emerging Market Equity Returns: A Bayesian Model Selection Approach. *Emerging Markets Review*. 5:379-387.

IDX. (2018). Retrieved from: [www.idx.co.id](http://www.idx.co.id). (Accessed on December 14th, 2018).

Isa, NM., Hasan, Zunairah, & Abdullah, A. (2012). Relationship between Macroeconomic Variables and Malaysia Available Shariah Indices. *Munich Personal RePEc Archive*, 69397, pg.1-14.

Ji, Q. (2012). System analysis approach for the identification of factors driving crude oil prices. *Computers & Industrial Engineering*, 63(3), 615–625.

Jones, Charles M. and Gautam Kaul. (1996). Oil and The Stock Market. *Journal of Finance*, 1(2), 463-491.

Jones, Charles P. (2013). *Investments: principles and concepts*. New York: John Willey & Sons.

Kewal, Suramaya Suci. (2012). Pengaruh Inflasi, Suku Bunga, Kurs, dan Pertumbuhan PDB Terhadap Indeks Harga Saham Gabungan. *Jurnal Economia*, 8 (1), 53-64.

Kilian, L. (2008). Exogenous oil supply shocks: How big are they and how much do they matter for the u.s. economy? *The Review of Economics and Statistics* 90 (2), 216–240.

Kilian, L. (2009). Not all oil price shocks are alike: Disentangling demand and supply shocks in the crude oil market. *The American Economic Review*, 99 (3), 1053–1069.

Kothari, C. R. (2004). “Research Methodology: Methods and Techniques, Second Revised Edition”. New Delhi: New Age International.

Kwofie, C. and Ansah, R. K. (2018). A study of the effect of inflation and exchange rate on stock market returns in Ghana. *International Journal of Mathematics and Mathematical Sciences*, March 2018, 1-8.

Lail, Khong Yen., Lee Sin Yee, and Mahendra Kumar a/l Chelliah. (2017). Relationship between Macroeconomics and Stock Market: Empirical study in Malaysia. *Journal of Research in Business, Economics and Management*, 8 (1), 1344-1367.

Laokulrach, M. (2014). Relationship between stock market and economic development in Thailand: Empirical test of the whole stock market and each industry in 1998-2012. *International Journal of Arts & Sciences*, 7(1), 235- 244.



- Levine, R., & Zervos, S. (1998). Stock Markets, Banks, and Economic Growth. *The American Economic Review*, 88(3): 537-558.
- Madura, Jeff. (2012). *International Financial Management*. 11th edition. Cengage Learning. Canada.
- Mille, J., R. Ratti. (2009). Crude oil and stock markets: stability, instability and bubbles. *Energy Economics* 31 (4). 559-568.
- Mishkin, F. S., & Eakins, S. G. (2009). *Financial Markets and Institutions*. Boston: Pearson Prentice Hall.
- Murthy, Uma., Paul Anthony, and Rubana Vighnesvaran. (2017). Factors Affecting FTSE Bursa Malaysia Index Stock Market Return in Malaysia. *International Journal of Business and Management*, 12 (1), 122-132.
- Najaf, R. and Najaf, K. (2016). Impact of oil prices on the stock exchange of Pakistan and Malaysia. *International Journal of Research – Granthaalayah*, 4(8), 84-91.
- Nandha, Mohan and Robert Faff. (2008). Does oil move equity prices? A global view. *Energy Economics*. 30(3), 986-997.
- Nazir, M. S., Nawaz, M. M., and Gilani, U.J. (2010). Relationship between economic growth and stock market development. *African Journal of Business Management*, 4(16), 3473-3479.
- Panggraito, I. G., Banani, A., and Suwaryo. (2014). Analisis pengaruh makro ekonomi dalam negeri dan indeks harga saham luar negeri terhadap pergerakan Indeks Harga Saham Gabungan (IHSG) di Bursa Efek Indonesia periode 2009-2013. *Performance*, 20(2), 72-86.
- Pok, W. C., & Poshakwale, S. (2004). The impact of the introduction of futures contracts on the spot market volatility: the case of Kuala Lumpur Stock Exchange. *Applied Financial Economics*, 14(2), 143–154.
- Rashid, A. and Muhamad N. (2011). Stock Prices and Exchange Rates: Are they Related? Evidence from South Asian Countries. *Pakistan Development Review*, 41 (4), 535-550.
- Reddy, L. D. (2012). Impact of Inflation and GDP on Stock Market Returns in India. *International Journal. Advanced Research in Management and Social Sciences*, 1 (6).
- Republic of Indonesia. (1995). Law No. 8 Year 1995 about Definition of Capital Market. Jakarta. Samuelson, P. A., Nordhaus, W. D. (1998). *Economics*. Irwin/McGraw-Hill. Boston.
- Sekaran, Uma. (2006). *Research Methods for Business*. John Wiley & Sons, Inc. United States of America. Shiller, R.J. (1995). *Hedging Inflation and Income Risks*. The

Manchester School, 63 (S1), 1-21.

Scott, Smart., Lawrence Gitman and Michael Joehnk. (2014). *Fundamental of Investing*. Pearson Education Limited. United States of America.

Shula, K. (2017). The impact of GDP, inflation, interest and exchange rates GDP on the stock market in Zambia. EAZ Working Paper.

Singh, T., Seema Mehta and M.S. Varsha. (2011). Macroeconomic Factors and Stock Return: Evidence from Taiwan. *Journal of Economics and International Finance*, 2 (4): 217-227.

Stax, O., Taylor, T., and Greenlaw, S.A. (2014). *Principle of Macroeconomics*. Texas: Media Services.

O'Sullivan, Arthur and Sheffrin, Steven M. (2003). *Economics: Principles in Action*. Upper Saddle River, New Jersey 07458: Pearson Prentice Hall.

Suliyanto. (2011). *Ekonomi Terapan: Teori dan Aplikasi dengan SPSS*. Yogyakarta: Andi.

Shofiyullah, N. F. (2014). "Comparison of Jakarta Islamic Index and FTSE Bursa Malaysia Hijrah Shariah Index". *Journal of Business and Management*. Vol. 14, No. 2, pp. 19-34.

Syarofi, FH., & Muharam, Harjum. (2014). The Impact of the Domestic Interest Rates, Exchange Rate, World Oil Prices, World Gold Prices, DJIA, Nikkei 225 and HSI on the JCI. The Second International Conference on Finance.

Tsagkanos, A., & Siriopoulos, C. (2013). A long-run relationship between stock price index and exchange rate: A structural nonparametric cointegrating regression approach. *Journal of International Financial Markets, Institutions and Money*, 25, 106-118.

Wongbangpo, Praphan and Subhash C. Sharma. (2002). Stock Market and Macroeconomic Fundamental Dynamic Interaction : ASEAN-5 Countries. *Journal of Asian Economics*, 13:27-51.

Yusof Bin, MKAD., & Rambeli Binti, N. (2017). The Effect of Selected Macroeconomic Variables and Globalization Factors on Return on Stock Market for Selected Sectors in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 7 (11), pg. 1004-1011.