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Stock Market Movement in Malaysia: Islamic Versus Conventional Stock Market

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Abstract
This study is undertaken to identify the determinants of stock market return and their movement towards Islamic and conventional stock market in Bursa Malaysia. The data from the period of January 2007 to December 2018 is employed to this study this study is from January 2007 until December 2018 and the stocks data is based on Kuala Lumpur Composite Index (KLCI). Furthermore, the dependent variables of this study are 100 leading companies (FMB100) for conventional stock market whereas Hijrah Shariah Index is being referred for the Islamic one. Further, its independent variables are money supply, gross domestic product, interest rate, exchange rate and industrial production index. To run those obtained data, the researchers have employed Descriptive Statistic, Pearson Correlation, Regression Model, Correlation Coefficient and Multicollinearity test (Variance Inflation Factor) and it is found that both interest rate and exchange rate are statistically significant in determining the Islamic or the conventional stock market price movement. Meanwhile, money supply and gross domestic product (GDP) are found to have significant relationship only with Islamic stock market. Thus, industrial production index gives significant impact just towards the conventional market. After all, the study is employing all macroeconomics factors and stock market in one model to infer the difference influences against two stock market's condition.
Purpose: To investigate the macroeconomic determinants affecting the conventional and Islamic stock market performance in Malaysia by manipulating descriptive statistics, Pearson Correlation and Regression Model thru E-View 10 software.
Design/methodology/approach: The analysis is carried out by using EViews 10 to run and analyze the data in measuring the stock market return movement of both conventional and Islamic stocks. Hence, the results obtained were used to clarify any significant relationship existed between the independent variables and the dependent variable. In addition, the data

reading too, consists of descriptive statistics, Pearson Correlation and Regression model as well.
Findings: Interest rate, exchange rate, and industrial production are considered to be the best models that act as macroeconomic determinants in affecting the conventional stock market movement (FBM100) whereas both exchange and interest rates were found to have the most major impact towards HIJRAH stock market movement. In fact, money supply and gross domestic product also needs to be considered as the determinants that can affect the Islamic stock market movement as well.
Research limitations/implications: The study is using time series data. Therefore, it involves some long period data such as KLCI and FBM Hijrah that cannot be obtained directly from Bursa Saham because it provides data for the previous six months only. This has led to difficulty in finding such data on other websites.
Practical implications: Additional focus and awareness should be placed on Islamic market since the market is highly related to the economic condition of Malaysia. Besides, it is known to be shariah compliance and to have higher transparency compared to the conventional stocks.
Originality/value: A contribution to the line of macroeconomic movements studies since this study is conducting several macroeconomics effects and other determinants namely narrow money supply (M1), broad money supply (M2), gross domestic products (GDP) interest rate (IR), exchange rate (MYR) and industrial production index (IPI) on Kuala Lumpur Composite Index (FTSE Bursa Malaysia KLCI) and Islamic Stock Market (FBM Shariah Hijrah)

Keywords: Conventional stock market, Islamic stock market, money supply, gross domestic product, interest rate.

Introduction

Of late, many studies had been conducted relating to factors affecting macroeconomic development, in terms of money demand and supply movements, households, interest rates and exchange rates. Those studies have stated that most of the contributors for macroeconomic development are the various trading activities and transactions by international traders and one of those is stock market. Therefore, the previous researchers mostly conducted their studies to investigate the relationship between stock market and current economic condition. Nonetheless, there are still numerous researches who have undertaken those studies to determine existing relationship between KLCI stock market index and the determinants of macroeconomic in Malaysia.

As an extending purpose from the existing researches on macroeconomic movements, this paper contribute to the line of those researches by conducting several macroeconomics effects and other determinants which are narrow money supply (M1), broad money supply (M2), gross domestic products (GDP) interest rate (IR), exchange rate (MYR) and industrial production index (IPI) on Kuala Lumpur Composite Index (FTSE Bursa Malaysia KLCI) and Islamic Stock Market (FBM Shariah Hijrah); both are the stock markets indexes in Malaysia. Since there were too many studies that are generally focused on conventional stock market in recent decades, less attention was then given to Islamic stocks condition. Thus, this study highlights and adds that least focused index and the index is used for comparison purposes towards the conventional stock market in Malaysia.

Bursa Saham Malaysia (formerly known as Kuala Lumpur Stock Exchange) was set up in March 1960. Public trading of stocks and shares were commenced later in May 1960 in the clearing house of Bank Negara Malaysia. Bursa Saham Malaysia, as well as many other stock markets in Asia, have experienced considerable growth and turbulence. Thus, those processes have resulted in a profound change in Malaysia's economy.

Bursa Saham Malaysia and FTSE Group have been partnered since 2006 to provide a suite of indices for Malaysian Market. On the other hand, Bursa Malaysia, FTSE and Kuala Lumpur Composite Index (KLCI) are three major stock market indexes which track the performance of 30 largest constituents. KLCI has a base value of 100 as of 2nd January, 1977. The creation of KLCI eases the investors to track funds, derivatives and it too, acts as an indicator of the market performance. KLSI is comprised of various companies from essential sectors such as financial, plantation, telecommunication, gaming, utilities, consumer, and transportation sector. In general, all stocks of KLSI are selected and weighted to ensure that the index can be invested. (FTSE Group, 2015).

In 1992, Islamic Capital Market (ICM) was introduced in the economy of Malaysia. Instantly, its existence during that period was reflected by the presence of Islamic stock-broking operations which include Islamic indices as well as unit trusts and list of permissible counters in the KLSE as issued by Securities Comission (SC). The main feature of ICM is that all its activities are guided by Shariah injunctions. These are actually an assertion of religious laws in the capital market that ensure all transaction elements must be free from usury (riba), gambling (maysir) and uncertainties (gharar). Besides that, SC too, uses benchmarks based on Ijtihad (Shariah based reasoning) that ascertains all contributions of non-permissible activities must exceed those benchmarks and securities shall be classified as Shariah non-compliant. Thus, on 26th May 2017, 676 securities were classified to be Shariah compliant. Those securities represented 75% of the securities listed in Bursa Malaysia. On the other hand, Bursa Malaysia had launched three Shariah indices to track the performance of Shariah compliant securities which consists of FTSE Bursa Malaysia Hijrah Shariah Index, FTSE Malaysia EMAS Shariah Index and FTSE Malaysia Small Cap Shariah Index.

Moreover, stock market in Malaysia plays an important role in accumulating capital formation and sustaining the economic growth of the country. However, there is no benchmark existed in monitoring movement of stock prices. Yet, there are several macroeconomic factors that are important in determining the volatility of stock market price and return. Former studies conducted by previous researchers however, had focused only on macroeconomic variables or exchange rate as well as industrial production independently without even combining those variables together as a model to be studied. Besides, most of the researchers had conducted studies only on conventional stock market. It is obvious that Islamic stock market is less explored due to its small size and the geographical locations of Malaysian stock market. Therefore, this study adds the literature available to emerging markets in Malaysia by combining all the variables in one specific model and it is being compared to the conventional and Islamic stock market. Throughout the study, the researchers too, were determined to examine the relationship existed between those listed macroeconomic variables that affecting both stock markets and how does the relationship differ among the variables and their performances.

Literature Review

Stock prices play an important role in determining the future course of events for every country. There are several studies undertaken to investigate a relationship between stock market returns and macroeconomic factors during last few decades. Previous researches had stated that volatility in selected variables known as inflation rate, money supply, interest rate, exchange rate and oil price may influence the volatility of the stock market return. Since then, there were more researchers who have disclosed their interests in identifying the relationship between the stock market return and the variables. They have tested those variables with different methodologies and employed various time frame data. However, only a few number of such

studies were undertaken by advanced countries and less studies were registered in developing countries like Malaysia

Stock market return and money supply

Heng et al. (2012) found that there is a positive significant relationship between money supply and stock market return whereas another finding of a study conducted byAb. Rahman and Hatta, (2013) stated a positive relationship between money supply and stock price. In addition, Zakaria anf Shamsuddin (2012)via their study concluded that money supply volatility is significantly related to stock market volatility and the relationship is positive. These findings too, were supported by a study conducted by Maskay, (2007).

On the other hand, a study by Gunasekarage et al. (2004) on the influence of the macroeconomic variables towards the stock market of an emerging country, Colombo showed that the variables were statistically found to have significant influence on the stock market of the country. Further, Geetha et al, (2011) stated that they found long run relationship existed between expected and unexpected inflation with stock returns yet, there was no short run relationship found between the macroeconomic variables for the stock market in Malaysia. In contrast, the study performed in Egypt found negative relationship between the macroeconomic variables and the long- run and short-run relatioship. (Omran & Pointon, 2001).

However, a surprising aspect that appeared from forgoing discussions was that money supply is negatively related to stock prices (Ibrahim & Aziz, 2003). Another study by Rahman, Sidek and Tafri. (2009) stated that an increment in money supply is found to produce negative ramifications on KLCI. Meanwhile, Hosseini et al. (2011) found that the fluctuation in money supply has negatively impact the stock market of India, which was contradicted to the positive relationship found throughout the study conducted towards the stock index of China. Those findings, however, were not supported by the studies conducted by Habibullah and Baharumshah (1996) and Sourial, (2002) in which they concluded that money supply and stock market are not co-integrated with each other.

Stock market and GDP

Nordin and Nordin (2016) reported that the finding of their study showed that stock market does positively affect the overall gross domestic products or economic growth of a country and this finding has supported all findings disclosed by the previous studies based on the same area. However, they also found out that the effect only lasts for a short period in response to the change of size occured to the stock market. This is agreed by Ogutu (2011) who concluded that GDP would lead to the increase of perfomance of the stock market.

Thus, real GDP, which is determined by the nation's output, is also determined by constant or market prices that would lead to additional money that can be dispensed on stock purchases. Moreover. Zakaria and Shamsuddin (2012), stated that the stock market return is not statistically important. Imdadullah and Hayatabad (2012), too found the insignificant relationship between GDP and the stock returns of KSE 100 index.

Stock market return and interest rate

In a study carried out by Heng et al. (2012), they found an inverse relationship existed between interest rate and stock market return and Kuwornu and Owusu-Nantwi (2011) too, concluded that the interest rate shows negative significant influence on the stock market returns. However, a study done by Hamrita and Trifi (2011) that employed the use of wavelet analysis that is relatively new found a significant relationship between exchange rate and stock index only at low frequencies which is at the longer horizons. This indicates that the increment of interest rate was associated with the fall in stock index and vice versa. Later, interest rate was also

discovered to have a negative impact on stock market which is done on the market of Pakistan (Ali, 2014).

Unlikely, the finding of the study by Gunasekarage et al.,(2004) that has been mentioned earlier disclosed the significant influence of the interest rate towards the stock market of Colombo Infact, Rahman et al. (2009) too found that there is significant and positive relationship between these two variables via his study and the same finding was emphasized by Ab Rahman and Hatta (2013), who found the positive relationship existed between the interest rate and the stock price.

Interestingly, a study carried out among the developed and developing countries by Alam and Uddin (2009) in determining the relationship between the interest rate and the stock price discovered that the interest rate actually has no relation with share price. Instead, they found that the changes of interest rate has the negative relationship with changes of the share price in Malaysia. Thus, this result is in line with the study undertaken by Imdadullah and Hayatabad (2012) who concluded that the interest rate is insignificant with the dependent variables and on the stock returns of KSE 100

Stock market return and exchange rate

Asmy, Rohilina, Hassama, and Fouad (2009) via their study had tested the data for pre-crisis and post crisis and they found out the existence of different pattern of interaction was in the period before and after a crisis occured. The details of their findings mentioned that before the occcurence of a crisis, the long-run relationship was identified to be positive. However, they figured out that the negative association has indicated that the effects of negative currency effect net are more dominant, hence creating downward pressure on stock prices. This indicates that the economy of Malaysia is open for international trade.

Furthermore, the existence of negative association was found by Ibrahim and Aziz, (2003) between stock returns and Ringgit exchange rate throughout the study they have conducted before. Their finding was parallel to the finding of the study conducted by Imdadullah and Hayatabad (2012) and they stated that the exchange rate is not related to stock returns of KSE 100 index. In addition, Rahman et al. (2009) via their study had identified a negatively significant long run effects of exchange rate on the stock market of Malaysia in VECM framework. They too, concluded that depreciation of Ringgit Malaysia tends to deter investors' confidence on the stock market return. This was proven when KLCI descended by more than 30 percentage points during the onset of the Asian financial crisis in July 1997. During that period, Ringgit Malaysia was depreciated by 25% against USD. Thus, the investors' confidence on the stock market return deterred especially when the ringgit was pegged to the USD on 2nd September 1998. During that time, the stock market of Malaysia was plummeted for the second time to as low as 262.70 points. Despite all those findings, M. S. Khan (2014) however figured out that the exchange rate and the stock prices of KSE-100 index show a strong positive correlation.

Stock market and industrial production

The industrial production index is typically used as a proxy for the level of real economic activity. It is theoretically shown that the industrial production increases during economic expansion and decreases during a recession, and thus a change in industrial production would signal a change in economy. The productive capacity of an economy indeed rises during economic growth, which in turn contributes to the ability of firms to generate cash flows. That is why the industrial production would be expected to act beneficially on expected future cash flows, hence a positive relationship between real economy and stock prices exist. (Adigwe, Nwanna & Ananwude, 2015). Increased production means increased spending on capital where

further replenish inventories therefore increased profits. The investors later will recognize the increased earnings and revalue the stocks and price the higher in order to get higher return. Lazarus (2017), in parallel, concluded that there is a strong relation between current sector returns and future industrial production growth rates on the sectoral level. However, (Maditinos et al, 2011) on the other hand, found differ results from them where his analysis indicates that stock market movements are negatively linked to both industrial production and inflation, even though the inflation coefficient is not statistically significant.

Theoretical Framework and Hypothesis Development

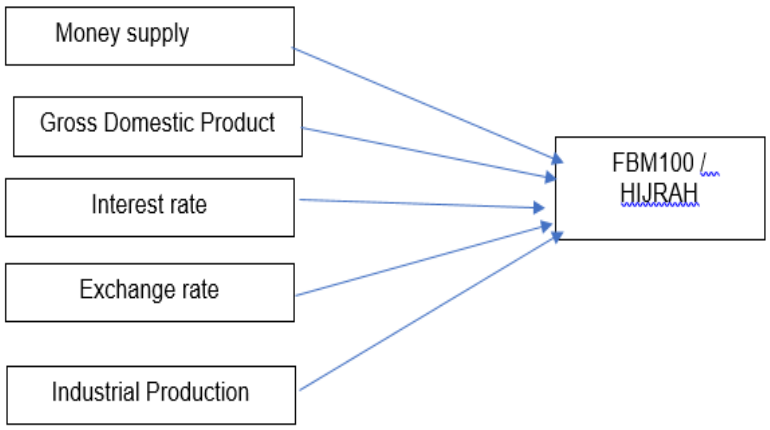

Figure 1: Theoretical Framework

Hypotheses statement

H1: There is significant relationship between money supply and KLCI.

H2: There is significant relationship between gross domestic product and KLCI.

H3: There is significant relationship between interest rate and KLCI.

H4: There is significant relationship between exchange rate and KLCI .

H5: There is significant relationship between industrial production index and KLCI.

Method

Causal study is the type of study employed for this study. It is undertaken to measure the relationships or to establish the differences between groups. This study is used as it is regarding the testing of the variables to determine whether a variable can cause another to change. As for this study, the researcher is going to test how the money supply level, gross domestic products, interest rate, exchange rate and industrial production will affect the conventional and Islamic stock market price movement either positive or negatively related or being significant or not to each other.

Moreover, this paper aims for the financial stock market of Malaysia known as Bursa Malaysia (BM). All targeted companies and performance are located in Malaysia and the data obtained consists of all 30 top constituents for Islamic stock market as well as the top 100 ranking companies in conventional stock market (KLCI). This study focused on time series data within the period of 2007 to 2018 and the data is referred to monthly data with the total amount of 144

from all independent variables. It also employed Kuala Lumpur Composite Index (FTSE Bursa Malaysia KLCI) and KLCI is divided into many types and for the purpose of this study as mentioned before, only the top 100 leading companies known as FBM100 were chosen for to represent the conventional stock market. Meanwhile, as for Islamic stock market, FBM Hijrah Shariah acts as the proxy for dependent variable that represents the top 30 companies in Bursa Saham Malaysia. The price percentage and changes over time was taken in general and the volatility average of the listed companies were considered as well.

Generally, most finance research papers employ daily, monthly, quarterly, or yearly time series data in fulfilling their purposes. Thus, this paper employed monthly-basis data that began in 2007 and ended in 2018 and it was downloaded either from Bank Negara Malaysia or Investing.com. In short, 144 observations were performed by the researches towards the data throughout the study.

For sampling of the study, FBM100 and FBM Hijrah Shariah were used as they are the major indicator of the stock market price performance and volatility in Malaysia. The sampling comprises of 100 leading constituents used for the conventional stock market and 30 companies were used as samples for the Islamic stocks in Bursa Malaysia. With the shift in emphasis of Bank Negara Malaysia (BNM), the central bank of Malaysia, towards broader monetary aggregates during the mid-1980s, such aggregates seems to play an important role in the conduct of monetary policy. Moreover, the broader monetary aggregate such as M2 that employed by the researchers in this study satisfies both wealth and substitution effects of monetary holdings and, makes the aggregate to be more appropriate for the present analysis.

Besides that, the data of Gross Domestic Products (GDP) that was used in this study was obtained from the statistics of Bank Negara Malaysia at its current prices. GDP, by kind of economic activities, consist of various services such as transportation and storage, communication, finance/ insurance, estate and event government services. This data was provided on yearly and quarterly basis only. Thus, the amount obtained from the analysis needed to be manually converted into monthly basis in order to make the data available to be synchronized with other data.

On the other hand, the bilateral Ringgit-US dollar rate is justified as the exchange rate employed to all samples based on its importance to international transactions and economy of Malaysia.The rate too, was referred for the unit and price of exchange inter currencies within other countries. In addition, the data chosen from BNM on the exchange rate was in term of average rate instead of the end of the period rate.

Further, the interest rate used in this study was referred to the weighted average base lending rates by commercial banks. Hence, Consumer Price index is the most frequently used indicator of inflation and reflect changes in the cost of acquiring a fixed basket of goods and services by the average consumer. The weights are usually derived from household expenditure surveys. In addition, Industrial Production Index data that was employed in this study is extensive since it consists of various sources such as mining, electricity, manufacturing, consumer products and construction. Therefore, the average of all groups have been considered throughout this study since Industrial Production Index (IPI) was used as a proxy for real level economic activities, as IPI increases during economic expansion and decreases during recession.

The analysis for this study was completed by the use of EViews 10 in running and analyzing the data in which the measurement is stock market return movement of conventional and Islamic stocks. The results obtained from the analysis were used in order to determine any significant relationship existed between the independent variables and the dependent variable. Hence, the data readings in this section consists of Descriptive statistics, Pearson correlation and Regression model.

Findings

Table 1: Descriptive Statistic for FBM100

Variable Statistics	Klci (FBM100)	Money Supply	Gross Domestic Product (GDP)	Interest Rate	Exchange Rate	Industrial Production Index
Mean	9.229238	14.03915	10.63924	6.524167	3.539874	161.0750
Median	9.305079	14.11049	10.66643	6.650000	3.407700	109.4000
Maximum	9.477552	14.43942	11.14848	6.910000	4.461500	397.8000
Minimum	8.622097	13.52052	10.04850	5.510000	2.985300	90.80000
Standard Deviation	0.208497	0.275682	0.314580	0.368599	0.443039	102.5935
Skewness	-1.192787	-0.385660	-0.230705	-1.752120	0.649142	1.401536
Kurtosis	3.832911	1.805965	1.851084	5.224791	2.038856	3.138724

Table 2: Descriptive Statistic for HIJRAH

Variable Statistics	Hijrah Shariah	Money Supply	Gross Domestic Product (GDP)	Interest Rate	Exchange Rate	Industrial Production Index
Mean	9.354532	14.03915	10.63924	6.524167	3.539874	161.0750
Median	9.420296	14.11049	10.66643	6.650000	3.407700	109.4000
Maximum	9.626994	14.43942	11.14848	6.910000	4.461500	397.8000
Minimum	8.789645	13.52052	10.04850	5.510000	2.985300	90.80000
Standard Deviation	0.226959	0.275682	0.314580	0.368599	0.443039	102.5935
Skewness	-0.785038	-0.385660	-0.230705	-1.752120	0.649142	1.401536
Kurtosis	2.623389	1.805965	1.851084	5.224791	2.038856	3.138724

Both Table 1 and 2, show the descriptive statistics data obtained for both the conventional and Islamic stock market return in Malaysia for these five variables: money supply, GDP, interest rate and exchange rate and industrial production.

The statistics showed that the median obtained by FBM100 is 9.30507 and and HIJRAH is 9.420296.whereas the median for other variables are as follows; money supply (14.11049); GDP (10.66643); interest rate (6.650000); exchange rate (3.407700); and industrial production (109.4000). Meanwhile the maximum reading for dependent variable obtained by FBM100 is 9.477552 and the maximum value for HIJRAH is 9.626994. Further, the maximum statistics obtained for the independent variables is 14.43942 for money supply, 1.14848 for GDP, 6.91000 for interest rate, 4.461500 for exchange rate and 397.8000 for IPI. Furthermore, the

statistics disclosed that the minimum value for FBM100 is 8.622097 and HIJRAH obtained 8.789645. The value obtained for those independent variables are as follows; 13.52052 (money supply), 10.04850 (GDP), 5.510000 (IR), 2.985300 (ER) and 90.80000 (IPI).

In addition, descriptive statistics also function in describing data sets that measures dispersion and variability. The variability can be measured by comparing the number of standard deviations and mean. By referring to those tables, all variables either dependent or independent, showed that the standard deviation is less than the mean which indicated that the variables are low in variability. If, let say, the standard deviation obtained is more than the mean, it will be resulting in high variability. For instance, the figures for money supply's standard deviation (0.275682) is lower than mean (14.03915) , following with GDP (SD 0.314580 < 10.63924 Mean), interest rate (0.368599 < 6.524167), exchange rate (0.443039 < 3.539874) and IPI (102.5935 < 161.0750).

Another information that can be found in the descriptive analysis is skewness where it represents the asymmetry of the probability distribution of a real-valued random variable. The skewness value can be both positive or negative or even undefined. The skewness value should also be around zero. For example, the skewness value for exchange rate is 0.649142 and IPI is 1.401536 and the value too, will not exceedingly more than five. The inflation's skewness is negative for both FBM100 and HIJRAH, and the value obtained for variables such money supply (-0.385660) and GDP (-0.230705) were found to be negative. Negative skewness indicates that the tail is on the left side of the distribution meanwhile the positive skewness such as exchange rate indicates the tail on the right. In cases where one tail is long, but the other tail is fat, skewness does not obey simple rule and a zero value means that the tails on both sides of the mean balance out overall.

In order to measure the thickness or heaviness of distribution for the variable along its tail, the data refers to kurtosis. It is also know as "tailedness" of the distribution. The distribution with kurtosis equal to three follows a normal distribution whereas the distribution is abnormal if it is exceeded negative or positive five. Based on the kurtosis data of money supply (1.805965), GDP (1.851084), exchange rate (2.038856) the kurtosis is less than three. Therefore the distribution has shorter and thinner tails, also lower and broader compared to normal distribution. In contrast, the kurtosis that is greater than three can be seen by interest rate data which is IPI (3.138724). It indicates that distribution has longer and fatter tails than normal distribution. Moreover, the peak is shaped as higher and sharper.

Table 3: Pearson Correlation between variables (FBM100)

Variable	FBM100	Money Supply	Gross Domestic Product (GDP)	Interest Rate	Exchange Interest	Industrial Production
FBM100	**1.000000**					
Money Supply	0.826499	**1.000000**				
Gross Domestic Product (GDP)	0.826783	0.986452	**1.000000**			
Interest Rate	0.523195	0.437846	0.465913	**1.000000**		
Exchange Rate	0.242545	0.547308	0.577577	0.305675	**1.000000**	
Industrial Production	-0.715332	-0.770404	-0.758579	-0.023942	-0.148144	**1.000000**

Table 4: Pearson Correlation between variables for HIJRAH

Variable	HIJRAH	Money Supply	Gross Domestic Product (GDP)	Interest Rate	Exchange Interest	Industrial Production
HIJRAH	**1.000000**					
Money Supply	0.877572	**1.000000**				
Gross Domestic Product (GDP)	0.878123	0.986452	**1.000000**			
Interest Rate	0.608292	0.437846	0.465913	**1.000000**		
Exchange Rate	0.364289	0.547308	0.577577	0.305675	**1.000000**	
Industrial Production	-0.627690	-0.770404	-0.758579	-0.023942	-0.148144	**1.000000**

Table 3 and 4 represent the correlation between all variables. In order to know whether the variables have strong correlation or not, the value of correlation must be at 80.0% or higher than 80.0%. For the correlation between independent variable and dependent variable, both FBM100 and HIJRAH have a strong positive correlation with money supply and GDP at value 82.64% and 82.64% for FBM100 while for HIJRAH, the correlation is 87.75% and 87.81% for money supply and GDP respectively. Coefficient values between money supply and GDP towards both stock market is strong which is higher than 80.0% while industrial production have a negative correlation with the stock market at 71.53% for FBM100, and 62.77% for HIJRAH sequence.

However, for the correlation between independent variables, money supply has identified to have a positive correlation with GDP, interest rate and exchange rate with the value of 98.64%, 43.78%, 54.73% respectively while a negative correlation was determined with industrial production at the value of 77.04%. Besides, industrial production was fund to have negative relationship with all the variables.

Pearson Correlation is then conducted to examine the multicollinearity problem that exists between two independent variables. There will be no multicollinearity problem if the correlation value less than 80.0%. As for this analysis there is one multicollinearity problem exist between independent variables which is money supply and GDP amounting 98.64%, more than 80.0%.

T-statistic is employed to determine if there is a significant relationship between the dependent and independent variable. Based on the result obtained for the analysis carried out for FBM100, the value obtained by the independent variables are as follows; interest rate (5.506258), exchange rate (-4.187785) and industrial production (2.945863) Thus, the relation between FBM100 and those independent variables is significant since their values are higher than the rule of thumb which is two. Moreover, HIJRAH can be concluded to have four significant relationships between the independent variables which are money supply (2.4741068), GDP (2.420141), interest rate (4.970296) and exchange rate (5.231382).

In contrast, two independent variables, both are money supply (0.987904) and GDP (1.550378) were identified to be insignificant for FBM100 since their values were lower than the rule of

thumb which is two. However, HIJRAH was found to have only one insignificant variable which is industrial production with an amount of 1.493752

Table 5: Ordinary Least Square Regression Method (FBM100)

Variable	Coefficient	t-Statistic	Prob
C	3.339393	3.072937	0.0026
MS	0.173789	0.987904	0.3249
GDP	0.265131	1.550378	0.1233
IR	0.172690	5.506258	0.0000
ER	-0.116106	-4.187785	0.0000
IPI	-0.000537	-2.945863	0.0038
R-squared	0.809460		
F-statistic	117.2512		
Prob (F-statistic)	0.000000	Durbin-Watson	0.168212

Regression Model:

$$FBM100 = 3.339393 + 0.173789\ MS + 0.265131\ GDP^* + 0.172690\ IR - 0.116106\ ER - 0.000537\ IPI + \varepsilon$$

Table 6: Ordinary Least Square Regression Method (HIJRAH)

Variable	Coefficient	t-Statistic	Prob
C	-0.802598	-0.804278	0.4226
MS	0.399667	2.474068	0.0146
GDP	0.380053	2.420141	0.0168
IR	0.143144	4.970296	0.0000
ER	-0.133188	-5.231382	0.0000
IPI	-0.000250	1.493752	0.1375
R-squared	0.864408		
F-statistic			
Prob (F-statistic)	0.000000	Durbin-Watson	0.236356

$$HIJRAH = -0.802598 + 0.399667\ MS + 0.380053\ GDP^* + 0.143144\ IR - 0.133188\ ER - 0.000250\ IPI + \varepsilon$$

Coefficient

Regression is a set of statistical processes used to estimate the relationships existed among variables. It is used to analyze and to understand which independent variable is related to the dependent variable. Thus, the regression model employed to this study has shown the there is relationship between the dependent variables of this study to their independent variables.

The results obtained from the regression model show that if other variables were held constantly, FBM100 will increase by 3.3394%. However, HIJRAH, on the other hand will decrease to 0.8026%. As for the independent variable, coefficient value of money supply is determined to have positive relation with the stock market. If there is an increment of one percent only in money supply, FBM100 will increase by 0.1738% while HIJRAH will increase by 0.39997%. It goes the same with the coefficient value of GDP. It has been identified to have positive relation with both FBM100 and HIJRAH. In short, if there in an increment of one

million in GDP, the value of FBM100 will increase to 0.265131% and an increment to 0.3801% for (HIJRAH). Meanwhile the coefficient value of interest rate has also identified to have a positive relation with the stock market. If there is one percent increase in the interest rate, it will affect the stock market will then increased too. However, in the case of the exchange rate, the coefficient value has a negative relation towards the stock market. It means that for FBM100, if there is one percent increment in the exchange rate, the stock market will decrease by 0.1161% and 0.1332% for HIJRAH. As for Industrial Production, this variable differently effects FBM100 and HIJRAH since it was found to negatively affects the KLCI and instead, it positively affect HIJRAH. The study too found out that the decreasing amount of IPI will increase the amount of FBM100 by 0.0005%. However, the increment will negatively affect HIJRAH since its amount has decreased by 0.0003%.

T-Statistic

Basically the purpose of t-statistic is to determine if there is a significant relationship between the dependent and independent variable. Usually measurement of t-statistic will consider the probability to know which independent variables has the most significant relation with money supply. By using probability, significant level of independent variable can be seen when the probability is not exceeding ten percent level of the significant relation.

Probability consist of three significant levels which are significant at the level of one percent, five percent and ten percent. In addition to measure the significant level of independent variable t-statistic can also be used by comparing t-statistic with t-critical. Usually t-critical is known as a "student t" and the rules of thumb for t-critical is two. Actually, rules of thumb is a custom law used by most researchers to compared with t-statistic. If t-statistic of independent variable is greater than t-critical, it means that the independent variable is statistically has significant relation with the dependent variable.

Hence, based on the result obtained from the analysis towards FBM100, three independent variables; those are interest rate (5.506258); exchange rate (-4.187785) and industrial production (2.945863) were determined to have significant relationship since the values obtained are higher than the rule of thumb which is two. HIJRAH, however, is found to have four significant independent variables which are money supply (2.4741068), GDP (2.420141), interest rate (4.970296) and exchange rate (5.231382). Furthermore, it was found that two independent variables; money supply (0.987904) and GDP (1.550378) were insignificant for FBM100 since the values obtained were lower than the rule of thumb which is two. Yet, HIJRAH was found to have only one insignificant variable which is industrial production with the value of 1.493752

R-Squared

Coefficient of determination R-squared is known as an explanatory power to test goodness of fit and to determine how well the regression line fits the data. It is also used to measure the proportion of total variation in the dependent variable that is explained by the regression equation. In details, the value of coefficient ranges from zero to one. The zero shows that none of the independent variable explained changes in the dependent variable while the one shows that all changes in dependent variable is explained by the variation in independent variable used in the regression. The most preferred value of R-squared is closed to one.

In having a good model, R-squared must be higher than 50 percent. It indicates that the independent variable itself is good on influencing the dependent variable.

Hence, according to Table 5 for FBM100, it shows that R-squared is 80.95 percent. It means 80.95 percent of the variation changes in FBM100 can be explained by money supply, GDP, interest rate, exchange rate and industrial production. The table also shows that 19.05 percent

of the variation changes in money supply cannot be explained. As for HIJRAH, Table 6 shows that the R-squared is a little bit higher than FBM100 and the value is 86.44 percent, which is more than 50 percent and can be explained by all independent variables, except for that 13.56 percent.

F-Statistic

F-statistic or known as F-value shows the overall explanatory power of regression model. It is used to test the hypothesis that a variation in an independent variable can explain a significant portion in another independent variable. Thus, if the calculated F-value is higher than F- critical value, it can be concluded that there is a significant relationship between the independent variables of this study and its dependent variables. As for F-critical, the rule of thumb will be used to determine whether the overall model is significant or not via its value of four.

Based on the result featured in Table 5 for FBM100, its F-statistic value is 117.2512. The value shows that the overall model is significant since F-statistic value is higher than the rule of thumb at the value of four. By looking at the probability of the F-statistic, it also shows that the interest rate, exchange rate and industrial production are significant at level one percent, the highest of all since its probability is ranged at zero percent. Farther, Table 6 displayed the F-statistic readings for HIJRAH, that is 175.9434, which emphasized the significant model with its value is higher than four. The four variables that were found to be significant with HIJRAH comprised of money supply, GDP, interest rate and exchange rate at the probability level one percent which is the highest level.

Table 7: Summary of Major Findings of KLCI.

Dependent Variable	Independent Variable	Ordinary Least Square
LFBM100	LMS	Not Significant
LFBM100	LGDP	Not Significant
LFBM100	IR	Positive Significant
LFBM100	ER	Negative Significant
LFBM100	IPI	Negative Significant

Table 8: Summary of Major Findings of HIJRAH.

Dependent Variable	Independent Variable	Ordinary Least Square
LHIJRAH	LMS	Positive Significant
LHIJRAH	LGDP	Positive Significant
LHIJRAH	IR	Positive Significant
LHIJRAH	ER	Negative Significant
LHIJRAH	IPI	Not Significant

Discussion and Conclusion

From the research, it is found that there is positive relationship between money supply and the stock price of HIJRAH. It is generally noted that monetary expansion is inflationary for the case of Malaysia and therefore a positive money supply-stock price relation should be expected. In addition, the relation between money supply and stock prices is not only accounted by inflationary pressures from monetary expansion. Instead, the inflation uncertainty and the expectations of future contractions may also accompany changes in money supply and later generate risk premium for holding shares (Ibrahim & Aziz, 2003). However, for KLCI, the relation is not significant. As an illustration, when taking the financial crisis into a consideration, it was found that money supply did not explain change in stock price. Sellin

(2001) in his reviewed studies, attributed the findings to the extent to which the market is efficient. Moreover, proponents of the efficient market hypothesis (EMH) hold that all available information is embedded in the stock prices and anticipated changes in money supply would not affect the stock prices. The unanticipated change, however, will only affect stock prices.

In the case of GDP, different result was also obtained and it stated that there was no significant impact to KLCI and positive significant to HIJRAH. It is normal that when the business obtains high profit, GDP is expected to increase. It happens because whenever the economic of a country is observed to be in a good condition, it leads investors to put trust their trusts on the stock market. On the other point of view, a stable economy is always impossible and there will be uncertainty involved although GDP performed well and this required for other factors to be considered. For instance, the highest performance of GDP was recorded in 2010 whereas the stock market was found to perform better in 2006. The study also shows that real GDP was increased marginally even though the stock market performed poorly during the period of recession that began in 2008 and ended in 2009. Thus, the performances of the stock market for those two cases were influenced by the performances of previous years and not the instantaneous one. (Ogutu, 2011)

Moreover, the positive relationship existed between the interest rate and the stock market return may occured because rates generally increases when the economy is prospering. Hence, companies generally are becoming more profitable during this period. Even though costs may rise slightly since interest rates are gradually raised, profit growth generally exceeds these costs. Higher profits, in turn, lead to higher stock prices. An industry that specifically benefits from rising interest rates is financial services industry.

On the other hand, the researcher found a negative relationship between Ringgit exchange rate and the stock returns. A common feature in any economy of a country is that it is highly dependent on international trade. For instance, it is very common practice for a country to do exports and imports of capital and intermediate goods. Throughout this practice, currency depreciation may encourage exports to increase. However, this may lead to the increase of costs of production through increasing domestic prices of imported capital and intermediate goods. The latter effect of currency depreciation on real output and expected cash flows of the firms seems more dominant. Moreover, the result is also consistent with the recent observations during the Asian crisis that both stock prices and exchange rates substantially decreased in value (Ibrahim & Aziz, 2003)

The analysis made on the data employed to this study also shows that the industrial production as negatively significant sign to the conventional stock market of FBM100 and it is not significant to Islamic stocks market of HIJRAH. This different influence towards the two type of market might be due to some sectors that present major data of industrial production compared to others. It may also be related to uncertainty and problem occurred in stock market themselves. (Maditinos et al, 2011)

The regression result obtained from the study also shows that interest rate, exchange rate, and industrial production are chosen and considered as the best model to explain the dependent variables for the conventional stock market of FBM100. it is also shown that interest rate has the most significant effect on the conventional stock market return predictability, followed by exchange rate.

As for the condition of Islamic stocks market, the regression stated that both exchange and interest rate were found to give the most major impact towards the stock market movement of HIJRAH. It is quite like the finding of the conventional stock movement as well. Besides, two additional variables were found to have normal significant and can be considered to have

impact towards the Islamic stock market and those variables are money supply and gross domestic product.

Since the analysis conducted for this study may be due to the vast involvement of interest rate in financial field and the consideration of exchange rate towards foreign companies and traders in Malaysia's stock market involving conventional or Islamic stocks. Therefore, focus should be given on the movement of interest rate and the condition of exchange rate. Future investors for conventional stocks should look onto the interest rate and exchange rate in the prediction of their return on investment more.

Besides that, even though the linkages in the macroeconomic variables and the movement of the stock prices have been well researched in the developed countries, there are still avenues for research in this area for emerging economies. As in the case of Malaysia, further research could be conducted to examine the relationship between the macroeconomic variables and various sectors in the stock market.

In terms of policy relevance, the findings of this study then suggested that the government should be cautious with how the interest rate and exchange rate are managed since they have ramifications for the budding stock price. Both of the variables were identified to have major significant for the conventional and the Islamic stocks. Besides that, additional attention for the conventional stocks is needed in terms of the industrial production of a country. The finding of the study also disclosed that the macroeconomic factors, namely money supply and GDP are some of the factors that may impact the Islamic stock market of HIJRAH.

After all, this study has exposed that the independent variables mostly give effect towards Islamic market stocks compared to the conventional one even though the Islamic market stocks were introduced la bit later in the country. More focuses and awareness should be laid on Islamic market since they are highly related to the economic condition of the country. Besides, it is shariah compliance and high transparency compared to the conventional stocks.

References

Ab Rahman, S. M. B., & Hatta, S. A. B. M. (2013). Macroeconomic variables of stock prices (KLCI). *Retrieved September*, *30*, 2015.

Adigwe, P., Nwanna, I. O., & Ananwude, A. (2015). Stock market development and economic growth in Nigeria: An empirical examination (1985-2014). *Journal of policy and Development Studies*, *9*(5).

Alam, M. M., & Uddin, M. G. S. (2009). Relationship between interest rate and stock price: empirical evidence from developed and developing countries. *International journal of business and management, 4*(3), p43.

Ali, H. (2014). Impact of Interest Rate on Stock Market; Evidence from Pakistani Market. *IOSR Journal of Business and Management, 16*(1), 64-69.

Asmy, M., Rohilina, W., Hassama, A., & Fouad, M. (2009). Effects of macroeconomic variables on stock prices in Malaysia: An approach of error correction model.

Geetha, C., Mohidin, R., Chandran, V. V., & Chong, V. (2011). The relationship between inflation and stock market: Evidence from Malaysia, United States and China. *International Journal of Economics and Management Sciences*, 1(2), 1-16.

Gunasekarage, A., Pisedtasalasai, A., & Power, D. M. (2004). Macroeconomic influence on the stock market: evidence from an emerging market in South Asia. *Journal of Emerging Market Finance, 3*(3), 285-304.

Habibullah, M. S., & Baharumshah, A. Z. (1996). Money, output and stock prices in Malaysia: an application of the cointegration tests. *International Economic Journal, 10*(2), 121-130.

Hamrita, M. E., & Trifi, A. (2011). The relationship between interest rate, exchange rate and stock price: A wavelet analysis. *International Journal of Economics and Financial Issues, 1*(4), 220-228.

Heng, L. T., Sim, C. F., Tee, W. W., & Wong, K. L. (2012). Macroeconomic determinants of the stock market return: the case in Malaysia (Doctoral dissertation, UTAR).

Hosseini, S. M., Ahmad, Z., & Lai, Y. W. (2011). The role of macroeconomic variables on stock market index in China and India. *International Journal of Economics and Finance, 3*(6), p233.

Ibrahim, M. H., & Aziz, H. (2003). Macroeconomic variables and the Malaysian equity market: a view through rolling subsamples. *Journal of economic studies*, 30(1), 6-27.

Imdadullah, M. B. A., & Hayatabad, P. (2012). Impact Of Interest Rate, Exchange Rate And Inflation On Srock Returns Of Kse 100 Index. *International Journal Economic*, 142-155.

Kuwornu, J. K., & Owusu-Nantwi, V. (2011). Macroeconomic variables and stock market returns: full information maximum likelihood estimation. *Research Journal of Finance and Accounting, 2*(4), 49-63.

Lazarus, G. (2017). Stock Returns and Industrial Production: A Sectoral Analysis.

Maditinos, D., Chatzoudes, D., Tsairidis, C., & Theriou, G. (2011). The impact of intellectual capital on firms' market value and financial performance. *Journal of intellectual capital*.

Maskay, B. (2007). Analyzing the effect of change in Money supply on stock prices. *The Park Place Economist, 15*(1), 72-79

Nordin, S., & Nordin, N. (2016). The impact of capital market on economic growth: a Malaysian outlook. *International Journal of Economics and Financial Issues*, *6*(7S), 259-265.

Ogutu, C. O. (2011). *The relationship between the GDP and share price movement at the Nairobi Stocks Exchange* (Doctoral dissertation, University of Nairobi, Kenya).

Omran, M., & Pointon, J. (2001). Does the inflation rate affect the performance of the stock market? The case of Egypt. *Emerging Markets Review*, *2*(3), 263-279.

Rahman, A. A., Sidek, N. Z. M., & Tafri, F. H. (2009). Macroeconomic determinants of Malaysian stock market. *African Journal of Business Management*, *3*(3), 095-106.

Sellin, P. (2001). Monetary policy and the stock market: theory and empirical evidence. *Journal of economic surveys*, *15*(4), 491-541.

Sourial, M. S. (2002). Monetary policy and its impact on the stock market: The Egyptian case. *Cairo, Egypt, Ministry of economy and foreign trade. Economic Working Paper, Archive*, (0204002).

Zakaria, Z., & Shamsuddin, S. (2012). Empirical evidence on the relationship between stock market volatility and macroeconomics volatility in Malaysia. *Journal of Business Studies Quarterly, 4*(2), 61-71.