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The Relationship between Islamic Stock Market, Sukuk, Islamic Bank Assets and Macroeconomic Variables in Malaysia

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This paper focuses on the relationship between the Islamic stock market, sukuk, Islamic bank assets and the macroeconomic variables in Malaysia by looking at the market reaction of Islamic shares represented by the FBMES Index to the selected Islamic finance instruments and macroeconomic variables. The Vector Auto Regression (VAR) method was applied to the model of the study. The selected variables to be used in this study comprised the FBMES Shariah Index (FBMES), Sukuk Issuance (SI), Gross Domestic Product (GDP), Real Effective Exchange Rate (REER), Islamic Bank Assets (IBA), Islamic Interbank Rate (IIR), Crude Palm Oil Prices (CPO) and Crude Oil Prices (CO). The data chosen for this particular was in the form of quarterly data from the first quarter of 2007 to the fourth quarter of 2017. The results indicated that the FBMES Index was integrated with the set of selected macroeconomic and Islamic finance variables in which it was positively and significantly connected with the SI variable but related negatively and significantly with the CO variable. On the other hand, its relationship with the GDP and REER variables was positive but not significant. In relation to other variables which were IBA, IIR and CPO, the resulting relationship was a negative and insignificant relationship. From the aspect of Granger's causal relationship and the pioneer indicator, it was discovered that the SI, GDP, IBA, IIR and CO variables were the short-term causes of Granger to FBMES while variable REER and CPO variables did not show evidence of the short-term causal relationship Granger. FBMES was the cause of short -term Granger to IBA and GDP variables but not for other variables.

Key words: *Islamic Stock Market, Sukuk, Islamic Bank Assets, Macroeconomic Variables, Vector Autoregressive (VAR).*

Introduction

One of the major contributors to the country's economic growth is the Islamic capital market. Malaysia has its own syariah index, namely the FBM EMAS Syariah Index. The Islamic stock market in Malaysia enables the further growth of Islamic economics in this country and to provide opportunities for Muslim investors to engage in stock trading which is in line with Islamic principles. However, a question arises: does the Islamic stock index, especially the FBM EMAS Shariah Index have links and relationships with other macroeconomic factors?
Previous studies related to the relationship between stock market indices and macroeconomic variables mostly emphasised conventional stock market indexes. The study of stock market indexes with macroeconomic variables is vital as the Islamic stock market is an ideal investment point to prevent inflation and also serves as one of the indicators for the country's economic growth (Yusuf, Hussin & Rambeli & Ramli, 2017). This is an important study as the Islamic stock market is one of the key instruments in the Islamic capital market which constitutes 59.19 percent of the total Malaysian capital market with a market size of RM1,893.47 billion in 2017 (Securities Commission, 2017). This study looked at the relationships between the FBM EMAS Syariah Index (FBMES), Islamic finance instruments and macroeconomic variables from the first quarter of 2007 to the fourth quarter of 2017 using the Vector Autoregressive (VAR) model.

Review of the Relationship between Islamic Stock Returns, Islamic Finance Instruments and Macroeconomic Variables.

Past researchers often argued the relationship between stock movement and macroeconomic variables. Macroeconomic variables can greatly influence the price of a stock. As such, this research can be used as a guide for other researchers to view the effects of an Islamic finance instrument and macroeconomic variables on stock price by examining their relationships. As stated by Sanusi, Wahab and Matraji (2013), Rahim and Ahamad (2016), Rahim and Ahamad (2015), Rahim and Ahamad (2014) and Chaker, Shawkat and Hela (2015), there is a positive relationship between the stock market and the sukuk market. This positive relationship is based on the fact that sukuk, which was regarded as neither debt nor stock, was true to the call of Islamic economics in which its issuance reflected the economic strength and real economic activity (Rahim and Ahamad, 2015; Rauf, 2016).
The relationship between stock prices and real GDP showed a positive relationship based on the findings of the study conducted by Duka (2007) and Reddy (2012) which stated that economic growth had a positive relationship with the stock market while a study conducted by Gajdka and Pietraszewski (2016) showed that it was problematic to find a clear link

between stock market and economic growth in the world economy. GDP and the stock market of a country was an indicator of the level of economic activity for the country. The profitability of the companies will further increase the country's revenue and it will affect the stock index it represents.

The relationship between stock prices and exchange rate can be seen in the results of the study conducted by Ishfaq, Ramiz and Awais (2010), Khan and Ali, 2017, Bala Sani and Hassan (2018), Gözde and Zafer (2018) and Hatipoglu and Tekin (2017). Their studies showed a positive relationship between the exchange rate and the stock market. On the other hand, the study by Suriani, Kumar, Jamil & Muneer (2015) stated that no relationship existed between the exchange rate and the share price and these two variables were free from one another. This positive relationship could be seen in the value of a currency. Higher exchange rates will also lead to higher returns. Bank assets reflecting on stock prices can be seen in the research by Deva and Pallawi (2016) as well as Asli, Enrica and Ouarda (2010) which showed a positive relationship between the bank assets and stock price. This was because a stronger capital position would be associated with better stock market performance.

The relationship between stock prices and Islamic interbank rates based on the study of Mustapa, Ramlee and Kassim (2017) showed that Islamic interbank rates were not related to Islamic stock prices over the long term. As stated by Hussin, Muhammad, Abu-Hussin & Awang (2013), the basis for this form of contact referred to an increase in interest rates; this would affect the decline in share prices through the decline in corporate profits in the future due to the increase in the cost of lending and production. In conclusion, the relationship between Islamic Interbank Rate (IIR) and Islamic stock prices was negative, the higher the IIR, the lower Islamic stock prices. It was in line with the interest rate relationship with conventional stock prices in Malaysia.

The research carried out by Razak and Masih (2017) and Nor and Masih (2016) showed that palm oil prices had an important relationship in influencing the stock market index. Their research was consistent with the features of a major commodity for a country; it would affect the stock market for corporate companies involved with the commodity market. However, there were various industries listed in an index so it cannot be denied that this can also lead to a negative relationship. Understandably, the relationship between stock prices and the price of crude oil could be either positive or negative. There was a negative and insignificant relationship based on the study by Rahman and Mustafa (2018). Other studies by Quadry, Adewale, Jaiyeoba and Motunrayo (2016), Cengiz, Çağatay and Fatih (2011) and Ding, Fan, Wang and Xie (2017) showed a significance to the stock market. This was because the stock market performance can be predicted when crude oil prices became unstable in the futures

market. Companies that used crude oil as its primary source would also affect the stock market.

Islamic Stock Market in Malaysia

The Islamic capital market has been established in Malaysia since the late 1990s. Major developments in the Islamic capital market were particularly noticeable in the 1990s as more companies and other entities began sourcing funds from the capital market to finance their economic activities. With some of the features and advantages found in the Islamic economic system in general and the Islamic capital market in particular as opposed to the existing capital market, this has driven the Islamic capital market to be the best choice for a massive fund raising for the nation's economic progress and development (Hussin and Borhan, 2009). The Securities Commission (2017) recorded 59.28 per cent of the Islamic Capital Market from the entire capital market in Malaysia in the first half of 2017. This shows that the Islamic Capital Market had managed to capture half of the capital markets available in Malaysia.

In Malaysia, the Islamic capital market embraces major markets, comprising Islamic government securities and Islamic corporate securities and secondary markets comprising Islamic government notes and Islamic debt securities transacted (Bank Negara Malaysia, 1999). The stock market refers to shares of companies listed on Bursa Malaysia for trading. The Islamic stock market refers to a marketplace either in the form of stock exchanges or over the counter market, where the activities of the stock company involved are conducted in a way that does not conflict with the faith of Muslims and Islam (Hussin and Borhan, 2009). Currently, more than half of these shares are syariah compliant stocks. As such, this makes the stock market in Malaysia contribute directly to the growth of Islamic economics in Malaysia.
Throughout the Islamic stock market operations in Malaysia, several Islamic stocks were introduced to simplify the selection of syariah compliant stocks by investors. The index of Islamic shares includes the RHB Islamic Index which was launched on 10 May 1996, the Kuala Lumpur Syariah Index on April 17, 1999, the Dow Jones-RHB Islamic Malaysia Index on 23 June 2005 (replacing the RHB Islamic Index), the FBM EMAS Shariah Index at 22 January 2007 (replacing the Kuala Lumpur Syariah Index beginning 1 November 2007) and the FBM Hijrah Syariah Index on 21 May 2007. These diversified shariah indices provide investors with greater investment opportunities and thus enhance the Islamic stock market in Malaysia (Salamon, 2009).

Table 1: Malaysian Indexes value for the year 2016 and 2017

Index	2017	2016	Change (%)
FBM KLCI	1,796.81	1,641.73	9.45%
FBM EMAS Shariah	13,302.92	12,014.42	10.72%
FBM Hijrah Shariah	14,528.19	13,427.77	8.20%
FBM Small Cap Shariah	15,288.03	13,759.07	11.11%

Table 1 above shows the value of the syariah indexes including a non-syariah index, the FBM KLCI Index, to ascertain the difference between the indexes. The FBM KLCI Index showed a change of 9.45 percent from the point value 1,641.73 to 1,796.81. This percentage of change was greater than that of the Shariah Hijrah FBM Index which only showed a change of 8.20 percent. On the other hand, the other two shariah indices, FBM EMAS Shariah and FBM Small Cap Shariah had a higher percentage change than the FBM KLCI Index. Both indexes had a change in value of 10.72 percent and 11.11 percent respectively. Shariah indexes are valued based on shariah-compliant securities listed under their respective index. The performance of the increased shariah securities will also increase the value of the index points in which the securities are represented.

Data Description

This study consists of Islamic finance instruments, macroeconomic variables and FBMES Index. Their definitions is described in table 2 below.

Table 2: Definitions of Variables

No	Variable	Description	Duration	Source
1	FBM EMAS Syariah Index (FBMES)	FBMES is used as the proxy for Islamic stock market in Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017.	Bursa Malaysia
2	Sukuk Issuance (SI)	SI is used as the proxy for Islamic bond issuance in Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017.	Securities Commission
3	Real Effective Exchange Rate (REER)	REER is used as the proxy for exchange rate for Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017. (Base year = 2010)	Federal Reserve Bank St. Louis

4	Gross Domestic Product (GDP)	GDP is used as the proxy for the revenue of Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017.	Bank Negara Malaysia
5	Islamic Bank Assets (IBA)	IBA is used as the proxy for the assets of Islamic Bank in Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017.	Bank Negara Malaysia
6	Islamic Interbank Rate (IIR)	IIR is used as the proxy for the interest rate in the Islamic financial system in Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017.	Bank Negara Malaysia
7	Crude Palm Oil Price (CPO)	CPO is used as the proxy for the price of the main commodity in Malaysia.	Quarterly data from the first quarter 2007 to the fourth 2017.	Bank Negara Malaysia
8	Crude Oil Price (CO)	CO is used as the proxy for the world's oil price.	Quarterly data from the first quarter 2007 to the fourth 2017.	Bank Negara Malaysia

Methodology

This study utilized the Vector autoregressive (VAR) model to examine the relationship between Islamic stock market and macroeconomic variables in Malaysia. The model used in this study is as follows:

$$FBMES_t : \alpha_0 + \alpha_1 SI_t + \alpha_2 KDNK_t + \alpha_3 REER_t + \alpha_4 IBA_t + \alpha_5 IIR_t + \alpha_6 CPO_t + \alpha_7 CO_t + \mu_t \quad (1)$$

The aim was to examine the relationship between Islamic stock market variables, the FBM EMAS Syariah Index (FBMES) with seven macroeconomic and Islamic finance variables which are Sukuk Issuance (SI), the Real Effective Exchange Rate (REER), the Gross Domestic Product (GDP), the Islamic Bank Assets (IBA), the Islamic Interbank Rate (IIR), the Crude Palm Oil Price (CPO) and the Crude Oil Price (CO) based on discounted cash flow model.

As a measure to properly specify the VAR model, it was necessary to follow the standard procedure of time series analyses. The first step was the application of the augmented Dickey-Fuller (ADF) and Phillips- Perron (PP) unit root tests in order to determine the

variables' stationarity properties or integration order. A variable is said to be integrated of order d, written 1(d), if it requires differencing d times to achieve stationarity. As such, the variable is non-stationary if it is integrated of order 1 or higher. It is crucial to classify the variables into stationary and non-stationary variables as standard statistical procedures can handle only stationary series. Additionally, a possible long-run co-movement also exists, called 'cointegration', among non-stationary variables having the same integration order. The second step involved the implementation of a VAR-based approach of cointegration test as suggested by Johansen (1988) and Johansen and Juselius (1990). This test provides us information on whether the variables, specifically measures of Islamic Stock Market and macroeconomic variables, are tied together in the long run. After that, the study proceeded with a Granger causality test in the form of vector error correction model (VECM). The Granger causality test was performed to identify the existence and nature of the causality relationship between the variables. This was essential in order to identify the relationships between variables because multiple causes simultaneously, especially if the variables involved in the created model are more than two variables.

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Empirical Results

Table 3 below shows the results of the test cause unit conducted through Dickey Fuller Immunization Test (ADF). The tests carried out was based on intercept and the other one was based on trend and intercept. The optimal lag duration for the ADF test was determined by assessing the minimum value of the Akaike Information Criteria (AIC).

Test	**Augmented Dickey Fuller (ADF)**							
Variables	Level				First Differentiation			
	Lag	Intercept	Lag	Trend & Intercept	Lag	Intercept	Lag	Trend & Intercept
LOGFBMES	4	-0.899263	0	-2.111908	0	-5.663695*	0	-5.598016*
LOGSI	1	-1.312474	1	-1.573122	0	-11.32737*	2	-5.221349*
LOGGDP	9	-1.429773	9	-2.220828	8	-4.448012*	9	-4.75538*
LOGREER	0	-0.853682	0	-1.618773	0	-6.4973*	0	-6.527605*
LOGIBA	3	-4.42143*	3	-8.426039*	5	-3.384047**	0	-6.321406*
LOGIIR	3	-2.800247***	3	-3.207552***	9	-4.438126*	9	-5.590187*
LOGCPO	3	-3.030205**	3	-3.003598	1	-6.071595*	1	-5.995261*

LOGCO	1	-2.138998	0	-2.067422	0	-5.097907*	0	-5.014631*

Table 3: Augmented Dickey Fuller (ADF) Unit Root Test

* Denote significance at 1% respectively
** Denote significance at 5% respectively
*** Denote significance at 10% respectively

Based on table 3, all variables were non-stationary (having unit root problems) at the level of either involving intercept and intercept with time trend except for the IBA, IIR and CPO variables. However, the CPO variable was not stationary on intercept and time trends. This showed the ADF statistical t value for some of the variables which were FBMES, SI, GDP, REER, CPO (on intercept) and CO is smaller (insignificant) than the t critical value. On the other hand, at the first differentiation levels for both intercept and intercept with time trend, all variables were stationary (no unit root problem) or significant. This indicated the ADF statistical t value for all variables at the first differentiation level was larger (significant) than the t critical value. Based on the ADF unit root test, it can be concluded that the time series data was stationary at the first differentiation level and integrated in the first degree of integration I (1).

Table 4: Phillip Perron (PP) Unit Root Test

Test	**Phillip Perron (PP)**							
Variables	Level				First Differentiation			
	Lag	Intercept	Lag	Trend & Intercept	Lag	Intercept	Lag	Trend & Intercept
LOGFBMES	1	-1.285641	0	-2.111908	2	-5.677865*	3	-5.593269*
LOGSI	2	-2.657948***	0	-2.899906	7	-11.25272*	7	-11.09518*
LOGGDP	19	-1.030235	8	-3.286652***	22	-7.442884*	22	-7.174226*
LOGREER	0	-0.853682	0	-1.618773	3	-6.50117*	4	-6.595896*
LOGIBA	2	-4.717683*	5	-2.80676	4	-5.147559*	3	-6.331344*
LOGIIR	2	-2.256945	1	-2.285989	0	-5.237906*	0	-5.209685*
LOGCPO	2	-3.323178**	2	-3.326609***	38	-9.993759*	37	-9.576745*
LOGCO	2	-1.904886	2	-2.240019	9	-4.94586*	10	4.825518*

* Denote significance at 1% respectively
** Denote significance at 5% respectively
*** Denote significance at 10% respectively

Table 4 above shows the results of unit root tests conducted through Phillip Perrons (PP) test. This analysed tests which included intercept and intercept with time trends. The Newey-West bandwidth selection method was used for selected lag durations. Based on the following table, all variables were non-stationary (had unit root problems) at the level which involved intercept and intercept with time trends except for some variables which were SI (intercept), GDP (trend and intercept), IBA (intercept) and CPO (intercept and trends with intercept). This showed that the value of t test of the PP test for the variables studied was smaller (insignificant) than the critical value of t except for the variables already stated. For the first differentiation, it was found that all variables were stationary (significant) on intercept and intercept with time trends. This showed that the value of the PP statistic for all variables at the first differentiation level was greater or can be said to be significant than the critical value of t. To conclude, based on the PP unit root test, the time series data was stationary at the first differential level and integrated in the first degree of integration I (1). It was parallel and supported the findings of the ADF unit root test.

After establishing the variables which were stationary and had the same order of integration, they were further tested for cointegration or otherwise. Johansen Multivariate Cointegration test was used. The results of the Johansen's Trace and Max Eigenvalue tests are shown in Table 5 below.

Table 5: Johansen-Juselius Cointegration Test

Model	Null Hypothesis	Statistical Trace	Critical Value (5%)	Maximum Eigen Statistical Trace	Critical Value (5%)	Results
Lag Length : 2#	r ≤ 0	273.9101*	156.00	96.77600*	51.42	Trace statistics show that there are 6 cointegration relationships and Maximum Eigen Statistics show there are 5 cointegration relationships
	r ≤1	177.1341*	124.24	53.49624*	45.28	
	r ≤ 2	123.6379*	94.15	45.22102*	39.37	
	r ≤ 3	78.41686*	68.52	34.12177*	33.46	
	r ≤ 4	47.29509*	47.21	27.15235*	27.07	
	r ≤ 5	30.14274*	29.68	10.52663	20.97	
	r ≤ 6	9.616108	15.41	5.115216	14.07	
	r ≤ 7	3.500892	3.76	3.500892	3.76	

* : Denote significance at 5% respectively
: Critical Value obtained from Osterwald-Lenum (1992)
#: lag length based on AIC

According to the Johansen and Juselius cointegration test, it can be proven that at least six (6) vector cointegrated in the model. This showed that in this study there was a long-term relationship between the variables studied. The findings were also supported by the Engle Granger (1987) cointegration test where the ADF unit root test performed on the error correction term (ECT) obtained from the long-term equation showed that Ect was stationary at level and the first differentiation. This proved that there was a long-term relationship or cointegration between the variables studied.

Based on the Johansen and Juselius cointegration tests, the first normalized co-integrated vector to the FBMES variable using the lat period proposed by the AIC was chosen to illustrate the long-term relationship between the macroeconomic variables on the development of human capital as in Table 6 below.

Table 6: Cointegration Relationship

Dependent Variable (FBMES)	Independent Variables							C
	LOGSI	LOGGDP	LOGREER	LOGIBA	LOGIIR	LOGCPO	LOGCO	
Coefficient	0.0800**	6.1112*	0.6932	-0.1126	-0.2233	-0.1265	-0.2892***	0.0949
t value	4.5756	8.3693	1.4017	-0.5248	-0.9673	-0.9220	-3.0244	

** Denote significance at 5% respectively
*** Denote significance at 10% respectively

The findings in this study on the relationship FBM EMAS Shariah Index (FBMES) with the issuance of sukuk (SI), indicate a positive and significant relationship. The findings were in line with the study conducted by Sanusi, Wahab and Matraji (2013), Rahim and Ahmad (2016), and Chaker, Shawkat and Hela (2015) which stated there was a positive relationship between the stock market and the sukuk market. This positive relationship was due to the fact that sukuk, which was regarded as neither debt nor stock, was true to the call of Islamic economics in that its publication reflected the economic strength and real economic activity (Rahim and Ahmad, 2015).

The Gross Domestic Product (GDP) variable was also found to have a positive relationship with FBMES and it was significant. This was in line with the findings of the study conducted

by Duka (2007) and Reddy (2012) which stated that economic growth had a positive relationship with the stock market while the study by Gajdka and Pietraszewski (2016) stated that it was problematic to find a clear link between stock market and economic growth in the world economy. GDP and the stock market of a country is an indicator of the level of economic activity for the country. The profitability of the companies will further increase the country's revenue and it affects the stock index it represents.

Additionally, the long-term equation above also showed a positive but insignificant relationship between Islamic stock market with real effective exchange rate (REER). This finding was in line with the study of Suriani, Kumar, Jamil and Muneer (2015) which stated that no relationship existed between the exchange rate and the share price and these two variables were free from one another. This positive relationship could be seen in the value of a currency. Higher exchange rates would also lead to higher returns. This study also showed that the relationship between Islamic bank assets (IBA) and FBMES was negative and not significant. This study was contrary to the findings of the study conducted by Deva and Pallawi (2016) as well as Asli, Enrica and Ouarda (2010)) which had a positive relationship between the asset variable and the stock. This was because the stronger capital position would be associated with better stock market performance but it would also be contrary to the outcome of this study.

The long-term equation above was also an interbank Islamic investment rate (IIR) correlated negatively and insignificantly with the FBMES variable. This was in line with the study conducted by Mustafa, Ramlee and Kassim (2017) which states that the rate of interbank Islamic investments was not linked to long-term Islamic stock prices. Hussin, Muhammad, Abu-Hussin & Awang (2013) stated that the basis for this form of contact referred to an increase in interest rates which would affect the decline in share prices through the decline in corporate profits in the future due to the increase in borrowing costs and production. In conclusion, the relationship between Islamic bank (IIR) and Islamic stock prices was negative: a higher IIR will lower Islamic stock prices. This was in line with the conventional interest rate relationship with conventional stock prices in Malaysia. However, the long-term relationship between these two variables was not significant.

Furthermore, this study also indicated that long-term effects of the variable price of crude palm oil with FBMES was negative and not significant. This result was inconsistent with the studies conducted by Razak and Masih (2017), Buerhan, Azlan, Naziruddin and Sulaiman (2014) and Nor and Masih (2016) which showed that palm oil commodity prices had an important relationship in influencing the stock market index. Their research was consistent with the features of a major commodity for the country which in turn affected the stock market for corporate companies involved with the commodity market. However, there were

various industries listed in an index so it cannot be denied that it could be negatively associated.

The last variable studied on the effect towards FBMES was the price of crude oil. The result showed a negative and insignificant relationship for both variables. This finding was consistent with the study of Rahman and Mustafa (2018). Other studies by Tjandrasa and Sutjiati (2016), Quadry, Adewale, Jaiyeoba and Motunraya (2016), Cengiz, Çağatay and Fatih (2011) and Ding, Fan, Wang and Xie (2017) showed its significance to the stock market. This was because the stock market performance could be predicted when crude oil prices became unstable in the spot market or the futures market. Companies that use crude oil as its primary source will also affect the stock market.

Table 7: Vector Error Correction Model (VECM)

Dependent Variables	**Independent Variables**							
	Chi-Square statistic value (wald test)							
	ΔLOG FBMES	ΔLOG SI	ΔLOG GDP	ΔLOG REER	ΔLOG IBA	ΔLOG IIR	ΔLOG CPO	ΔLOG CO
ΔLOG FBMES	-	13.9325*	7.3026**	0.3676	9.0470**	6.7560**	1.1596	9.5103*
		(0.0009)	(0.0260)	(0.8321)	(0.0109)	(0.0341)	(0.5600)	(0.0086)
ΔLOG SI	1.2577	-	10.1451*	0.8206	1.4740	3.5700	2.2275	5.6420***
	(0.5332)		(0.0063)	(0.6634)	(0.4785)	(0.1678)	(0.3283)	(0.0595)
ΔLOG GDP	31.9993*	34.1864*	-	6.3305**	12.1971*	8.4317**	7.5797**	5.1675***
	(0.0000)	(0.0000)		(0.0422)	(0.0022)	(0.0148)	(0.0226)	(0.0755)
ΔLOG REER	1.0601	1.3053	2.5077	-	0.9070	4.4185	0.8310	4.4692
	(0.5886)	(0.5207)	(0.2854)		(0.6354)	(0.1098)	(0.6600)	(0.1070)
ΔLOG IBA	7.7201**	16.6497*	0.9534	1.9612	-	2.5057	6.0834**	2.1816
	(0.0211)	(0.0002)	(0.6208)	(0.3751)		(0.2857)	(0.0478)	(0.3359)
ΔLOG IIR	0.0950	0.0615	1.8028	3.1284	0.3180	-	6.3080**	3.6190
	(0.9536)	(0.9697)	(0.4060)	(0.2092)	(0.8530)		(0.0427)	(0.1637)
ΔLOG CPO	1.9216	1.7199	3.7320	1.0286	5.0275***	0.7935	-	6.7014**
	(0.3826)	(0.4232)	(0.1547)	(0.5979)	(0.0810)	(0.6725)		(0.0351)

ΔLOG CO	0.7124	2.2403	11.9671*	5.8756***	7.6413**	5.5024***	4.7890***	-
	(0.7003)	(0.3262)	(0.0025)	(0.0530)	(0.0219)	(0.0639)	(0.0912)	

* Denote significance at 1% respectively
** Denote significance at 5% respectively
*** Denote significance at 10% respectively
( ) probability
[ ] T- Statistic

The long term relationship of Granger can be seen based on ECT-1 values for each variable. Based on the results of the VECM test results, some variables were found to have long-term causal relationships following the coefficient of ECT-1 for some of these variables which were FBMES, SI, GDP and CO. The ECT-1 values for the FBMES variables were 0.480556 and they were significant. This showed that 48.05 percent of adjustments were made during the lat period of 2 to achieve long-term balance. In other words, the FBMES variables in the equation bore the burden of error correction which was scattered from short-term balance to achieve long-term equilibrium and demonstrate the integrity of FBMES from the established model. The ECT-1 coefficient value also reflected the adjustment speed to achieve balance in the long run. Consequently, the conclusions of SI, GDP, REER, IBA, IIR, CPO and CO variables were the long-term causes of Granger to FBMES. This was also the similar situation for the SI, GDP and CO variables.

Meanwhile, for the dependent variables of REER, IBA, IIR and CPO, there were no long-term causal relationships for all four variables in the model equations as the value of ECT-1 for all fours were insignificant. It can be summarized that the real effective exchange rate variables, Islamic bank assets, Islamic interbank investment rates and crude palm oil prices were not an endogenous variable to the established model equation.

Short-term causal relationships could be seen through the Wald tests on a set of coefficients in question. Based on table 7, it is arguable that all variables except for Real Effective Exchange Rate and Crude Palm Oil Prices were the cause of short-term Granger to the FBM EMAS Shariah Index (FBMES) variable. This meant that the FBM EMAS Shariah Index in the short term was only affected by the Sukuk Issuance, Gross Domestic Product, Islamic Bank Assets, Islamic Interbank Rate and Crude Oil Prices while other variables were Real Effective Exchange Rate and Crude Palm Oil Prices do not reveal significant relationship. However, the FBMES variable was not a short-term cause for all other variables.

On the other hand, GDP and CO variables were significant in forming the short-term Granger causality variable to SI variable. All variables were significant in shaping the short-term

Granger causality variable to the GDP variable. For the REER variable, there was no significant variable in forming the short-term Granger causality variable to it. Furthermore, this study found that FBMES, GDP and CPO variables were significant in forming a short-term Granger causality variable to IBA variable. This study also found that only the CPO variable was significant in forming short-term Granger causality variable to IIR variables. IBAs and COs were significant variables in forming variable short-term Granger causes to CPO variables. Finally, for CO variables, only FBMES and SI were insignificant in forming short-term Granger causality variable to the CO variable.

Conclusion

This study's main objective was to investigate the relationship between the Islamic stock market and macroeconomic variables that are available in Malaysia. The results show that the FBMES Index was integrated with the set of selected macroeconomic variables in the long term. It was positively and significantly connected with the SI variable but related negatively and significantly with the CO variable. Meanwhile, its relationship with the GDP and REER variables was positive but not significant. In relation to other variables which were IBA, IIR and CPO, the resulting relationship was a negative and insignificant relationship. Regarding the short-term relationship, the results showed that the SI, GDP, IBA, IIR and CO variables were the short-term causes of Granger to FBMES, while variable REER and CPO variables did not show evidence of the short-term causal relationship Granger. FBMES was the cause of short-term Granger to IBA and GDP variables but not for other variables.

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